

1924.

NEW ZEALAND.

RAILWAYS STATEMENT

BY THE MINISTER OF RAILWAYS, HON. J. G. COATES.

MR. SPEAKER,—

I have pleasure in presenting the Railways Statement for the year ended 31st March, 1924.

In presenting my last Statement I explained that it had not been possible for me to personally review our railway system owing to the short time I had held the portfolio. During the recess, however, I have made an exhaustive inspection of all branches of the Department's activities, and have formed definite opinions with regard to the more important problems, and these I have dealt with herein under the different headings.

Generally speaking, I am convinced that the Dominion has a splendid railway system, and that, if given necessary facilities, it can be made to pay a reasonable interest on the capital invested, and render more satisfactory service to the community. The nature of the facilities I refer to are new stations and layouts at important termini and main centres, deviations, grade-easements, and increased accommodation; and my proposals with regard to these matters have for convenience been dealt with in a separate report, which will be presented to Parliament at the same time as this Statement.

Before proceeding to deal with new subjects I propose to touch on the matters mentioned in my last Statement.

REORGANIZATION.

After the close of last session I immediately closely examined the existing organization, and with the General Manager of Railways put some changes into effect. I feel sure that the reorganization of the Head Office, which is set out in the diagram annexed, will result in a much more satisfactory apportionment of the work and responsibility of the management than existed hitherto, speed up routine, and enable the time of the General Manager to be exclusively occupied in matters of prime importance.

To extend this decentralization of responsibility to other important officers of the Department, such as District Managers, District Engineers, Locomotive Engineers, &c., was a most difficult matter, especially with regard to the management of the districts. I arranged a conference with the District Managers to consider the question, but they were of the opinion that matters directly affecting revenue, expenditure, staff conditions, and regulations required to be in the hands of a central authority to ensure uniformity and stable finance; also that authority is at present in the hands of District Managers to meet the full transport requirements of the various districts. I am not yet satisfied that much more could not be done, and I have certain proposals under consideration now which will, when put into operation, greatly assist towards a solution of this problem.

There can be little doubt that District Managers, in concentrating on the primary problem of coping with the traffic *usually available*, are prone to overlook the vital necessity of seeking to stimulate business, and thus swell the revenue by rendering improved service. It has become apparent in many instances that some officers have been influenced too much by precedent, and have hesitated to exercise their own initiative as fully as the conditions justify. My remarks dealing with the establishment of the Commercial Branch will indicate more fully how I hope to overcome this tendency.

DEVELOPMENTAL.

Although the railways have never been regarded or run as a profit-making concern, there is no doubt in my opinion that the time has arrived for the finances of the Department to be placed on an entirely different footing. My proposals in this connection are dealt with later.

The necessity for and advantage obtained by developing the Dominion by means of transport facilities are apparent, but at the same time there does not appear to be any good reason why the accounts should not be arranged in conformity with recognized commercial methods, and at the same time ensure that full credit is given to the Railways for the services they perform, besides showing how far they meet their proper obligations. The system followed insists that business life and daily transactions shall conform to stereotyped accountancy methods, instead of the accountancy methods being adapted to business requirements.

It is well known that many of our branch lines are not paying their way, but by counteracting competition and utilizing a cheaper transport method I am of opinion that the working-expenses can be reduced to a minimum, and the revenue substantially increased and a more effective service rendered to the public.

The new policy of constructing new lines, whereby the estimated cost of construction, revenue, and working-expenses, &c., are very closely scrutinized by the Public Works, Railway, Agriculture, and other Departments concerned, will eliminate as far as it is possible the construction of uneconomic lines. In my opinion no line should be undertaken unless it is shown that interest can be earned on the capital outlay within a reasonable time of completion.

Every care is now taken to see that new lines will be paying propositions before any expenditure is authorized. The procedure is roughly as follows: A railway having been projected, the Public Works Department instructs its Engineers to examine the country and select the route which appears to be the best both from (1) first cost, and (2) an operating point of view. This is not intended to mean that the first cost is the first consideration or the reverse, but that the solution to the problem is selected which makes the sum of the interest on construction, plus the cost of working and maintenance, a minimum. If the natural conditions are such that two or more routes appear to be of very similar value, then each one is closely surveyed. The country likely to be tapped by these lines is carefully delimited and its potentialities estimated. When the data up to this point is collected, the problem is referred to the Agriculture Department, who advise as to the probable produce likely to be grown on the areas served, and whether it is likely to be transported by rail, or move on its own feet (in the case of cattle), to the nearest market; should there be any mineral deposits, full information is obtained from the Mines Department. The data is then passed on to the Railway Department, who estimate the probable facilities necessary to adequately cope with the traffic, and the annual cost of running this traffic and maintaining the line. Having obtained all this information, the Engineers then set out the whole case for the information of the Government, who then decide whether the construction of the line should be authorized.

TARIFF.

In the report of last year the matter of the railway tariff was touched upon, and it was indicated that it was proposed to undertake a comprehensive revision thereof. This was taken in hand, but, owing to pressure of work arising out of the difficulties with the staff that culminated in the recent unfortunate strike, and the important matters that claimed attention after the strike had taken place, work

on the tariff had to be set aside for a time, and has accordingly been somewhat delayed. This work has, however, again been receiving attention, and matters are now in train which will lead to an early decision in regard to the tariff.

Seeing that the general expectation lies along the line of a reduction in charges, it is necessary to carefully examine the financial position of the Department in order to ascertain just how far it would be safe to go in reducing rates. It may be, of course, that some reductions may be made which, by bringing traffic to the railway, might to a greater or lesser extent recoup the loss involved in the reduction of the rates, but it seems safe at the outset at least to assume that reduction in rates will involve at the commencement and for some little time afterwards a direct loss of revenue. The problem, then, so far as it relates to finance, seems to take its commencement in the policy that will be laid down, and this has been dealt with in my remarks on finance. An examination of the returns for the last financial year shows that the net revenue resulting from the Department's operations was just sufficient to pay the policy rate of interest, and the gross revenue has not increased to a very marked degree. There appears to be nothing in the circumstances at present existing to warrant a belief that the position, so far as the natural increase of traffic in the country is concerned, and as indicated during the past few years by the comparatively small increase in revenue, will be materially different in the coming year. On the expenditure side the position is that the Department has cut its expenses to the lowest reasonable limit, and has even arrived at the stage where the public have commenced a demand for an extension of the services. This makes it safe to assume that the likelihood of any substantial reductions in expenditure during the coming year is very remote. It is believed, however, that such reductions may be made in the railway rates as may eventually bring such a volume of increased traffic as to counterbalance the loss involved in the rate reductions.

In the vicinity of large towns motor-vehicles are being increasingly patronized, and it is therefore desirable to make some adjustments in the suburban fares. During the war and post-war periods the passenger charges were increased by only 25 per cent. as compared with 40 per cent. in the case of goods, and, apart from considerations of competition, it does not appear that there is the same pressing necessity for reductions of a general nature in the case of the passenger-fares as in the case of the goods-rates.

In regard to the goods traffic, the position is that the total quantity of goods required to be carried in New Zealand has not very substantially increased during the last few years, and if the Department is to obtain the increased traffic which will enable it to recoup itself for reductions in rates it must obtain such traffic from its competitors.

Competition by sea has always existed, and there is no reason to believe that the proportion of goods carried by sea as against railway has increased very much of late years. From the reports received by the Department it cannot be found that the proportion of sea-borne goods has increased in any particular locality, while, on the contrary, it is found that the opening of the Otira Tunnel has diverted to the railway all but a negligible quantity of the traffic between Canterbury and the West Coast that formerly went by sea. Still, there remains a fair amount of sea-borne traffic, some of which might possibly be attracted to the railway, and which might, therefore, be taken into consideration when detailed proposals are being made along the lines of increasing the traffic to be carried by rail.

The road motor traffic is, however, of later development than the sea-borne traffic, and is becoming an increasingly potent factor in competing with the railways. Therefore in considering the question of increasing the railway traffic by attracting to the railways the carriage of goods now being transported by other means than the railways the motor traffic claims very serious attention.

The problem presents many difficulties. The comparatively free use of the roads which the motor carriers now enjoy, and the greater mobility of the motor-vehicle (enabling the goods to be transported from starting-point to destination without the handling involved in loading and unloading to and from the railway), are advantages which materially affect the position in favour of the motor. The first factor is not within the control of the Railway authorities. The second can, in

a measure at least, probably be met by arranging for transit of goods to and from the railways. This could be done by the Department itself undertaking cartage to and from the railway, or by entering into suitable contracts with road carrying concerns. The principal commodities at present being conveyed by road are mineral oils (benzine, &c.) and household furniture. Certainly other classes of goods are also being carried, but the two classes mentioned seem to form the backbone of the motor traffic. In regard to benzine, it is to be noted that, being a dangerous commodity, it was, up till July, 1922, charged at rate and a half of the highest class in the railway tariff—namely, Class A. In the month mentioned the rate was reduced to single rate, Class A, being a concession of $33\frac{1}{3}$ per cent. This reduction undoubtedly affected the quantity carried by road, but a substantial quantity still continues to be so carried, and the road traffic in benzine is fairly general throughout the Dominion, though more marked in some localities than in others. Its generality is sufficient to warrant action being taken along the lines of a general reduction in rate, supplemented as may be found desirable by special competitive rates between points where the traffic cannot be secured by other means and is sufficient to warrant the institution of such a rate. In the case of furniture it is to be noted that the road traffic in these articles is practically confined to household removals. In connection with this traffic the advantage of one handling from starting-point to destination has a peculiar value. Articles of furniture are not usually easy to pack, and when once the labour has been expended in advantageously packing them on to a motor-lorry there is generally a disinclination to remove them from the lorry and repack in a railway-truck if it can be avoided, and in regard to this aspect of the matter the labour cost is not the only factor. Liability to damage in the case of handling enters into the matter and increases the disinclination of owners to subject the furniture to the added risk involved. It is found also that under the present system of classification of furniture it is not possible to give inquirers information in a compendious form as to the probable cost of the carriage of their goods by rail. At present various articles of household use are classified at different rates per ton, and this involves a knowledge of the total weights of the various classes of goods that will be involved in the removal.

It is found also that the carriage of wool by motor tends to increase. Inquiries in various cases where wool has been carried by motor indicate that the farmers place a peculiar value on the fact that the wool is lifted by the motor from the wool-shed and delivered at the wool-store. They find that the avoidance of the necessity of carting the wool to railway-stations and loading into trucks affords so much more time during which their teams and employees can be occupied on the farms, and also saves the double handling of the wool. Cases have indeed been found where the farmers were willing to pay more for the transport of their wool by motor than by rail in order to secure these advantages. There is little doubt, however, that a reduction in the rates on wool would tend to counteract this effect, and on that ground I consider a lower rate is justified.

Apart from the commodities that have been mentioned above, the traffic by motor is, as has been already indicated, confined to the goods which are most highly placed in the railway classification. Any reduction, therefore, to meet such competition can be justified in respect of such traffic only, for there is little doubt that the motor cannot hope to compete with the railway on the low-rated traffic.

Without going into details the immediate extent to which rates will be used for the purpose of meeting motor competition will involve suitable reductions on benzine, household removals, and the commodities that are listed in the higher classes (A, B, C, D, and H) of the railway tariff. I propose to submit recommendations to Cabinet along these lines within the next week or two, the reductions in the aggregate amounting in all probability to approximately £200,000 per annum.

There must come a time when loss of the more lucrative traffic will make it impossible for the Department to continue giving concessions, but this is a point which does not seem to be sufficiently recognized.

Another matter which suggests itself as being worthy of consideration in connection with the tariff as affected by competition is as to whether the method under which rates are fixed is not too rigid, and not as readily adaptable to

circumstances as the necessities of meeting competition require. At one extreme we have, as at present, the method of fixing rates solely by gazetted regulation. The other extreme is the placing in the hands of individual officers authority to fix charges as occasion may require. The question is how far the position can be carried from the extreme where it now rests in the direction of allowing of a greater measure of elasticity in rate-making. The Minister might, of course, exercise his power of delegation as contained in the proviso to paragraph (viii) of section 10 of the Government Railways Act, 1908. There are difficulties in the way of an extended use of this power, but it appears to me that the urgency of the occasion calls for some action being taken to place the Department, as a business concern, on a more advantageous position in relation to its competitors in the matter of quoting rates than it now holds. The question as to how this may be effected, and, in particular, as regards the matter of the extent to which the power contained in the proviso mentioned above might be used in this direction, is now under consideration.

MOTOR COMPETITION.

Road competition by motor-vehicles has continued to develop, and has been extended in many parts of the Dominion, especially in places where conditions have been such as to render remedial measures extremely difficult. This has been very apparent on such sections as Lower Hutt—Petone—Wellington, Wanganui—Marton and up as far as New Plymouth, Timaru—Waimate, &c. Since the main road to Petone has been improved by the laying-down of a permanent pavement of bitumen a very serious competition has grown up by the running of passenger motor-buses from Lower Hutt and Petone to Wellington, and *vice versa*.

The officers of the Commercial Branch of the Department took the matter in hand, and the steps taken to recover the business have been watched with very close attention, and similar measures taken in other localities where good roads and the general conditions have enabled the motors to seriously compete.

Motor competition in the carriage of goods, however, is far more serious, and a very definite course of action has been outlined to cope with the inroads that are being made on the Department's revenue due to the loss of traffic that is being carried by road.

TRAIN-SERVICES.

During the last twelve months many improvements in train-services have been brought into operation in various parts of the Dominion, including the putting-on of the Frankton—Auckland morning train and altering of the time of departure of the morning train from Wanganui to Marton to enable passengers to connect with the Main Trunk express southward, and the provision of better services on suburban sections. In addition, a Sunday service was given a trial between Auckland and Helensville during the summer months, and, although this arrangement was not supported to the extent anticipated, it will be given a further trial during the forthcoming summer.

To enable people from the Waikato district to visit Auckland on Saturdays for football, cricket, and other events, and return to their homes the same day, it was arranged to delay the departure from Auckland of the afternoon train to Frankton until about 5.30 p.m., which gives ample time to passengers to attend the particular events in which they may be interested and catch their train. In many other cases rearrangements have been made to meet the convenience of the public, and with the present organization of the Transportation and Commercial Branches users of the railways can be assured that their requirements will have every possible consideration.

As will be seen from the remarks concerning rail-motors, it is proposed to provide improved facilities in many sections of railway in the South Island as soon as these cars are available for use, as it is considered that working-expenses on many sections in the South could be very considerably reduced by the running of self-propelled cars and at the same time give a more frequent service.

With regard to goods traffic, a steady improvement has been effected, and through services inaugurated wherever sufficient traffic was available. This phase of the Department's operations will continue to be the subject of close observation, and improvements effected in every possible direction.

One of the most important proposals in view is the intention to run, from about November next until after Easter, a "limited" express service between Wellington and Auckland, and *vice versa*. This question has received a good deal of consideration for some time past, and the officers of the Transportation Department are of the opinion that the service should leave both terminal stations shortly after 7 p.m., reaching Auckland and Wellington respectively before 11 a.m. the following day. It has been decided to proceed along these lines during the coming summer, and there can be little doubt that the service should be a very popular one. It is obvious that stopping-places for the "limited" will have to be reduced to a minimum, and consequently they will be restricted to Frankton, Taumarunui, Ohakune, Taihape, Marton, and Palmerston North.

Representations have been made from time to time for the Christchurch-Dunedin mail-train on Mondays to leave at 8.50 a.m. instead of 12.20 p.m. as at present, chiefly to enable commercial travellers to return to their circuits in the southern portion of the Canterbury Province and North Otago. Unfortunately, however, up to the present it has not been found practicable to so arrange connections with branch lines and obviate other difficulties as to allow of the alteration being made, but the question is still under investigation.

The question of running the Christchurch-Greymouth passenger-trains through to Hokitika has also been thoroughly examined, but I regret that it has been found that the traffic offering is quite inadequate to warrant the provision, and that the present connecting service meets requirements.

One of the results of the economies effected in the running of train-services was the amalgamation during the winter months of the Auckland-Thames and Auckland-Rotorua expresses. Following the usual custom, these trains will be separated as soon as ordinary summer traffic develops, but I am looking forward to the time when the traffic will be maintained sufficiently to warrant the running of these trains separately throughout the whole year.

It is expected that the section of railway between Huarau and Portland will be ready for the running of through express services during this summer. The schedules for the through trains and other trains affected have been completed in readiness for the inauguration of the service when the necessary certificates from the Engineers as to the section have been received. The time-table provides for a ten-hour journey from Auckland to Opua.

A considerable handicap in the economical working of goods traffic in the Dominion is the running of what are commonly termed "mixed trains." A good deal of attention is being directed to this question at the present time, and with the advent of the self-propelled rail-cars there is every reason to believe that the running of mixed trains can be reduced and more elastic passenger services provided by means of rail-motors, thus enabling goods-trains to more efficiently cope with their proper task.

SUBURBAN SETTLEMENT.

My remarks and proposals in connection with the reductions in suburban fares will indicate the Government's anxiety to foster suburban settlement from the point of view in the first place of bringing about more desirable living-conditions for those employed in our cities, and in the second place of encouraging settlement that will ultimately lead to remunerative train-services.

In this connection the recent action of the Government in deciding to acquire a large area of land in the Hutt Valley calls for special mention. Options for the purchase of certain areas were secured by Mr. W. T. Strand, Mayor of Lower Hutt, and handed over to the Government, which is at present having the various proposals thoroughly investigated with the object of acquiring suitable blocks for cutting up into residential areas. Access will be given to the land by a branch railway. It will then be subdivided and disposed of under the betterment system, the profit derived from the sales of sections going toward the cost of constructing the railway.

ELECTRIFICATION OF SUBURBAN LINES.

Much valuable material has been collected with regard to the electrification of certain suburban sections. The consensus of opinion has been that the time has not yet arrived to convert any of our lines from steam to electricity.

Public agitation continues in various localities, however, for the electrification of suburban sections, and in order to remove as far as possible all doubt as to the wisdom or otherwise of converting any particular section or sections the Government invited quotations for the cost of furnishing a report with regard to the suburban sections of the four main centres, and many leading firms have submitted prices either to the High Commissioner or directly to the Department. It has been decided to obtain a report from Messrs. Merz and McLellan, Consulting Engineers, London, who carried out the electrification of the Melbourne suburban system, and who are considered to be among the leading authorities of the world with regard to such questions. Information has already been supplied to the firm, and representatives will be in New Zealand in November of this year.

MOTOR-TRAINS.

It was fully anticipated that at least three motor-trains would have been in active commission ere this, but owing to various reasons I regret it is not possible for me to be able to furnish any useful information so far as actual experience of working on our own lines is concerned. Orders were placed in December last for one Sentinel steam-car, one Clayton steam-car, and a Leyland internal-combustion engine to be fitted to a car to be designed and constructed in the Department's own shops. The latter engine duly arrived in July, and the vehicle is at present under construction. With regard to the two steam-cars, owing to various points being raised by the Government's Consulting Engineers in England concerning the design and other matters, it is not anticipated that the cars will be available in the Dominion for use much before the end of October.

In addition, arrangements were made with Mr. E. B. Buckhurst, a motor engineer of Christchurch, to install a six-cylinder internal-combustion engine to a light type of railway-carriage. This car should be available towards the end of October.

The cars will be placed in commission immediately they are available, and so far as can be seen at present will be tried out on various sections throughout the Dominion, such as Wanganui-Marton, Penrose-Papakura, Wellington-Johnsonville, Wellington-Upper Hutt, Christchurch-Lyttelton, Christchurch-Templeton, Dunedin-Port Chalmers, Invercargill-Tuatapere, Invercargill-Lumsden, Gore-Switzers, Timaru-Fairlie, Woodville-Featherston, Napier-Waipukurau, Thames-Frankton, and others.

In order to secure practical expert knowledge of the motor-trains in use on the railways in the Australian States, Mr. S. H. Jenkinson, Chief Draughtsman, visited Australia, and has furnished a valuable report dealing with his observations.

Mr. Jenkinson closely inspected the design and construction of the various petrol rail motor-cars on the Australian railways (with the exception of Western Australia), and travelled on all the types in service at the time of his visit. He also examined the traffic conditions of the sections on which the cars were running, and travelled over sections representative of each type of service.

It will be clear from the portions of his report attached to this Statement that self-propelled cars are being successfully operated in some of the Australian States, and the results obtained are, in my opinion, sufficient justification for this class of vehicle to be adopted more extensively on some portions of our system.

In addition to the types already dealt with, inquiries are being made with regard to other kinds of self-propelled cars, such as electrical storage battery, and any other types that have been successful in other countries.

LEVEL CROSSINGS.

As is shown in the statement of the Signal Engineer, attached to the General Manager's report, a number of crossings have been fitted during the year with

warning-devices. Apart from these, negotiations have taken place with the local bodies concerned with regard to converting level crossings by means of subways and overbridges, but satisfactory results are often rendered difficult by the unwillingness on the part of local bodies to assist in any way to defray the cost, expecting the Department to carry the work out entirely at its own cost.

RAILWAY-IMPROVEMENT.

As I have already indicated, matters under this heading are dealt with in a separate statement.

A considerable increase in siding facilities at various stations has been effected, the principal works being Whangarei, which are being completely enlarged and rearranged in anticipation of the opening of through communication with Auckland.

A subterminal station is in course of construction at Maungaturoto. At Rolleston and Arthur's Pass complete rearrangements have been made to provide for the through West Coast traffic. At Hokitika and Otira Stations rearrangements have also been completed.

In Wellington a commencement has been made with the sea-wall to retain filling for the new station-yard.

HOUSING.

The housing-factory commenced operations in July, 1923. The number of five-roomed cottages cut to date is 255; number completed and in occupation, 61; number in course of erection, 192. Cutting-capacity of factory approximately 400 houses per annum.

The housing programme contemplates the provision of three hundred houses per annum, and the total number of houses dealt with by the Architectural Branch is 438.

In addition to housing, the branch erected the refreshment and dining rooms, girls' hostel, men's quarters, and store-room at Otira, and the erection of the refreshment and dining rooms, storeroom, hostel, and men's quarters at Maungaturoto is in hand.

Other matters which have engaged my attention during the year are as follows:—

FINANCE.

With reference to my remarks earlier in this Statement, I am definitely of the opinion that the Railway finance and accounts should be on an entirely different footing, and brought into line with commercial practice as far as may be possible.

The first and most important step in this direction is the establishment of a separate Railway Account, into which all earnings will be paid, and out of which all working-expenses met, as well as superannuation subsidies, actual interest on fixed and floating capital, and renewals and replacements.

On the other hand, the Railway Account will be credited with all services rendered by it, including the loss on operation of unpayable lines.

It is now generally recognized that the compiling and publishing of facts and figures relating to financial results in proper form will dispel ignorance and inspire confidence in the administration.

In the past the New Zealand Railway Department's accounts have been prepared essentially on a *cash* basis. All revenue earned is paid into the Consolidated Fund, and all expenditure is provided annually by Parliament.

It might be contended that the proposals outlined will weaken parliamentary control, but that is not so. In South Africa, for instance, the State Railways are run as a separate account. Interest on the loan-moneys provided by the Treasury and invested in the undertaking is a charge against the earnings of the undertaking. Parliamentary control is not diminished, as (a) all accounts are subject to parliamentary appropriation each year, and (b) all investments of reserves, &c., are under the control of the Public Debt Commissioners.

The approximate capital cost of the tunnel section was £1,500,000. The estimated loss per annum on working, including interest, will probably not be less than £70,000 per annum. The expenses of working the tunnel section are particularly heavy, as special electric locomotives have had to be provided, and, owing to the very heavy grade, the load that can be taken through the tunnel by each train is limited in a marked degree, and, speaking generally, the business consists of one-way traffic only. It is very difficult at this juncture to say what increase in traffic would be required to make the new section of line a payable proposition, but it would require to more than double if the existing rates are maintained.

The coal and timber traffic, which is the main portion of the traffic from the west to the east coast, carries comparatively low rates, which allow very little, if any, margin over the working expenses involved in working such traffic.

Notwithstanding the higher rates in operation from the 4th August, 1923, until February, 1924, under the Public Works regime the net result of operating the tunnel was a loss of £27,305 for approximately forty weeks.

In February, 1924, the rates were reduced by charging fares and freights on continuous mileage. The effect is strikingly illustrated by the figures showing the results of operating the line for the three periods the line has been operating since the altered system of charging was invoked. This shows a net loss of £13,324; and it will be noted that the working-costs have exceeded the actual receipts for the three months ended on the 16th August by £379.

The question of improving the financial results on this section has been engaging the serious attention of the officers of the Tariff and Commercial Departments who have been investigating the representations made by the Canterbury Chamber of Commerce and other bodies for the inauguration of back-loading freights between Christchurch and the West Coast, the object being to offer such reductions in freights as will encourage a considerable increase in traffic. It is contended by those interested that the additional traffic secured by the reductions would materially assist in reducing the loss on this section, as at present a large number of trucks which bring coal from the West Coast are hauled back empty. I am particularly desirous of finding means of securing a larger amount of back-loading on this section, but from the information before me I find it impossible to definitely decide that the claims put forward for the special rates are likely to materialize, and until it has been established to my satisfaction I do not propose to decide the question one way or the other.

OTIRA TUNNEL.

Working-expenses and Revenue Account for the Period 4th August, 1923, to 24th May, 1924—Period in which the Line was under the Public Works Department and Special Rates were charged.

To Working-expenses—	£	s.	d.	By Revenue—	£	s.	d.
Salaries and wages ..	8,073	5	6	Passengers	7,192	6	3
Stores and material ..	4,780	8	1	Parcels and mails ..	1,000	0	0
Miscellaneous	4,100	17	0	Goods	25,510	11	5
				Miscellaneous	1,130	6	9
Total working-expenses	16,954	10	7				
Balance	17,878	13	10				
	<u>£34,833</u>	<u>4</u>	<u>5</u>		<u>£34,833</u>	<u>4</u>	<u>5</u>

Net Revenue Account.

	£	s.	d.		£	s.	d.
Interest on approximate capital cost, £1,500,000, at 3½ per cent.	45,184	8	7	Net earnings	17,878	13	10
				Deficiency	27,305	14	9
	<u>£45,184</u>	<u>8</u>	<u>7</u>		<u>£45,184</u>	<u>8</u>	<u>7</u>

Working-expenses and Revenue Account for the Period 25th May, 1924, to 16th August, 1924—Period in which the Line was worked by the Railway Department and ordinary Mileage Rates were charged.

To Working-expenses—	£	s.	d.	By Revenue—	£	s.	d.
Maintenance of way and works	433	16	11	Passengers	327	14	4
Locomotive power	2,642	10	8	Parcels and mails	90	1	4
Signal and electrical works	454	10	5	Goods	3,107	1	7
Traffic expenses	365	2	4	Miscellaneous	59	14	8
Cars and wagons—Renewals and repairs	306	15	3	Rents	366	5	2
Miscellaneous	126	19	11	Total revenue	3,950	17	1
	<u>£4,329</u>	<u>15</u>	<u>6</u>	Loss in working	378	18	5
					<u>£4,329</u>	<u>15</u>	<u>6</u>

Net Revenue Account.

Interest on approximate capital cost, £1,500,000, at 3½ per cent. <th style="text-align: right;">£</th> <th style="text-align: right;">s.</th> <th style="text-align: right;">d.</th> <th style="text-align: left;">Deficiency <th style="text-align: right;">£</th> <th style="text-align: right;">s.</th> <th style="text-align: right;">d.</th> </th>	£	s.	d.	Deficiency <th style="text-align: right;">£</th> <th style="text-align: right;">s.</th> <th style="text-align: right;">d.</th>	£	s.	d.
Loss in working	12,945	0	0		13,323	18	5
	<u>£13,323</u>	<u>18</u>	<u>5</u>		<u>£13,323</u>	<u>18</u>	<u>5</u>

REORGANIZATION OF STAFF.

With regard to retirements, it has been decided as a general policy that all members are to retire on superannuation on completion of forty years' service, or when they otherwise become eligible. Exemptions will only be allowed in exceptional cases. Indeed, up to the present only one or two such cases have arisen. One was due to the fact that no other officer was considered sufficiently experienced to fill the position—that of Chief Accountant. It has been arranged to make an exemption in this case until the end of the present financial year. In the meantime an officer is to be given an opportunity of qualifying for the position.

In my opinion there has been in the past insufficient incentive given to the staff to qualify for the higher and more responsible positions in the service, although this does not now apply to the Civil Engineering Branch.

I propose to arrange that every encouragement be given to officers in the Accountant's Branch, for instance, to become qualified accountants by examination, and that the examination be made an essential qualification for important positions in that branch. It is fully recognized that a system of this kind cannot be built up in a day, but formulating the policy now will act as a very strong incentive to officers to improve their position and incidentally become of more value to the service. The same policy will be extended to other branches, such as the Commercial, where qualifications in railway transport and economics would be specially considered, and so on. In addition, I think better results would be obtained by endeavouring to secure lads as cadets with higher educational qualifications, such as Matriculation or Civil Service Examinations.

The positions of Chief and Assistant Traffic Manager have been abolished, and an additional Assistant General Manager appointed. This change was made with the object of bringing the Head Office into more direct touch with the Traffic Branches and the officers in charge of the various districts.

As will be seen from the diagram attached, the management in the Head Office consists of the General Manager, First Assistant General Manager, and Second Assistant General Manager, the former being responsible for the whole of the transportation and the Commercial Branch, the latter for the tariff, staff, and general matters. The responsibilities appertaining to these positions have been fully defined, and consequently the General Manager has been relieved of a large amount of work connected with those branches which occupied a considerable portion of his time previously. The results of this reorganization are being watched, and changes will be made if found by practical working to be advantageous.

Similar steps have been taken with regard to the position of Chief Engineer, whose duties and scope of authority have also been defined.

It is anticipated that by giving a freer hand and at the same time throwing the full responsibility appertaining to the position on to executive officers much better results will be obtained.

COMMISSION OF INQUIRY.

The presence in New South Wales of Sir Samuel Fay and Sir Vincent Raven, two English railway experts who with three others were engaged by the New South Welsh Government to investigate the railway system in that State, led the New Zealand Government to invite these gentlemen to carry out a similar investigation in the Dominion.

Arrangements have been completed, and it is anticipated the Commission will arrive in the Dominion during the month of October, and that the inquiry will occupy from two to three months. It will include the whole of the Department's operations, and should prove of considerable value in coping with present-day conditions.

APPOINTMENT OF ASSISTANT CHIEF MECHANICAL ENGINEER.

With the taking-over of the electrified section of railway between Arthur's Pass and Otira, and having in view the opinion held in many quarters that electrification should be carried out on other sections, it was considered advisable when the position of Assistant Chief Mechanical Engineer became vacant to advertise abroad for an engineer with a good mechanical training, but more especially with wide experience in electric traction, drawing up estimates for conversion from steam to electricity, and the construction of electrified railways.

Mr. R. P. Sims, who happened to be in the Dominion, made application, and has been selected for the position from a large number of applicants. He was trained as a mechanical engineer in the Crewe Workshops of the London and North-western Railways, and has had very wide experience in England and Canada in hydro and steam-generated electrical plants, and electrified railways.

COAL.

Very little alteration has taken place with regard to the use of New Zealand coal on our railways. As much of the various classes of coal as can be economically used is utilized.

As a result of negotiations with the colliery-owners of the Dominion a full inquiry is at present being held into this important matter, including a full investigation by experts representing the mine-owners and the Government to ascertain whether locomotive firebox designs or other parts can be so altered as to enable New Zealand coal of various classes to be used with satisfactory results. The findings of the Committee should prove of considerable importance, as the Government is particularly anxious to solve the problem in order to reduce as far as possible the large amount of money being paid out of the Dominion's revenue annually for imported coal.

PULVERIZED FUEL.

With regard to the use of pulverized coal, Mr. S. H. Jenkinson reported as follows subsequent to his recent visit to Australia :—

“The only place where I was able to obtain any information about the use of pulverized fuel on locomotives was in Victoria. Here two locomotives of the larger types (the A2 and the D₁ class) have been fitted with the Fuller-Lehigh equipment and tested in service. Various classes of coal from the Newcastle, Lithgow, Bulli, and Illawarra fields were tried, but in every case the results were disappointing, and the equipment has been removed from the locomotive.

“This negative result might have been expected, since the major proportion of the cost of such coals in Victoria is the freight charges, and these had to be paid on the moisture and ash content of the coal as well as on the useful carbon

constituents. The fact, therefore, that the moisture is removed in the drying process had not so much bearing on the question, since freight from New South Wales had already been paid on it. The net result of the trials was that the use of pulverized fuel proved almost exactly as efficient as the use of the same fuel in a solid state, the extra efficiency of pulverized fuel in the boiler-furnace being offset by the extra amount of steam used in the feeding and blowing appliances on the engines, and by the fuel used in drying the coal.

“It is now recognized that no economy can be derived from the use of pulverized fuel unless the moisture is removed from the coal in the vicinity of the coal-mine itself before freight and transport charges have been paid on it. This restricts the process to the brown coals in the Eastern district and to the section centred on the mine, and extending to the limiting distance to which the dry coal may be carried without absorbing fresh moisture.

“In practice this means that the fuel would be pulverized and placed on the tender at Morwell, in the vicinity of the mines, and burned within engine-run radius of that point.

“The Morwell coal is a cheaply mined brown coal containing about 50 per cent. moisture, but costing only 3s. 4d. per ton to mine. Three tons of this coal give one ton of pulverized fuel, since about 50 per cent. of the coal is water and 16 per cent. is consumed in the drying process. The labour and overhead charges in drying and crushing average about 10s. per ton of finished produce. The pulverized fuel will therefore cost about £1 1s. per ton delivered on the tender at Morwell, and can be taken as practically equal to the best Newcastle coal in heating-value. There is, therefore, a possibility that locomotive operation can be cheapened on this section by the use of pulverized fuel.

“Unfortunately, only light engines are allowed to run on the section, and difficulty is being experienced in fitting the equipment to these small firebox engines in such a manner as to give reasonable hope of successful and satisfactory results. Another important factor against the scheme is the loss of flexibility and reliability in the locomotive power. The fact that the engines fitted will be made unsuitable for the use of other fuel, and will therefore be restricted to a short section centring on Morwell, will undoubtedly increase the cost of train-operation, but it is difficult at the present juncture to estimate the increase in monetary terms. The authorities consider that the cost of the experiment is justified, but are not at all sanguine of the ultimate success of the scheme.

“The successful use of pulverized fuel depends entirely on such local circumstances as the cost of the coal at the point where engines can conveniently be coaled, the moisture and ash content of the coal, the number of engines involved, and the length and traffic nature and density of the section.

“It is impossible, therefore, to apply broadly any figures derived from the Victorian experiments to New Zealand conditions. The only point that can be stressed is that the Victorian experiments have shown that on large-firebox engines pulverized coal can be burned to give an efficiency equal to that of similar coal (as dried) in the solid form. This conclusion confirms the opinion that I formed as a result of the experiments carried out at Auckland, and is somewhat disappointing to the advocates of pulverized fuel.”

STRIKE BY AMALGAMATED SOCIETY OF RAILWAY SERVANTS.

Negotiations with the Amalgamated Society of Railway Servants so far as I am concerned commenced in November last, when the executive council of the Amalgamated Society of Railway Servants interviewed me and asked that wages be restored to the 1921 basis and that a Wages Board be set up. I replied that I was then engaged in a very complete investigation of the conditions throughout the Dominion, and arranged with the council that the requests be left in abeyance until I had had an opportunity of completing my inspection in the following March.

The society reopened the matter in February of this year. The president, Mr. Sullivan, had in the meantime resigned the position, and Mr. M. Connolly was appointed in his place. The council protested against any further postponement

of the consideration of their claims, but after some discussion an amicable understanding was arrived at providing for negotiations being reopened on the 14th March—after my return from the South Island.

It was arranged that the society should formulate its claims and go through them with me. In the event of mutual agreement not being arrived at with regard to any points, such matters were to be referred to a Wages Board comprising equal representatives of the society and Department, presided over by a chairman to be agreed upon. The society ratified this agreement.

On the 25th February the society submitted a list of seventy-two claims, including one for an increase of 2s. 6d. a day. The total claims were estimated to cost the Department £862,830 per annum.

In accordance with the arrangement made, I met the society on the 14th March. Very little progress was made, however, as the society's representatives insisted on a definite offer being made by the Government on the first claim—that for an increase of 2s. 6d. per day—without giving me the opportunity of hearing the case for the remainder. I suggested as a ground for discussion that the council should consider the advisability of the weekly hours being extended from forty-four to forty-eight, but this was definitely refused. The discussions were continued for a day or two, the society declining to recede from its attitude in regard to the wages question. On the 17th March it was agreed to discuss all the requests, but on the following day the society asked that proceedings be terminated and matters referred to a Board. This was agreed to, and Mr. H. D. Acland, of Christchurch, was mutually agreed to as chairman, associated with him being Messrs. H. H. Sterling, F. J. Jones, and L. E. C. Hamann, representing the Department, and Messrs. M. Connolly, M. J. Mack, and M. J. O'Connor, representing the society.

The Board commenced its sittings on the 24th March, and sat for eight days. Its activities were terminated on the 10th April by the A.S.R.S. representatives withdrawing owing to the fact that the Board could not see its way to give a decision on wages without considering the rest of the claims.

On the 12th April the executive waited on the Prime Minister and myself, and intimated that the whole matter had been submitted to the society's members by ballot, and asking that the Government come to a decision on the wages question. The Prime Minister pointed out that the action taken with regard to the ballot had more or less tied the Government's hands, but the representations would be placed before Cabinet.

I then asked the representatives of the society if they would agree even at that stage to a further tribunal. They replied that while desiring an understanding on the wages question they would submit the question to their executive council.

Cabinet considered the representations of the society on the 15th April, and decided that it could not see its way to agree to the wages question being dealt with separately, and that the responsibility of the existing position must rest on the society.

Further interviews took place between that time and the 19th April (Easter Saturday), and on that date the representatives of the society notified me that the executive council was prepared to submit the whole of the claims to a fresh tribunal. Cabinet agreed to a further Board, the Chairman to be a Judge of the Supreme Court, but on Easter Monday, the 21st April, the society advised that unless some increase in wages was agreed to instructions would be issued by the society for its members to strike as from midnight.

The matter was further considered by Cabinet, which decided that as the society had failed to take advantage of the opportunities that had been offered by the Government to establish its claims, but had preferred to take matters into its own hands by declaring a strike, the Government had no option but to decline to comply with the demands.

The strike was therefore declared by the A.S.R.S., and took effect as from midnight on the 21st April, and continued until midnight on the 29th April, 1924.

Meantime there took place interviews with representatives of the society until the 29th April, when Cabinet decided that the subject-matter of the demands would not be further discussed until ordinary working was resumed.

Immediately after the termination of the strike I reopened negotiations with the society, and various arrangements were arrived at, including the withdrawal of the society's affiliation with the Alliance of Labour and the safeguarding of the superannuation rights of the men.

The Government considered that the action taken by the society in resorting to direct action cancelled the whole of the arrangements existing at the time of the strike, and that in consequence it was justified in laying down the conditions under which work should be carried on pending a new working agreement being brought into operation. After careful consideration it was decided not to interfere with the conditions of work existing prior to the strike, other than to extend the weekly hours from forty-four to forty-eight, the additional four hours to be paid for at the flat rate of pay, and cancel the clause relating to the payment of overtime over eight hours per day. This meant that overtime would only be paid after forty-eight hours had been worked in the week.

This arrangement came into operation on the 26th May, 1924. Meantime, proposals were being dealt with concerning the setting-up of a Board to consider the claims, and ultimately it was mutually agreed to appoint a Board consisting of the members of the Arbitration Court—His Honour Mr. Justice Frazer and Messrs. Scott and H. Hunter—and Messrs. James Mason, First Assistant General Manager, representing the Railway Department, and Mr. M. J. Mack representing the society. Mr. H. H. Sterling, Second Assistant General Manager, appeared as advocate for the Department, and Mr. M. Connolly for the society. The Board commenced sitting on the 5th June and submitted its report on the 23rd August. The details of the recommendations and subsequent action have already been published.

The Board's report was divided into four parts :—

- (a.) The report of the Board as a whole.
- (b.) The report of the majority of the Board (signed by His Honour Mr. Justice Frazer and Messrs. Mason and Scott).
- (c.) The report of the minority of the Board (signed by Messrs. Hiram Hunter and Mack).
- (d.) A memorandum from Mr. Mason, the Railway Department's representative, in respect of two matters on which he was unable to agree with the other members of the Board.

Cabinet considered the recommendations and decided to accept those in (a) and (b) without reservation.

The society, however, was dissatisfied with some of the recommendations, and urged that the payment of overtime for daily time worked in excess of eight hours be reverted to, instead of after ten hours as recommended by the Board ; that night rates be not interfered with ; that time worked on Sundays in commencing or completing the week's shift be paid at double rate instead of rate and a half as recommended ; and that no alteration be made on the lines recommended in connection with holiday pay.

These points were placed before Cabinet on the 15th September, 1924, when it was decided to adhere to the previous decision.

The results of the alterations in the pay and working conditions on the Department's finances have been very fully investigated. It will be remembered that when the Government extended the weekly hours after the strike from forty-four to forty-eight with a relative increase in wages, there was no intention to indiscriminately dismiss the surplus of staff brought about by the extension of the hours. Consequently the expenditure in additional wages under this heading will be considerable until such time as the surplus staff can be absorbed by utilizing it to fill vacancies brought about by retirements, resignations, dismissals, deaths, &c. Apart from this, it is found that the new conditions will allow much more elasticity in practical working. Allowing for increased efficiency in work, and the savings effected by the changes, and setting off against these the additional expenditure incurred by the increase in the overtime rates, &c., it is estimated that for the first year the increased expenditure and the savings in various directions will more or less balance, but that considerable economy will be effected by the automatic reduction of staff.

At the present time the position may be summarized as follows:—

Approximate annual cost of additional four hours per week per man	£ 230,000	Reductions recommended by the Board	£ 15,360
Cost of concessions recommended by Board	25,172	Cost of amount of time worked between forty-four and forty-eight hours per week prior to strike	63,500
Balance in favour of Department	17,008	Estimated value of increased output of work—	
		Permanent-way	68,000
		Locomotive and Maintenance Shops	96,600
		Traffic and miscellaneous	28,720
	<u>£272,180</u>		<u>£272,180</u>

It is anticipated that most of the surplus staff will be absorbed in a year. In the case of the locomotive and maintenance staff absorption would extend over a longer period, but the services of the surplus will be utilized in connection with railway-improvement works which are being put in hand in various parts of the Dominion.

Based on conservative estimates, the position from the point of view of *expenditure* may be expected to be somewhat as follows:—

Cost of additional four hours per week per man	£ 230,000	£
Cost of concessions recommended by Board	25,172	
	<u>255,172</u>	
<i>Less—</i>		
Estimated cost of time between forty-four and forty-eight hours that would have been worked under forty-four-hour week	63,500	
Savings resulting from recommendations of Board	15,360	
Estimated saving by absorption of extra staff during year, say	50,000	
	<u>128,860</u>	
Actual increased expenditure during year		<u>£126,312</u>

As has already been stated, the position so far as actual outlay is concerned will be a constantly improving one until all the effects of the alterations become fully operative. In addition, the Department will obtain service for the increased expenditure—in fact, it will receive an excess as shown in the first statement above.

The estimated total cost of all the claims made by the A.S.R.S. and placed before the last Board was slightly under £600,000.

The above statements have been worked out on the basis of Second Division men affected, including the workshops men, who are to be given an opportunity of deciding by ballot whether they will accept a forty-four-hours week with forty-four hours' pay, or a forty-eight-hours week with forty-eight hours' pay. Should they accept the forty-four-hours week the figures shown above would require to be amended accordingly.

COMMERCIAL BRANCH.

With the advent and rapid development of motor transport in the Dominion, and the steady increase in sea-borne traffic, it has become abundantly clear that if the Railways are to hold their own in open competition for traffic, commercial methods would have to be adopted so far as that may be possible in a State-owned enterprise.

It is well known that valuable concessions are granted by the Railways in many directions, and it is equally well known that many primary producers of this Dominion utilize the railways for the carriage of goods which receive preferential rates, and patronize our motor competitors for the carriage of the higher-classified articles.

The branch comes under the administration of the First Assistant General Manager, who is responsible to the General Manager for the transportation side of the Department's activities. When, of course, the problem becomes a matter of rating, it will require to be dealt with in consultation with the Rating Branch as controlled by the Second Assistant General Manager.

The first step taken to cope with the problem was to carefully select officers for the Commercial Branch who were considered specially suitable for the work. Care has been taken to appoint officers who are able to impart their knowledge to the general staff in the matter of securing traffic and dealing generally with the Department's clients. This constitutes one of the most important aspects of the new branch's work, and when properly established will have a very marked effect.

Counteracting motor competition was the next matter in order of importance that had to be taken in hand. The investigation will include—(1) Cause ; (2) where most effective ; (3) nature of goods carried each way ; (4) classification of such goods on railway tariff ; (5) difference in rail and motor charges ; (6) means suggested to recover or secure business ; (7) arrangements with carrying firms to feed railways ; (8) Department competing with motors ; (9) use of more economical method of transport.

A case in point where definite steps were taken is the competition by motor-buses on the Hutt Road between Lower Hutt and Wellington.

As a result of the investigations made by the Commercial Branch, arrangements were made to issue combined bus and train "shopping tickets," available for day of issue only, and an agreement entered into with certain bus-proprietors to pick up passengers at certain points and convey them to the station to connect with railway services, which have been so arranged as to provide a more satisfactory service. The whole of the arrangements have been fully advertised, and there is every indication that the methods adopted will prove effective.

SECURING NEW BUSINESS.

In the matter of securing new business the officers of the Commercial Branch will inquire into the following points:—

1. Offering additional facilities to travel in connection with race meetings, sports, shows, and other large public events.
2. Arranging excursions and house picnics, school picnics, especially at larger centres.
3. Approaching Chambers of Commerce, Agricultural and Pastoral Associations, Farmers' Unions, and so on, to secure their business.
4. Judicious advertising.
5. Through inter-Island goods traffic and passenger tickets, including boat and railway.
6. The consideration of the question of back-loading rates.

Those attached to the branch will organize conferences with the staff at larger centres, and with outside organizations such as Chambers of Commerce, Farmers' Unions, Industrial Associations, Progress Leagues, and others. Fluctuations in or loss of business will be promptly dealt with, and cases of dissatisfaction with services rendered will be gone into on the spot with those concerned. In fact, everything that will tend to improve financially the Department's operations, and extend a more satisfactory service to the public, will come within the scope of the Commercial Branch. The Department is out to seek business as well as to recover that lost. Business agents will visit the various localities where large events are being held with the object of co-operating with the governing bodies to provide facilities that will encourage people to travel to the events by rail.

Additional booking facilities have been arranged for at Christchurch by way of a Central Booking-office, situated in Hereford Street about midway between Manchester and High Streets. This location is extremely convenient, and will no doubt be very much appreciated and utilized by the travelling public.

MR. S. H. JENKINSON'S REMARKS IN CONNECTION WITH HIS VISIT TO AUSTRALIA
TO INVESTIGATE SELF-PROPELLED CARS.

PETROL RAIL-CARS.

So far as petrol rail-cars are concerned, it is clear from Mr. Jenkinson's report that certain types have been run successfully in New South Wales and Victoria, the working-costs averaging in the former for the type now adopted about 1s. 3d. per car-mile. He states that petrol-cars have not been found suitable for suburban services. They do not lend themselves readily to frequent stopping and starting, and the acceleration is very low, due to the necessity for changing gears. Running up to speed on a slipping clutch, which is necessary at starting, leads to a large amount of wear-and-tear, and the changing of gears throws heavy shocks on the engine and gear. In road service these troubles are not so serious, due to the smaller weight of the cars, and they are masked by the cushioning effect of the pneumatic tires. Whatever the reason, the fact remains that throughout Australia it is agreed that petrol rail-cars have proved unsuitable for suburban work, and Mr. Jenkinson's observations confirm this. The only cases where these cars are running on short services are at Mildura and Frankton, in Victoria. These are runs of seven and ten miles in length, but are quite distinct from suburban working in the character of the traffic.

The services for which petrol rail-cars have been found suitable are country branch lines of from fifty to one hundred and fifty miles in length. The conditions in Australia are, of course, very different from those in New Zealand, but typical sections in this Dominion which correspond more or less closely with the runs referred to are, say, Invercargill-Tuatapere, Invercargill-Lumsden, Gore-Switters, Timaru-Fairlie, Woodville-Featherston, Napier-Waipukurau, and Thames-Frankton. In Australia mixed trains are used very much less than in New Zealand, although the configuration of the railway systems there favour their use to a greater extent than here. The practice adopted as far as possible in Australia is to run one (or more) passenger-trains per day and a goods-train at infrequent intervals, say, bi-weekly. Under these conditions there is a good field for motor-cars in New South Wales, but so far one particular car is the only promising one in sight, and about twenty of these should be in service within a year. In Victoria the closer population calls for larger trains, and in the majority of cases a train carrying from one hundred and twenty to one hundred and fifty people is desired. There is no prospect of this demand being met by petrol rail-cars, but a Leyland car is under construction, and will be tested with a trailer.

DESIGN OF CAR.

The small low-powered rail-cars have not proved suitable for traffic purposes, nor have they given reasonable mechanical reliability on the road. Vibration is excessive with light cars, and easy running can only be secured by building cars of reasonably long wheel-base. For these reasons the use of small cars, either singly or with trailers, is not being extended. Design has crystallized round bogie cars seating from fifty to seventy people, weighing 12 to 15 tons, and from 45 ft. to 60 ft. in length. To give such a car a reasonable reserve of power, and allow the engine to work at an economical rate with an expectation of fair service, a petrol-engine of about 100 horse-power is required. It is very difficult to construct transmission-gears and clutches capable of transmitting any higher power, and from all directions the designer is being driven to the use of such sizes and powers of cars as I have mentioned. Mr. Jenkinson states that his experience convinces him that the engine must be placed at one end of the car where the driver can be close to the engine and tell at once if anything is going wrong. Neglect of this precaution has already led to very expensive mishaps in petrol rail-car working, and will, Mr. Jenkinson is convinced, lead to more. This necessarily means that the car can run in one direction only in ordinary service, but the provision of triangles or turntables is a simple matter for such light vehicles.

CONCLUSIONS.

For suburban services where frequent stopping and starting and high acceleration is necessary, petrol-cars are quite unsuitable. Light trains on such lines should be run with steam-cars or with light steam-locomotives driven by one man.

There is a fairly large field in New Zealand, however, where the petrol-car could be used. This lies in those country districts where passenger service could be reasonably maintained by a car running at thirty to forty-five miles per hour and seating fifty to seventy people. A petrol-car could be designed which would be mechanically economical and reliable for such work, and whose weight would not exceed 15 tons. This car would climb grades up to 1 in 60 in top gear, and up to 1 in 30 at a lower speed. Mr. Jenkinson does not consider that a petrol-engine of less than 100 horse-power will give continued and satisfactory service in such work, and the six-cylinder engine already landed for the Department is a very suitable one for this car. Mr. Jenkinson recommends that such a car be built and tested in service. It would be a one-class car, with a luggage, parcel, and mail compartment, but trailers, either for goods or passengers, could only be hauled under the most favourable conditions, so rare as to be negligible. The working-costs per car-mile would be in the neighbourhood of 1s. 6d. in average service.

The other competitor in such service would be the light steam-locomotive driven by one man.

Beyond this again is a larger field in both country and suburban service where the trains are still light, the number of passengers lying between, say, seventy and two hundred. Petrol-cars are of no use in this service, and he strongly believes that a light steam-locomotive could be designed which would deal with such work economically and reliably, and which would be capable of being driven by one man. This is the type of locomotive referred to in Mr. Jenkinson's report on steam rail-cars, and he recommends that one be built and tested in service against petrol and steam rail-cars. He feels sure that its economy, reliability, power, and flexibility will make it a serious competitor of the petrol rail-car in the latter's own field, and it will cover services, such as suburban and light passenger-trains, that the petrol-car is quite unfitted for.

With regard to steam rail-cars, Mr. Jenkinson reported as follows :—

“There are several instances in Australia where small steam-locomotives operated by one man are hauling trains of one or two cars on isolated short sections—*e.g.*, Yass-Yass Junction. But in all these cases the locomotives used are not specially designed, but are simply tank engines of a light and obsolete type, and the services are of an unimportant and irregular character.

“In Rockhampton, however, a neat design of steam-coach is operating very successfully on the Parkhurst and Lake Creek suburban runs. These are genuine suburban services run over the main line, the sections being seven miles long with several stations, and the time for the run is thirty minutes. Some of the stops are at street intersections where no platforms exist, and in every way the service approximates a tramway service. This is, therefore, a difficult service to work, but the small steam-car is working it in a very efficient and entirely satisfactory way.

“The car is a light four-wheeled car of tram-car type about 30 ft. long, with 8 ft. wheel-base and 33 in. wheels, seating forty passengers, and weighing 11½ tons. A light four-wheeled trailer about 25 ft. long, with 8 ft. wheel-base and 33 in. wheels, seating forty passengers, and weighing about 7 tons, is hauled when necessary. The fuel used is coke, and the speed of forty miles per hour on the level is attained, and about twenty-five miles per hour up a 1-in-60 grade. The main line runs for about a mile through a busy street, and here the car stops at each corner, so the time, thirty minutes, for over seven miles with eight to twelve stops is quite smart. The trailer is hauled on one-third of the trips, and the working-costs are just under 1s. per train-mile.

“This is the most economical and reliable motor coach or train operating in Australia, and appears to solve the difficult problem of suburban working in a thoroughly efficient manner. The design is practically foolproof, the boiler being constructed of steel tubes in such a way that there is no possibility of any serious explosion, while they are practically unharmed in case of the water getting low

or even being evaporated. In such a case the boiler becomes a steam superheater, and no damage occurs. The engine is a solid-built quick-running four-cylinder tandem compound that can be entirely removed from the under-frame in a few hours if necessary. Such a service is outside the field of the petrol-car, but in any case the fuel costs here are only one-half the cost of the petrol consumed by the lightest and most economical car running in New South Wales in much easier service and seating only thirty passengers. There is not the slightest doubt that for runs up to twenty miles in length with frequent stops this is easily the best vehicle that has been designed, and no petrol-car has yet been designed that will approach it in economy, reliability, freedom from repairs, and general satisfaction.

“The drawback to the car lies in the fact that the boiler is a very small one, and the fuel and water capacity of the car is low. It is therefore unsuited for runs of longer than twenty miles, and has no reserve of power to deal with heavier and faster traffic if required. While it is a much lighter, cheaper, and more efficient design than either the ‘Sentinel’ or the ‘Clayton’ steam-coaches, it has the same general limitations, and I am more than ever firmly convinced that a more powerful and flexible design can be secured by the use of a small locomotive specially designed for one-man operation. It is possible to design a light tank locomotive with 300–400 square feet of heating-surface and with about 10 square feet of grate-area which would not weigh more than 15 tons, and would be capable of hauling three light cars on the level at forty-five miles per hour, and on a grade of 1 in 50 with $7\frac{1}{2}$ -chain curves at about twenty miles per hour. This locomotive could be easily handled by one man, as the large boiler, firebox, and grate would act as a reservoir of power, and need only occasional attention.

“The fuel-consumption would not be more than 15–18 lb. per engine-mile. There are plenty of old cars available for such a service, and the cost of the locomotive would not exceed £1,800 erected, and if a lot of five were ordered or built locally the cost would be about £1,500.

“The locomotive I have in mind is shown on attached sketch, and is a special design which could be built cheaply and quickly in New Zealand. The fittings and equipment would all have to be specially designed for one-man working to give the best results, but this is not a difficult proposition, and in all other respects the locomotive would closely follow standard practice, although the idea appears quite a novel and original one.

“Such a locomotive could handle suburban motor traffic as efficiently as the steam-car does at Rockhampton; it could handle light country motor traffic up to seventy passengers at least as cheaply and efficiently as the petrol-car could, and in addition it could handle light passenger-trains on practically any section which would seat up to one hundred and fifty people with ordinary cars or, if special cars were designed, up to two hundred.

“I recommend that such an engine be built for trial. With the experience gained from the Rockhampton coach, I have no hesitation in saying that such an engine is the most promising method of dealing with light traffic, and that there is an excellent field for such in New Zealand.”

Mr. Jenkinson’s recommendation that a light engine be constructed was supported by the General Manager, and has been duly approved, as the Government is most anxious to explore every possible avenue of reducing working-expenses.

RESULTS OF WORKING.

The following is a summary of the results of working for the year ended 31st March, 1924, as compared with 1923:—

PARTICULARS.	Year ended 31st March	
	1924.	1923.
Total miles open for traffic	3,053	3,037
Average miles open for year	3,044	3,036
Capital cost of opened and unopened lines	£48,738,821	£46,851,071
Capital cost of open lines	£41,399,427	£40,275,161
Capital cost per mile of open lines	£13,560	£13,261
Gross earnings	£6,984,211	£6,727,802
Working-expenses	£5,403,766	£5,502,497
NET PROFIT ON WORKING	£1,580,445	£1,225,305
PERCENTAGE OF PROFIT TO CAPITAL INVESTED	3·83	3·04
PERCENTAGE OF WORKING-EXPENSES TO EARNINGS	77·37	81·79
Earnings per average mile open	£2,291	£2,219
Working-expenses per average mile open	£1,772	£1,813
NET EARNINGS PER AVERAGE MILE OPEN	£519	£406
Earnings per train-mile	d. 185·50	d. 193·18
Working-expenses per train-mile	143·43	157·81
NET EARNINGS PER TRAIN-MILE	42·07	35·37
Passengers, ordinary	13,836,311	14,256,610
Season tickets	525,744	485,681
Goods tonnage	6,519,457	6,234,807
Live-stock tonnage	406,060	383,781
Train-mileage	9,024,503	8,346,731
Locomotives	655	639
Passenger-cars	1,527	1,498
Wagons and brake-vans	26,195	26,106

In view of the existing conditions it is still necessary to take a conservative view in making a forecast for the Railway revenue for the coming year. I, however, anticipate the revenue will reach £7,000,000 and the expenditure £6,050,000.

ANNUAL REPORT OF THE GENERAL MANAGER OF THE NEW ZEALAND
GOVERNMENT RAILWAYS.

SIR,— New Zealand Government Railways, Head Office, Wellington, 17th September, 1924.

I have the honour to report on the working of the railways for the financial year ended 31st March, 1924.

The Kaikohe-Okaihau Section, 8 miles 22 chains; the Tarawhati-Donnelly's Crossing Section, 4 miles 53 chains; the Napier-Eskdale Section, 11 miles 67 chains; and the Runanga-Rapahoe Section, 2 miles 27 chains, were opened during the year, making the total mileage open for traffic on the 31st March 3,053 miles.

The capital invested in the lines open for traffic, including the steamers and plant on Lake Wakatipu, on the 31st March, 1924, was £41,399,427, as against £40,275,161 for the previous year, an increase of £1,124,266. This amount includes £366,648, construction charges on lines already taken over from the Public Works Department; £643,648 on new works charged against Capital Account under "Additions to open lines"; £20,520 expended under the Railway Improvement Authorization Act, 1914; and the Cape Foulwind line, £93,450.

The gross receipts for the year amounted to £6,984,211, as against £6,727,802 for the previous year, an increase of £256,409.

The net revenue, £1,580,445, is equal to a return of 3·83 per cent. on the capital invested in the lines open for traffic, and 3·24 per cent. on the capital invested in the opened and unopened lines.

The train-mileage for the year, 9,024,503, was 677,772 more than the previous year. The lines on which the additional mileage was run are—Whangarei, 11,837; Kaihu, 3,020; North Island Main Trunk, 437,542; South Island Main Trunk, 156,800; Westland, 78,902; and Nelson, 623. Decreases totalling 10,952 miles were made on the Gisborne, Westport, and Picton Sections.

Floods and slips during the year have been more extensive than usual, the railway-lines being considerably damaged thereby in the Hawke's Bay, Christchurch, and Dunedin districts. During June and July a number of slips (but not of an extensive nature) blocked traffic to some extent in the Ohakune district. Unfortunately, one of these slips caused a very regrettable accident to the south-bound express at Ongarue on the 6th July, 1923.

The following figures, which include delays from every cause, and give the record of the late arrival at destination of the principal trains during the year, indicate that—notwithstanding the difficulties experienced in connection with slips, floods, and other unforeseen circumstances—the trains have, as a whole, run well up to time:—

	Average Late Arrival.	
	Min.	Min.
Long-distance passenger-trains	3·51	2·57
Suburban trains	0·71	0·61
Long-distance mixed trains	4·26	3·66

against 2·57 last year.

The number of ordinary passengers carried during the year was 13,836,311, a decrease of 420,299 when compared with last year. 433,185 passengers were carried at holiday excursion fares, 114,701 children and teachers and 86,047 adults at the schools, factories, and friendly-societies rates.

Season tickets issued numbered 525,744, an increase of 40,063. Workers' twelve-trip tickets issued numbered 133,002, an increase of 5,990; and workmen's weekly tickets issued on suburban lines numbered 313,111, an increase of 31,891.

The goods and live-stock tonnage was 6,925,517 tons, an increase of 306,929 tons over the preceding year. The increases were:—

Cattle	26,504	head.
Sheep and pigs	356,208	,,
Timber	60,903	tons.
Other goods (including minerals)	223,747	,,

The increase in general goods was 64,010 tons, and in minerals 159,737 tons, mainly represented by traffic under the heads of dairy-produce, grain and general merchandise, and native coal.

The increase in the number of cattle carried was due to the operation of Australian buyers in the early part of the year, and the unsatisfactory weather conditions in certain parts of the Dominion causing the culling of herds.

The increase in the movement of sheep this year was caused by the freezing-works commencing operations this season earlier than usual. The closing of certain works necessitated the railing of sheep which had previously been driven by road, and a shortage of feed in the south making it necessary to depasture certain flocks. The increases were—North Island, 198,348 sheep; and South Island, 157,860 sheep.

The increase in timber tonnage is attributable to increased activity in the building trades and the importation of poles for electric-power lines.

The coal railed from the Westport mines was 454,851 tons—a decrease of 131,833 tons on the previous year's traffic. The output from mines operated by co-operative parties increased by 24,297 tons. The fluctuations were due to the closing of certain mines for a period of four months on account of labour troubles, which did not affect the co-operative mines.

The output from mines in the Greymouth district was 329,565 tons, as against 276,732 tons last year, an increase of 52,833 tons. The opening of the Otira Tunnel has provided improved facilities for catering for the Canterbury markets.

The output from the mining area in the Wairio district, Southland, served by the Ohai Railway, was 26,041 tons more than last year, but the Nightcaps and other mines in the same neighbourhood fell off 5,316 tons.

The average number of men employed for the year was 16,353, as against 15,728 for the previous year.

Thirty-three members of the Second Division were promoted to the First Division, 505 members resigned, 118 retired on superannuation, 54 died, 104 were dismissed, and 1,153 engaged.

The sum of £27,257 16s. 3d. was paid under the Workers' Compensation Act during the year to members who sustained injuries while in the execution of their duty.

Nineteen new engines, increasing the total traction power by 4·19 per cent., were added to the locomotive stock. Two Class AB and seven heavy tank engines, Class Ws, were built in the Government Railway workshops; five Class AB engines were built under contract by Messrs. A. and G. Price (Limited), of Thames; the balance of engines added to stock (*i.e.*, five) completed the contract with the North British Locomotive Company (Limited), of Glasgow. Three old engines were condemned and written off stock.

Thirty-seven bogie cars, one bogie brake-van, thirty-one bogie and fifty-eight four-wheeled wagons were built in the Department's workshops.

The rolling-stock on order at the close of the year comprised thirty-three engines, 106 cars, four bogie brake-vans, and 137 bogie and 472 four-wheeled wagons.

Four thousand eight hundred and seventy-two car, van, and wagon axles were replaced during the year with modern steel axles.

The work of equipping the engines and rolling-stock on the Westland Section with the Westinghouse brake is well in hand, and will be completed early this year.

The permanent-way, buildings, structures, and appliances have been efficiently maintained, and a considerable number of improvements have been made in the accommodation at various stations.

Eighty-one and three-quarter miles of track were relaid, and 235,372 new sleepers and 202,414 cubic yards of ballast placed in the track during the year.

Automatic signalling with three-position colour light signals for single-line working was brought into use between Rolleston and Arthur's Pass (seventy-three miles) during the year, and is working satisfactorily. The work of installing automatic signalling between Otira and Stillwater (single line), and between Auckland and Penrose and from Addington to Rolleston (double line) is now in hand.

The tablet system was installed between Arthur's Pass and Otira.

Complete electric-power signalling and interlocking has been installed at Rolleston, Springfield, Arthur's Pass, and Otira Stations.

Three hundred and four stations are now equipped with fixed signals, and 106 are interlocked.

Traffic is now controlled by—

	Miles.
Tablet system (single line)	1,653
Lock-and-block (double line)	35
Three-position colour light and upper quadrant signals—	
Single line	81
Double line	12

The railway telegraph and telephone system has been extended, and now comprises 277 Morse sets, 1,773 telephones, 339 electric bells, 8,635 miles of wire, and 2,758 miles of poles.

REVENUE.

The gross revenue for the year amounted to £6,984,211, of which the North Island system yielded £4,197,393, an increase of £187,716, and the South Island system £2,786,818, an increase of £68,693 on the previous year's figures. The increase from the whole system, including Lake Wakatipu, was thus £256,409 on the earning of the previous year, but £15,789 below the estimate, due principally to the miners' strike at Westport during the period September to January, and traffic hold-ups on account of slips, floods, &c.

The particulars of the revenue earned are as follows:—

	1924.	1923.
	£	£
Passengers, ordinary	2,136,999	2,216,514
Season tickets	212,601	204,106
Parcels, luggage, mails	406,832	393,322
Goods	3,953,213	3,671,008
Miscellaneous, rents, &c.	274,566	242,852
	<u>£6,984,211</u>	<u>£6,727,802</u>

The gross receipts per train-mile for all lines were 185·50d., as against 193·18d. for the preceding year, a decrease of 7·68d. per train-mile.

The North Island main line and branches gave a return of 184·92d. per train-mile, against 193·20d. for the previous year, a decrease of 8·28d.

The South Island main line and branches produced 185·70d. per train mile, against 192·40d. last year, a decrease of 6·70d.

The earnings from the Lake Wakatipu steamers amounted to £8,872, a decrease of £478.

The net revenue, £1,580,445, was equal to a return of 3·83 per cent. on the capital invested in the lines open for traffic (£41,399,427), and 3·24 per cent. on the capital invested in the opened and unopened lines (£48,738,821).

EXPENDITURE.

The working expenditure for the year under review (including £10,456, the cost of working the Lake Wakatipu traffic) amounted to £5,403,766, a decrease of £98,731 on the expenditure for the previous year, and £646,234 below the estimate.

The ratio of expenditure to earnings was 77·37, as compared with 81·79 for the preceding year, a decrease of 4·42.

The particulars are as follows:—

	Expenditure.		Per Cent. of Revenue.	
	1923-24.	1922-23.	1923-24.	1922-23.
	£	£	£	£
Traffic	1,530,652	1,527,033	21·94	22·73
Locomotive	2,444,058	2,657,153	35·04	39·55
Maintenance	1,143,281	1,040,892	16·39	15·49
Signal and electrical	70,912	67,425	1·02	1·01
Management	204,407	195,894	2·93	2·91
	<u>5,393,310</u>	<u>5,488,397</u>	<u>77·32</u>	<u>81·69</u>
Lake Wakatipu steamers	10,456	14,100	0·05	0·10
	<u>£5,403,766</u>	<u>£5,502,497</u>	<u>77·37</u>	<u>81·79</u>

There was a decrease of £174,345 in stores expenditure, and a decrease of £18,143 in miscellaneous. The expenditure on wages and services shows an increase of £93,757.

The sum of £340,483 was expended in the Maintenance Branch and charged to capital under the head "Additions to open lines." These comprise additions to station-buildings; extension of sidings, bridge-work, and subways; additions to workshops; tablet, telegraph, and telephone facilities; signalling and interlocking; and purchase of land.

In the Locomotive Branch £285,991 was expended in the provision of additional rolling-stock, tarpaulins, Westinghouse brake, steam-heating, electric lights for engines and cars, and workshop machinery.

The rolling-stock in respect of which the charges were incurred comprised nineteen locomotives, thirty-seven cars, one bogie brake-van, and thirty-one bogie and fifty-eight four-wheeled wagons completed on 31st March, 1924; and twenty-two locomotives, 106 carriages, five brake-vans, and 137 bogie and 472 four-wheeled wagons incomplete but in hand on that date.

Wages Expenditure.

			Year ended	Year ended	+ Increase.
			31/3/1924.	31/3/1923.	— Decrease.
			£	£	£
For time worked between 6 a.m. and 10 p.m. .. .. .	..	..	3,786,402	3,651,798	+134,604
For time worked between 10 p.m. and 6 a.m. .. .. .	..	..	169,488	151,175	+18,313
For departmental holidays and Sundays .. .. .	..	..	59,542	74,915	—15,373
For night allowance paid to members of Second Division .. .. .	..	..	55,469	50,872	+4,597
Totals .. .. .	..	..	<u>£4,070,901</u>	<u>£3,928,760</u>	<u>+£142,141</u>

The following figures indicate the advance in wages and salaries exclusive of additions to open lines and railway authorization works since 1st April, 1914:—

Year.	Gross Amount.	Increase.			
		Over 1914.		Over 1919.	
		Amount.	Per Cent.	Amount.	Per Cent.
	£	£		£	
1914	1,966,868	..	..	..	..
1919	2,277,142	310,274	15·78	..	..
1922	3,826,369	1,859,501	94·54	1,549,227	68·03
1923	3,448,942	1,482,074	75·35	1,171,800	51·46
1924	3,542,699	1,575,831	80·12	1,265,557	55·57

It will be seen that the increase in the wages-bill for 1924 compared with 1914 is £1,575,831, a sum sufficient to pay 3·81 per cent. interest on the capital cost of the working railways—namely, £41,399,427; while the increase of £1,265,557, representing the difference between the wages-expenditure for 1919 and 1924 respectively, is sufficient to pay 3·06 per cent. on the capital cost.

TRAFFIC.

The following are the leading features of the traffic in the various districts in comparison with the previous year :—

Whangarei Section.

Revenue, £90,139 ; increase, £16,176. Passengers increased 13,331 ; season tickets decreased 144. Parcels, luggage, and mails increased £451. Live-stock decreased 1,765. Timber decreased 3,688 tons. All other goods increased 31,388 tons.

Kaihu Section.

Revenue, £8,943 ; increase, £77. Passengers decreased 661. Timber increased 353 tons. All other goods decreased 137 tons.

Gisborne Section.

Revenue, £39,169 ; increase, £868. Passengers increased 4,499 ; season tickets decreased 4. Parcels, luggage, and mails increased £203. Live-stock decreased 15,336. Timber increased 788 tons. All other goods decreased 324 tons.

North Island Main Line and Branches.

Revenue, £4,059,143 ; increase, £170,596. The principal items of traffic were : Passengers, 8,322,954 ; decrease, 230,092. Season tickets, 376,759 ; increase, 39,643. Parcels, &c., revenue, £238,312 ; increase, £9,842. Live-stock, 3,637,187 ; increase, 233,244. Goods tonnage, 2,666,204 ; increase, 260,681. Timber increased 33,161 tons, and all other goods 227,520 tons. The revenue per mile of railway increased from £3,411 Os. 2d. to £3,537 Os. 6d., but decreased per train mile from 16s. 1½d. to 15s. 5d.

The variations of traffic in the individual districts were approximately as follows :—

Auckland.—Revenue, £1,718,124 ; increase, £91,795. Passengers decreased 148,349 ; season tickets increased 24,901. Parcels, luggage, and mails increased £6,794. Cattle and calves decreased 3,259, and sheep and pigs 52,259. Timber increased 4,525 tons, and all other goods 155,853 tons.

Ohakune.—Revenue, £507,330 ; increase, £19,813. Passengers decreased 28,924 ; season tickets increased 265. Parcels and luggage increased £39. Cattle increased 696, but sheep decreased 20,869. Timber increased 19,528 tons, and all other goods 16,973 tons.

Wanganui.—Revenue, £644,524 ; increase, £7,219. Passengers decreased 73,605, and season tickets 220. Parcels, luggage, and mails decreased £586. Cattle and calves increased 4,860, sheep and pigs 137,715. Timber increased 4,741 tons, and all other goods 52,336 tons.

Wellington.—Revenue, £1,189,165 ; increase, £51,769. Passengers increased 20,786, and season tickets 14,697. Parcels, luggage, &c., increased £3,595. Cattle and calves increased 15,895, and sheep and pigs 150,465. Timber increased 4,367 tons, and all other goods 2,358 tons.

Picton Section.

Revenue, £37,398 ; decrease, £2,968. Passengers decreased 4,106, and season tickets 13. Live-stock decreased 5,990. Goods decreased 9,439 tons.

Nelson Section.

Revenue, £24,773 ; increase, £949. Passengers decreased 3,755. Live-stock decreased 12,455. Goods increased 6,579 tons.

Westport Section.

Revenue, £115,643, decrease, £9,600. Passengers increased 10,622 ; season tickets decreased 323. Timber increased 94 tons. All other goods decreased 130,418 tons.

Westland Section.

Revenue, £225,543 ; increase, £40,787. Passengers decreased 1,547 ; season tickets increased 548. Parcels, &c., increased £2,261. Live-stock decreased 17,894. Timber increased 41,423 tons, and all other goods 49,852 tons

South Island Main Line and Branches.

Revenue, £2,374,589 ; increase, £40,003. The principal items of traffic were : Passengers, 4,546,801 ; decrease, 204,706. Season tickets, 128,520 ; increase, 330. Parcels, &c., revenue, £144,003 ; increase, £198. Live-stock, 4,026,354 ; increase, 204,778. Timber, 143,230 tons ; decrease, 12,194 tons. All other goods, 2,342,301 tons ; increase, 49,881 tons. The revenue per mile of railway increased from £1,633 14s. 5d. to £1,661 14s. 3d., but decreased per train-mile from 16s. 0½d. to 15s. 5½d.

The variations of traffic in the individual districts were approximately as under :—

Christchurch.—Revenue, £1,049,103 ; increase, £42,998. Passengers decreased 286,646, and season tickets 2,469. Parcels, luggage, &c., increased £1,001. Cattle and calves increased 4,411, and sheep and pigs 97,420. Timber decreased 26,898 tons. All other goods increased 18,209 tons.

Dunedin.—Revenue, £787,833 ; decrease, £13,167. Passengers increased 115,045, and season tickets 3,558. Parcels, luggage, &c., decreased £34. Cattle and calves increased 3,844, and sheep and pigs 75,542. Timber increased 2,680 tons, and all other goods 4,048 tons.

Invercargill.—Revenue, £537,652; increase, £10,171. Passengers decreased 33,105, and season tickets 749. Parcels, luggage, &c., decreased £769. Cattle and calves increased 882, and sheep and pigs 22,679. Timber increased 12,024 tons, and all other goods 27,591 tons.

Lake Wakatipu Steamers.

Revenue, £8,872; decrease, £478. Passengers decreased 3,884. Live-stock decreased 1,466. Goods decreased 189 tons.

Average Late Arrival of Trains, Year ended 31st March, 1924.

Year ended	Period ended												Average for Year in Minutes.	
	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. 1.		Mar. 31.
<i>Express and Mail Trains.</i>														
March 31, 1924	.. 4-03	6-05	4-69	6-92	1-80	2-20	1-56	1-76	1-51	5-60	3-04	3-34	3-20	3-51
March 31, 1923	.. 4-01	3-62	2-91	1-62	2-50	2-48	1-94	2-31	1-45	3-82	2-31	2-01	3-46	2-57
<i>Long-distance Mixed Trains.</i>														
March 31, 1924	.. 4-63	5-59	4-61	3-50	2-02	2-48	2-29	2-84	3-17	6-22	6-37	6-18	5-49	4-26
March 31, 1923	.. 6-96	4-92	2-65	2-77	2-00	2-67	2-49	3-22	3-26	4-21	4-00	4-21	4-33	3-66
<i>Suburban Trains.</i>														
March 31, 1924	.. 1-42	0-88	1-18	0-80	0-57	0-40	0-42	0-43	0-46	0-78	0-51	0-64	0-80	0-71
March 31, 1923	.. 0-82	0-73	0-70	0-62	0-42	0-37	0-60	0-58	0-46	0-62	0-66	0-59	0-78	0-61

FINANCE.

Various considerations connected with the system of financial control in the Department, such as the rendering of a commercial balance-sheet, and the making of provision for depreciation of plant, and other similar matters, raise the question as to whether the present system of dealing with the railway accounts is the best adapted to the circumstances of the Department. At present the Department's finance is dealt with merely as part of the general financial scheme of the Government. All the revenue received by the Department is paid into the Consolidated Fund, and all the working-expenses are paid out of that fund. Capital expenditure is obtained from the Public Works Fund or from special funds constituted by Statute.

I desire to record my opinion that the separation of the railway finance from that of the general finance of the Government would be distinctly advantageous. I have long held the opinion that the Department should have its own Capital Account and should control the expenditure therefrom, and that its system of accounts should be brought into line with those of an ordinary business concern. In expressing this opinion, however, I desire also to make it clear that the mere changing of the system of accounts would in itself be meaningless unless the change involved also a decision to work the Department on a commercial basis. Hitherto the policy of the Department has not been directed towards the achievement of the same ends as a commercial institution. The Department has, in fact, been regarded as more developmental in its purpose than profit-earning, and it seems to me that accounts kept on commercial principles would be misleading unless they were the expression of the result of activities conducted on the same principle.

At present there are many services performed by the Railway Department which are unremunerative and would be quite unjustified if the railways were worked on a commercial basis, but which have up to the present been considered to be justified in pursuance of the policy that the railways should be used for developmental purposes. The abandonment of this policy, as far as the Railway Department is concerned, need not, of course, involve the withdrawal of the concessions. It would simply mean that in its accounts the Railway Department would receive credit for the value of any such services rendered by it, under some such arrangement as is in operation in Victoria, where it has been enacted by Statute as follows:—

“In the following cases (that is to say):—

“(a.) Where Parliament makes any alteration in the law which occasions any increase of expenditure by the Commissioners or any decrease of the railways revenue; or

“(b.) Where Parliament or the Governor in Council directs the Commissioners to carry out any system or matter of policy which occasions or results in any increase of expenditure by the Commissioners or any decrease of the railways revenue; or

“(c.) Where Parliament authorizes the construction of any new line of railway which, when vested in the Commissioners, does not produce sufficient revenue to cover the interest on its cost of construction and the expense of its maintenance, the annual amount of the increase of expenditure or decrease of revenue or of the loss resulting from such new line of railway shall be from time to time notified in writing by the Commissioners to the Auditor-General, and if certified by him shall be provided by Parliament in the annual Appropriation Act and paid to the Commissioners.”

If this were done I think there is little doubt that it would be advantageous both to the Department and to the country in general. Apart from other considerations, it would have the effect of bringing

out more clearly the concessions that are enjoyed by various sections of the community at the expense of the community in general. At present both the fact and the extent of these concessions are obscured by their inclusion in the railway tariff, and as being so included as railway rates they tend to be regarded merely as such instead of as subsidies or bounties which they really are. There are, no doubt, in the railway tariff many concessions which can be amply justified in the general public interest, and on the other hand there are many others which, though probably quite legitimate at their inception, have been continued long after the circumstances by which they were originally justified have ceased to exist.

Another aspect of the proposal to provide separate accounts for the railways is that there would be a more proper distribution of the profit resulting from the operations of the Department.

Up to the present, as a result of the payment of revenue into the Consolidated Fund, the Department has not the support of a Reserve Fund, Depreciation Fund, or any of the other similar funds, which are to be found in the accounts of private railways. Indeed, it has in the past been the acknowledged policy to regard buoyancy of revenue as being a ground for making concessions in rates and charges, and although from 1895 to 1915 working-costs increased, there were not only practically no increases in rates and charges, but the fact that the Department earned profits was taken as justifying the granting of tariff concessions, and many such concessions were accordingly made. The consequence was that when the period of buoyancy ended and a state of depression set in the Department found itself faced with these concessions which, though readily granted during and because of a period of prosperity, could not so readily be withdrawn when these conditions ceased to exist.

I think, therefore, that the policy of regarding the railways as a commercial concern, in the sense of being self-contained as to its finance and receiving credit from other appropriate Departments for concessions granted as a matter of policy and which cannot be justified on purely railway grounds, is desirable in the public interest as well as from the point of view of the efficiency and welfare of the Department as an operating concern.

I do not, however, desire to be understood as advocating that the policy of using the railways for developmental purposes should be abandoned. This is a matter on which I do not feel at liberty to comment. I desire to record the foregoing observations only as indicating my opinion that the mere change of the form of the railway accounts would have little significance, and would indeed be apt to be misleading unless they, as business accounts, constituted a record of the operations of a concern conducted on recognized business principles.

STAFF.

The staff was depleted during the year by the retirement on superannuation of Messrs. J. MacDonald, Assistant General Manager; H. Buxton, Chief Traffic Manager; F. W. MacLean, Chief Engineer; G. E. Richardson, Locomotive Engineer, Addington; A. C. Koch, District Engineer, Auckland; W. P. Williams, General Inspector; G. McCartney, Officer in Charge, Advertising Branch; I. Faris, Controller, Refreshment Branch; J. Bevin, J. B. Mitchell, A. W. Morgan, J. Young, J. L. Morgan, and R. M. Isaacs, District Traffic Managers at Wellington, Christchurch, Invercargill, Wanganui, Greymouth, and Ohakune respectively; together with a number of experienced officers who occupied sub-administrative positions. All the officers referred to herein gave of their best to promote the public interest, and had served the Department faithfully, zealously, and with honour to themselves, the majority for forty years and over.

While recording my high appreciation of the loyal and valuable services rendered by each of the officers included in this general list, I avail myself of the opportunity to specially thank the three administrative officers—Messrs. MacDonald, Buxton, and MacLean—for their valuable assistance and co-operation. These gentlemen served the Department with distinction, had a long and varied railway experience, and possessed a wealth of practical and theoretical knowledge, of which they made full use in the general public interest when the difficult problems which daily confront the Railway administrative officers were under discussion.

Upon the retirement of these officers a scheme of reorganization was undertaken, the principal feature of which was the abolition of the office of the Chief Traffic Manager, and the substitution of an additional Assistant General Manager, and the appointment of a General Superintendent of Transportation. The object of this scheme was to bring the Traffic Branch, as being that branch of the Department which comes into intimate contact with the public, into closer relation with the general management, and it was hoped by this means to obtain a greater measure of understanding between the management and the customers of the Department. The considerations which prompted the change were largely based on a desire to assimilate the methods of the Department more closely to those of a business concern than to those of an ordinary Department of State, facilitating and expediting the transaction of business between the Department and its customers, and, in particular, avoiding those delays in dealing with various questions arising between the Department and the users of the railways, which were so apt to lead to misunderstanding.

ACCIDENT TO AUCKLAND-WELLINGTON EXPRESS TRAIN NEAR ONGARUE.

A happening that calls for more than passing mention is the very unfortunate accident which befell the Main Trunk express train near Ongarue early on the morning of the 6th July, 1923. This was one of the most disastrous accidents that have taken place on the New Zealand railways, and it was of a magnitude which has happily been very rare on our system. For some days prior to the accident there had been a very heavy fall of rain in the Ohakune district of the Main Trunk line, and this was, without doubt, the primary cause of the accident. The immediate cause was the slipping-

away of a bank composed of pumice formation in which were embedded some very large boulders. Some of these boulders were precipitated on to the track in front of the train at the moment it was passing, causing the derailment of the engine, which led to the telescoping of the carriages. The point at which the accident occurred had never previously given trouble. It was patrolled and inspected shortly before the accident, and there was then no indication of instability or other cause to suspect trouble. It is interesting to note that the postal car, which was immediately behind the engine, sustained comparatively little damage, while the second and third cars were practically telescoped into one, and the third car was telescoped over more than half its length.

As the occurrence was unfortunately attended with serious loss of life and injury to passengers, a special inquiry was instituted into the circumstances by a Board composed of a Magistrate and two engineers of high standing in New Zealand who had had considerable experience in connection with railways. The conclusion at which this Board arrived after close investigation and most exhaustive inquiry was that the accident resulted from causes over which the Department had no control, and entirely exonerated the Department from any suggestion of negligence. The evidence that was available to the Board and to the public in connection with the matter clearly established the fact that unremitting vigilance and a very high degree of care are exercised by the Department to ensure the safety of those who have occasion to use the railways. It was clearly demonstrated that the Railway staff have a very high appreciation of their responsibility, and that in districts where night running of trains is involved and the formation of the country introduces any element of risk they maintain a degree of vigilance worthy of high commendation, and such as to justify the conclusion that public safety is their first consideration in all circumstances, and everything possible is done to ensure that end.

Notwithstanding that the Department was under no legal liability to pay any compensation to those who suffered loss as a result of the accident, a generous measure of assistance has been given to those who have found themselves in a position of necessity as a result of the unfortunate occurrence, and it is believed that the help which the Department has found itself able to afford in this direction has generally been much appreciated by the recipients.

Steps have also been taken to give effect to the various suggestions which were made by the Board. As a result of action along these lines the cars that are used for the Main Trunk express traffic are being specially strengthened so as to reduce the possibility of telescoping, and the equipment of guards' vans, both in respect of ambulance and other appliances, has been increased and generally made more suitable for coping with an emergency such as the one under notice.

Prior to the accident it had already been decided to equip the Main Trunk express trains throughout with electric light. This work is now well forward, and, when complete, will not only provide a more efficient and satisfactory light and increase the comfort of the passengers in that direction, but will also reduce the danger of fire occurring in the case of serious accidents.

Comment on this accident would not be complete without including in this report appreciation of the assistance rendered by the medical practitioners and hospital staff at Taumarunui, many passengers on the train, and numerous other willing helpers who gave ready and effective assistance in connection with the accident. The Railway staff met the emergency with commendable promptitude. The rapidity with which relief was organized and despatched to the scene of the disaster reflected greatest credit on all concerned, while the energy and zeal displayed by the staff were generally recognized. When so much good work was done by many persons both in and out of the service it is difficult to particularize any section, and it is hoped that the foregoing remarks in which particular mention is made of various groups of persons will not be taken as indicating any lack of appreciation of the good work that was done by every one concerned.

RAILWAY IMPROVEMENTS.

The expenditure during the year on works authorized under the Railway Improvements Authorization Act, 1914, and charged to capital cost was £23,730, making a total expenditure up to 31st March, 1924, on the various schemes authorized by that Act £923,489. Of the total amount the sum of £296,286 has been spent in connection with the Auckland new station; £240,892 on the grade improvements between Penrose and Mercer, and Mercer-Frankton-Te Kuiti; £14,321 on duplication works and automatic signals in Auckland district; £61,110 on new engine depot, Auckland, and new workshops, Newmarket; £12,708 on grade easements between Marton and Palmerston North; £206,633 on signals, interlocking, and safety appliances; £18,125 on improvements at Christchurch; £59,529 on improvements in Wellington yard, automatic signals, Petone shops, and Haywards station; £1,871 at Hastings; and £12,014 on plant required in connection with the general scheme of works.

The scheme outlined in 1914 was expected to be completed in five years from that time. At the time it was propounded, attention was definitely and pointedly directed to the fact that the then existing facilities were totally inadequate to meet the requirements of a business representing 23,000,000 passengers, 5,662,000 tons of goods, and producing a gross revenue of £4,000,000. The intervention of the Great War prevented any material progress being made towards completing the 1914 scheme. Meantime traffic has increased, and the Department has been confronted with a problem which requires it to deal with a traffic consisting of 29,000,000 passengers, 6,900,000 tons of goods, and yielding a gross revenue of £7,000,000 with facilities that were proved ten years ago to be totally inadequate to provide satisfactorily for the requirements of a traffic comprising 6,000,000 less passengers, 1,200,000 less goods tonnage, and yielding £3,000,000 less revenue, this notwithstanding the fact that the serious disabilities under which the operations of the Department are conducted, the economic waste resulting therefrom, and the urgent necessity of the works involved to afford relief

have been regularly pointed out for the last ten years. The lack of adequate facilities not only precludes the Department carrying out its obligations to the public, but is a source of constant anxiety to the management. The movement of traffic is greatly retarded, operating-expenses are greatly increased, and the congestion in the shunting-yards involves damage to rolling-stock and risk of injury to staff, besides causing serious delay to the movement of the commerce of the country. The altered conditions which now obtain as a result of the increase in traffic since 1914 render it imperatively necessary not only to put in hand immediately the scheme outlined in 1914, modified to meet the requirements based on more recent experience, but to make provision for the carrying-out of a larger scheme involving an expenditure of £13,000,000. The works involved must be carried out in their order of urgency and uninterruptedly if serious disorganization of the working is to be avoided.

The programme of works included in the scheme, although comprehensive, embraces only works that are regarded as being essential for carrying on the operations of the Department and providing reasonable facilities for the traffic. It does not, however, exhaust the list of works which are desirable in the interests of economy and public convenience. Many works not included in the general improvement scheme will require to be carried out coincident with the major scheme and as the financial resources of the Department will permit.

LOCOMOTIVE POWER.

A careful examination of the locomotive stock shows that, having regard to the requirements that might reasonably be expected to arise in the natural order of the development of the system consequent on the opening of new lines and the increase in traffic, there is urgent need for further increase in the engine-power. During the five years ended the 31st March, 1924, the locomotive stock was augmented by a total of seventy-nine new engines, of which nine were built by Messrs. A. and G. Price (Limited), of Thames, twenty-two were constructed in the Department's own workshops, and forty-eight imported from Great Britain. During the same period forty-four obsolete engines were written off as having been sold or scrapped, leaving a net increase during the period mentioned of thirty-five engines. There are at present 173 locomotives of obsolescent types in service; ninety-four of these will require to be written off as no longer economically efficient, and replaced by modern engines of greater power within five years. There will then remain seventy-nine to be replaced at a subsequent date. The opening of the Otira Tunnel has necessitated the diversion of eighteen of the best type of engines from the South Island Main Trunk to the Midland line. Similarly, the completion of the North Auckland main line will necessitate the transfer of engines to the Whangarei district, thus creating a shortage of power in other parts of the section. In order to provide for these contingencies and enable traffic requirements to be met it will be necessary to invite tenders for the manufacture of thirty-five Class AB engines for early delivery. The capacity of the Railway workshops, combined with the establishment of Messrs. Price Bros., Thames, is barely sufficient to meet the ordinary requirements created by wear and the natural expansion of business, and leaves no margin to provide for the requirements of new lines or overtaking shortages in locomotive power created by other emergent circumstances. It is not practicable to increase the capacity of the existing Railway workshops, nor for Messrs. Price Bros. to increase their output.

The following table sets out the position :—

Year ending 31st March,	New Locomotives for additional Services and Present Shortage.	New Locomotives to replace Obsolete.	Total.	Locomotives which can be built in New Zealand.				Remarks.
				N.Z.R.	Price's.	Total.	Shortage.	
1925 ..	36	7	43	10	8	18	25	To be im- ported.
1926 ..	6	20	26	18	8	26	..	Ditto.
1927 ..	10	26	36	18	8	26	10	
1928 ..	2	24	26	18	8	26	..	
1929 ..	9	17	26	18	8	26	..	
Totals	63	94	157	82	40	122	35	

Messrs. A. and G. Price are now engaged on the manufacture of nine AB engines to complete the contract let to them in 1920. This work will keep their workshops occupied for at least fourteen months. Meantime they have been requested to review their costs of manufacture and submit for consideration a quotation for building twenty additional AB locomotives to follow the completion of their existing contract. The Railway workshops have sufficient work on hand to keep them regularly employed at their full capacity.

ROLLING-STOCK.

As suggestions are from time to time heard that the rolling-stock is insufficient for requirements, I append hereto a statement showing the capacity of the rolling-stock in relation to the business done during the past year. This statement is based on a very conservative estimate as to the extent to which the trucks can be used, the basis of calculation being only 1½ trips per week.

The particulars are as follows :—

*Statement showing Goods Tonnage and Wagons available and suitable for dealing with same at
31st March, 1924.*

Section.	Goods Traffic for Year ending 31st March, 1924 (exclusive of Live-stock).	Wagons used exclusively for Goods Traffic.			Excess of Capacity of Wagons over Traffic offering.
		Number.	Tonnage Capacity per Day.	Capacity per Annun at 1½ Trips only per Week.	
	Tons.		Tons.	Tons.	Tons.
Kaihu	10,984	60	382	29,796	18,812
Gisborne	57,223	141	1,526	119,028	61,805
North Island Main Trunk including Whangarei	2,864,422	10,604	104,821	8,176,038	5,311,616
Picton	59,310	201	1,626	126,828	67,518
Nelson	42,853	150	1,180	92,040	49,187
Westport	476,484	755	6,072	473,616*	-2,868
South Island Main Trunk including Westland	3,001,447	10,093	94,910	7,402,980	4,401,533
Totals	6,512,723	22,004	210,517	16,420,326	9,907,603

* In this case the wagons can be made use of at least four times per week; the capacity therefore considerably exceeds the traffic.

Average capacity per wagon—

1924	9.57 tons.
1908	8.11 tons.

The foregoing statement will show that if the trucks are given reasonable despatch there is ample rolling-stock to meet the requirements of the business. The difficulties that arise in connection with the supply of trucks are, indeed, not through any shortage in the number of trucks, but in the delay which occurs in releasing trucks under load. The losses which the Department sustains through neglect of consignees to give due attention to this matter is the greatest obstacle to the efficient performance by the Department of its functions in the matter of wagon-supply. The charges which are imposed for demurrage do not adequately recoup the Department for its losses in this connection; and while consignees who are debited with these charges generally resent their imposition, they seem quite oblivious of the fact that the Department would much prefer to have the use of its rolling-stock for carrying purposes than to allow it to be used for warehousing consignees' goods, and that the demurrage charges are necessary in the interests of the users of the railways themselves, and are really the only effective means which the Department has to ensure that the trucks shall be made available within a reasonable time for their legitimate purposes.

CAR ACCOMMODATION.

The desirability of ensuring the maximum degree of comfort for passengers travelling on the long-distance trains has always been a particular care of the Department, and from time to time important improvements have been made to attain this end. In this connection it has been found that the running of ladies' cars has been a step in the right direction, and one that has been much appreciated by ladies making long journeys alone or with children. On the Main Trunk trains where night travel is involved a female attendant is provided to travel on each of these cars, whose duty it is to give personal attention to the comfort of lady passengers and assist those travelling with young children.

Ladies' cars have now been placed on the mail-trains between Wellington and Napier, Wellington and New Plymouth, and on the express trains in the South Island.

A further addition to the comfort of long-distance passengers is to be found in the provision already made in a number of carriages of separate lavatories for ladies and gentlemen respectively. Arrangements have been made for similar conveniences being provided in all cars now in service and all new cars under construction. The alteration will be effected as opportunity offers and cars running are taken into the shops for overhaul.

Another important alteration that the Department has in hand is the abolition of the system of gas-lighting and the substitution of Stone's system of electric lighting. The superiority of the electric light over the gas-lighting formerly in use is amply demonstrated by the cars that have already been equipped with electricity and placed in service. Better illumination is obtained from electricity; the lights can be manipulated with greater facility, and the possible danger of fire which may arise in an accident through the escape of the gas will be eliminated. It will also be possible with electric lighting to provide a light on the platforms of the carriages, and this will afford a greater measure of safety in entering and leaving carriages during hours of darkness.

Paper drinking-cups having been tested out and found to be efficient and satisfactory, suitable fittings of an artistic type have been designed as holders therefor, and these cups are now being added to the equipment of all trains, in substitution of the enamel and other similar drinking-vessels which from the hygienic standpoint have been the subject of complaint.

ENGINE HEADLIGHTS.

During the year it was decided to equip the engines running the more important passenger-trains with electric headlights, the current being provided by a dynamo fixed on the engine and driven by a small steam turbine. A commencement was made during the year by equipping a number of engines used for working the Main Trunk express trains through the Ohakune district, and the lights were found to be very efficient, and a considerable improvement on the headlights previously in use, and are greatly appreciated by the enginemen. The lights have undoubtedly afforded a greater measure of security against accidents, and have already demonstrated their value in this direction. Practically the whole of the engines used on the express passenger-trains in the North Island have now been equipped, and the material is coming to hand which will enable the equipment of the engines in the South Island to be taken in hand immediately.

RAIL MOTORS.

The problem of economically working lines on which the traffic is sparse, either generally or at particular times, is one that has engaged the careful attention of transport authorities in all parts of the world for some considerable time. The solution which now seems to be more or less generally accepted is the provision of suitable rail motor-vehicles. There has, however, not yet been reached any general agreement as to the type most suitable for adoption, and various types have been favoured in different countries according to the conditions prevailing. Many of the types are scarcely yet beyond the experimental stage, and with a view, therefore, to determining the qualities of the various classes of vehicles and their suitability for working on New Zealand lines it was decided to carry out some experimental work in this country. With this end in view arrangements have been made to obtain coaches fitted respectively with a Leyland petrol-driven motor-engine, a Clayton steam-engine, and a Sentinel steam-engine. It was also decided to send an officer to Australia to study the conditions existing there and the progress that is being made in that country in connection with rail motor traction. The knowledge that will be gained by the observations of this officer and the Department's own experiments will enable the Department to decide upon the type, or types, of vehicle best suited to the working-conditions of this country, and it is hoped that the provision of a sufficient number of these vehicles will go far towards lightening the financial burden involved in working the traffic which cannot be made remunerative under the present system of working.

AUTOMATIC SIGNALLING.

The automatic signalling that has already been installed on various sections of the railway has worked very satisfactorily during the year, and has more than justified its installation. The number of failures has been practically negligible, and these have principally arisen out of circumstances inseparable from the commencement of working on a large scale of installations of this nature.

Especially on the line between Wellington (Lambton) and Upper Hutt the system has demonstrated its usefulness, as without it the traffic could not have been carried on with satisfaction either to the Department or to the public, and the rapid and efficient handling of the heavy trains necessary to cope with the race traffic between Wellington and Trentham would not have been possible.

On the Midland line also the system has demonstrated its usefulness by avoiding the necessity of stationing men at isolated points along the line in order to enable the sections of line between crossing-places to be made sufficiently short to permit of the proper working of the traffic between the east and west coasts, while the general reliability of the system has afforded a very great sense of security in the rough country through which the Midland Railway passes between Springfield and Otira.

The extension of the system is gradually being pursued, and the work is now in hand between Addington and Rolleston, and Auckland and Penrose. Ultimately it is proposed to extend it from Penrose southward to Marton Junction, and when this is done it will provide an additional factor making for security and economy in the working of the trains through the Main Trunk district.

HOUSING.

The operations of the Architectural Branch were developed during the year and received a considerable impetus by the commencement in July, 1923, of the cutting of material for houses at the specially equipped factory at Frankton Junction. This factory has been designed to enable the house materials to be cut to fit therein, and taken thence to the selected site complete and ready to be put together. This system makes both for economy and speed, and it is estimated that when working at full capacity the factory will be capable of producing approximately four hundred houses per annum.

During the year improvements were made to the house settlements at Frankton Junction, Kaiwarra, and Wadestown. At Maungaturoto roading-work has been done on the land reserved there for the housing settlement. Land for housing purposes has been acquired at the following places—namely, Whangarei, Helensville, Otahuhu, Papakura, Pukekohe, Mercer, Morrinsville, Matamata, Paeroa, Henderson, Maungaturoto, Te Awamutu, Hawera, and Stratford.

Additional drainage facilities have been provided to the houses erected by the Architectural Branch at Foxton, Frankton Junction, Taihape, and Lyttelton. At Otira refreshment and dining rooms, girls' hostel, men's quarters, and a storeroom were completed, and a contract has been let for the construction of similar facilities at Maungaturoto.

At the house-factory, Frankton Junction, various improvements were carried out which will have the effect of enabling the work to be done more expeditiously and economically.

Up to the 31st March, 1924, the Architectural Branch had completed the erection of 223 houses, besides other works such as dining-rooms, hostels, &c.; and from the time of the commencement of the working of the factory until the end of the financial year forty-one houses had been cut and actually erected, while 193 "cut-to-fit" houses are now in process of erection, or contracts have been let for the erection of the same.

During the year the existing buildings, drainage-systems, settlements, &c., have been kept in good order.

LEVEL CROSSINGS.

In my report of last year I dealt at some length with the question of accidents occurring on railway-crossings. As previously mentioned, these accidents are almost wholly confined to motor-vehicles colliding with trains.

The Department during the year undertook a "safety" campaign with a view to bringing home, in some measure, to the drivers of motor-vehicles the necessity for exercising a proper degree of care when approaching railway-crossings. This campaign took the form of the public exhibition in conspicuous places of suitable posters. These posters, and some "stickers" suitably designed for placing on licenses and other documents which are likely to come into the hands of the drivers of motor-vehicles, were also provided and distributed to automobile associations and local bodies. The Department also adopted the policy of prosecuting in the Courts every motorist who, through failure to take proper precaution, caused an accident at a level crossing, and the cumulative effect of these activities on the part of the Department has, it is believed, had some effect in the direction desired.

There are, however, still too many accidents taking place at level crossings, and, practically without exception, circumstances have shown them to be due to want of care on the part of the motorist. Warning-bells and other automatic similar appliances, as well as the signals of crossing-keepers, are not infrequently disregarded, with the result that accidents have happened.

The only absolutely effective means of safeguarding motorists against their own carelessness is the provision of subways or overbridges; but, as I have previously had occasion to point out, and as is, indeed, sufficiently obvious, it is not practicable to make such a provision at every level crossing, nor would the financial burden which would be cast upon the community be warranted in order to guard against the carelessness of the comparative few.

The Department is, however, continuing to install warning-appliances at crossings where conditions involve any substantial element of danger, and has also co-operated and is still willing to co-operate with local bodies in the provision of overhead bridges where the circumstances of the case justify the outlay involved. Apart from this, the Department proposes to continue its policy of prosecuting every motorist who by omitting to take proper precautions when using the level crossings endangers the safety not only of himself but of the users of the railway.

REFRESHMENT BRANCH.

During the year the operations of the Refreshment Branch were further extended by the opening or taking over of the refreshment-rooms at Maungaturoto, Helensville, and Taumarunui. The temporary room at Arthur's Pass was closed, and the new dining and refreshment rooms at Otira were opened. In order to cope with the growing business, additions were made to the dining-rooms at Marton and Oamaru, and to the counter room at Frankton Junction.

The number of refreshment-rooms now under the control of this branch is eighteen, and in addition the branch performs the catering-work on the Lake Wakatipu steamers. A very considerable addition to the functions of the branch has been in connection with the purchasing of supplies for other Government Departments. This is a development of the principle of control of the Government stores by the Stores Control Board, and the Refreshment Branch of the Railway Department has been constituted a purchasing Department on behalf of the Board in connection with provisions and groceries. This has thrown a large amount of work and responsibility on to the branch, and has involved a fairly heavy expenditure, for which the Railway Department receives no credit whatever. The benefit that has accrued to other Departments through the operations of the Railway Refreshment Branch in connection with the purchase of provisions and groceries is, however, beyond question, and from the point of view of the Government Service as a whole there is no doubt as to the advantages of the present system.

The staff of the Refreshment Branch now numbers approximately 240, and the annual turnover is in the vicinity of £96,000.

As in the case of the Advertising Branch, the decision to constitute a Refreshment Branch has, without doubt, been amply justified by results. The standard of the refreshment service has been very considerably raised by the operations of the branch, and is being fully maintained.

Many eulogistic references to the quality of the service given by the branch reach the Department from time to time, and world-wide travellers have expressed the opinion that the standard of the meals served in the Department's dining-rooms will bear comparison with those served on any railway in the world, and the comparison is especially favourable when the comparatively low price charged by the Department is taken into consideration.

The policy of extending the operations of the branch as opportunity offers will be continued during the coming year.

STORES CONTROL BOARD.

This Department has been constituted a purchasing Department for the purposes of the Stores Control Board, and in this connection the Department performs a very large amount of work in respect of the provision of stores and material for other Departments. This matter has already been touched on as affecting the Refreshment Branch of the Department, but in addition to the work done by that

branch a considerable portion of the time of the Comptroller of Stores and his staff is taken up by the Stores Control Board work. The Comptroller of Stores is Chairman of the Advisory Committee attached to the Stores Control Board, and as such has heavy responsibilities. Each District Railway Storekeeper is also a purchasing officer for other State Departments, and a member of the Supplies and Tenders Committee in his district.

The work ahead of the branch in connection with the business of the Stores Control Board includes assisting in the standardization of many lines in common use by more than one State Department, and generally of further co-ordinating the stores business of the Government and the system of procuring supplies in the best available markets.

Every responsible officer of the Department whose duties have involved acting under the regulations of the Stores Control Board has freely placed his knowledge, experience, and energy at the service of any Department requiring them, and the whole of the stores organization of the Railway Department has been made available to the other Departments in furthering the interests of the State.

STORES.

The amount expended during the year on stores and materials for Working Railways was £1,783,642. Of this amount the sum of £1,446,185 was paid for stores purchased in New Zealand as a result of the policy pursued of so conducting the Department's purchasing operations as to keep within the Dominion the greatest proportion of the expenditure consistent with the demands of economy. The practice of giving preference to British manufactures over those from foreign countries has been continued, resulting in the sum of £337,457 being paid through the High Commissioner in London.

In operating the Stores Branch during the year every effort has been made to economize. Great care has been taken in buying, especially in connection with materials for forward delivery, due consideration being, however, given to the necessity for maintaining a stock sufficient to meet immediate requirements, and to provide for the future wants in a manner that will ensure that the Department's operations are not hampered through lack of regular supplies. Although market conditions have improved to some extent over those of the previous year, it cannot be said that normal trading conditions have as yet been wholly restored. There is, however, a more hopeful outlook that prices will gradually become more stabilized. Up to the present it has not been possible to return to the pre-war system of procuring stores under contracts for definite terms, neither would it be advantageous to do so until it is clearly established that prices have stabilized.

The matter of encouraging New Zealand manufacturers to produce materials and goods of the quality to meet the Department's requirements at reasonable prices has been given careful attention, and much has been done to assist and develop the industries of the Dominion along these lines. During the year also an increasing number of British manufacturers have appointed representatives in this country, and there is greater readiness than ever before to supply the kinds and qualities of stores and materials required for the Department's purposes.

SAWMILLS.

The Frankton Junction sawmill commenced operations in January last. It is a high-powered band sawmill driven by electricity, and is proving a valuable adjunct to the Department's activities.

Prior to its being brought into service the Department was under the necessity of purchasing considerable quantities of sawn timber from outside sources to supplement the product of the Mamaku mill, the output of which was insufficient to meet requirements.

The Frankton mill produces the whole of the timber required for the house-factory, together with a surplus which, combined with the output of the Mamaku mill, will provide fully for all the requirements of the Department, and obviate the necessity previously existing for purchasing sawn timber from outside mills.

The Mamaku mill was operated with satisfactory results during the year. The total quantity of sawn timber produced was 4,000,000 superficial feet. The bush areas of Pokako and Erua from which log timber is obtained for the Frankton mill have been fully organized and equipped for logging purposes. The logging operations are undertaken by the Department, and in that connection comfortable accommodation has been provided for the staff.

ADVERTISING AND PUBLICITY.

The volume of the business done by the Advertising Branch has maintained the steady increase of recent years, and has more than justified the step that was taken when the branch was opened and it was decided that the Department would itself control the displaying of advertisements on its premises.

The revenue accruing from the operations of the branch has been very considerably in excess of that received by the Department under the old system of letting the advertising-rights to private contractors, while the standard of the display has in itself more than justified the new departure.

The publicity side of the functions of this branch has also continued to develop during the year, and the reception that was accorded to the booklet that was compiled during the previous year has been so favourable both within the Dominion and abroad as to justify a considerable expansion of the activities of the branch in this connection. There is therefore now in hand further matter of a similar nature which it is hoped will be completed at an early date, and which will be freely distributed both within and without the Dominion to the best possible advantage. In this connection it may be noted that reciprocal arrangements have been entered into with numbers of large companies abroad,

such as the Canadian Pacific Railway and the owners of some of the larger hotels in Canada and America, with the object of obtaining the best possible distribution of the Department's literature. A very extensive scheme has also been embarked on, involving the preparation of a large number of hand-painted photographs of the patent "cirkut" type, which will be suitably framed and sent abroad for hanging in hotels and other suitable places, principally in America and Canada. These pictures are of a distinctly superior type, and show the various tourist attractions of the Dominion to great advantage. A poster of a highly artistic nature typifying the native birds of New Zealand has also been prepared by the Department's artist, and the resulting production is one of very great artistic merit. It is proposed to suitably frame the poster uniformly with the pictures, and to send one copy of the poster with each set of pictures distributed. The whole scheme will involve fairly considerable outlay on the part of the Department, but, as the quality of the pictures is such as to make them practically permanent, there will be virtually no further expenditure on renewals, and the distinctive and attractive nature of the pictures themselves will be such as to make them quite suitable for permanent exhibition in even the highest-class hotels and other such buildings. The importance of attracting to the Dominion a steady flow of revenue from other countries such as follows on a well-maintained foreign tourist traffic is fully appreciated by the Department, both in its own interests and those of the Dominion, and it is considered that the expenditure that is involved in the publicity work, though in the present early stage of development necessarily heavy, will in the ultimate result be amply justified. The many artistic publications received by the Department from other countries indicate that this opinion is evidently shared by railway authorities elsewhere, while, without undue egotism, it may be safely concluded from an inspection of these publications that the attractions which New Zealand has to offer to the tourist suffer in no way in comparison with those of other countries.

TRANSPORT OF CATTLE.

During the year a transaction of more than ordinary importance was the carriage for export to Australia of a very large number of cattle. These were railed from various points in the North Island to Wellington for shipment, the total conveyed being in the neighbourhood of 5,300; and, notwithstanding that many of the animals were somewhat wild, the losses in transit by rail were very small, and were estimated by Mr. Keith McLean, of Gippsland, Victoria, shipper of the stock, not to have exceeded five.

From time to time the Department is assailed by complaints of a more or less general nature that the carriage of live-stock on the railways is attended by very heavy loss, due to some fault in the railway transport which is not always made clear. In this connection it is interesting to note the remarks of Mr. McLean in regard to the carriage of the stock dealt with by the Department on his behalf. The following is the text of a telegram received from Mr. McLean himself: "Very grateful for the magnificent manner your railways handled my stock, also for the courtesy and consideration extended to me." Speaking to a newspaper reporter in Victoria, Mr. McLean, after estimating that the number of deaths in trucks did not exceed five, stated that the number of bruised cattle was also very small, and he continued as follows: "I would like the taxpayers of this beautiful country to know the splendid attention given by the railway always. In every instance special trains were run absolutely on time. The trucks were all at the stations ready for loading operations, and were always in a clean condition. The railways are too often blamed for cattle killed and bruised, whereas often the fault lies in overloading and over-travelling cattle." Mr. McLean, in commenting on the freedom from loss during the period of transport, also stated that all the animals were country stock, and in most instances had never before been handled by man.

The performance of the Department in connection with the railing of this stock undoubtedly furnishes a complete answer to the suggestions that are, as indicated above, more or less vaguely made from time to time that there is something wanting in the Department's arrangements for the transport of stock, and certainly warrant the suggestion that when losses do occur it should not be too hastily concluded that the transport by rail has been the cause.

SUPERANNUATION FUND.

The report and balance-sheet of the Railways Superannuation Fund for the 31st March, 1924, give the following figures:—

Annual liability	£	177,689	Members' contributions	£	133,148
			Fines and donations		436
			Interest		28,566
			Deficit (to be paid out of Government subsidy)		15,539
		<u>£177,689</u>			<u>£177,689</u>
On the 31st March, 1924, the liability of the fund to contributors in respect of amounts paid by them was				£	983,298
The total accumulated fund was					671,827
Deficit					<u>£311,471</u>

The Railways Fund has now been established for twenty-one years. Its revenue is derived from contributions of members, fines, and donations, interest on funds invested, and annual subsidy from the Government. The gross income from all sources from the inception of the fund till the 31st March, 1924, was £2,578,503; contributions, fines, and donations, £1,634,249; interest, £269,254; Government subsidy, £675,000. Disbursements: Life allowances, £1,404,581; widows and children, £158,994; refunds of contributions, £330,419; compensation, £4,206; administrative charges, £8,476; balance representing accumulated fund, £671,827.

TRAIN-SERVICES.

During the year the train-services have been well maintained, and various additional services have been laid on, involving a substantial increase in the train-mileage.

The following is a brief statement of some of the principal additions that have been made:—

Tapanui Branch: Services Monday, Wednesday, and Friday increased; additional mileage, 6,240 miles per annum.

Extra trains laid on between Waitara and Lepperton in connection with the speeding-up of the New Plymouth - Wellington mail-trains; additional mileage, 936 miles per annum.

New line between Napier and Eskdale was opened, and a train-service of two trains each way daily was commenced; additional mileage, 14,976 miles per annum.

Additional train provided leaving Lower Hutt at 7.30 a.m. for Wellington; additional mileage, 2,496 miles per annum.

Extra train between Penrose and Auckland on Friday evenings; additional mileage, 624 miles per annum.

Opening of line to Okaihau, and service extended to that station; additional mileage, 6,864 miles per annum.

5.55 p.m. train on Sundays, Wellington to Lower Hutt, extended to Upper Hutt; additional mileage, 1,248 miles per annum.

Services between Wellington and Upper Hutt were improved.

An extra train leaving Wellington at 7.30 p.m. for Johnsonville and back was instituted; additional mileage, 4,212 miles per annum.

The train-services on the Cheviot, Little River, and Oxford Branches were augmented for several months during the busy season.

Two extra trains between Swanson and Auckland were added; additional mileage, 3,744 miles per annum.

To give an hourly service between Mount Eden and Henderson, extra trains were put on and other trains adjusted; additional mileage, 15,912 miles per annum.

Extra trains—Penrose to Auckland at 7.13 a.m., Otahuhu to Auckland at 5 p.m., Auckland to Penrose (Saturdays) 11.53 a.m.—were put on.

The Sunday service between Auckland and Papakura was amended. Additional mileage, 6,084 miles per annum.

Extra train from Frankton to Auckland, leaving the former station at 7 a.m., was commenced, and the running of other trains adjusted; additional mileage, 26,364 miles per annum.

During the latter portion of the year experimental services were run on Sundays between Auckland and Helensville, and also on the Onehunga Branch.

Interruptions to Traffic.—There was a number of serious interruptions to traffic during the year, involving the Department in heavy expense and loss of traffic.

On 21st April, owing to floods, all traffic on the Waihi Branch and between Te Aroha and Thames was suspended.

On 23rd April, owing to floods, all morning trains from Dunedin on the north line and all traffic on the Waihemo Branch were cancelled. All the services from Dunedin to the south were also cancelled.

Traffic was suspended on the Catlin's Branch from 23rd April until 2nd May, when traffic was resumed between Balelutha and Ratanui. The line as far as Tahakopa was not cleared until 18th May.

On the Outram Branch traffic was suspended from 23rd April until 3rd May, and on the Lawrence Branch from 23rd to 29th April.

On 23rd April traffic was also suspended between Clinton and Gore owing to flood-waters.

Early in May there was a very heavy fall of rain in the North Canterbury district which very seriously affected the railway, doing very grave damage and completely disorganizing the train-services.

The following is a summary statement of the principal incidents:—

7th May.—North line: All trains north of Rangiora were cancelled.

8th May.—No trains ran north of Kaiapoi.

9th May.—Running resumed northward to Rangiora.

10th May.—Services extended to Sefton.

14th May.—Line reopened to Waiiau.

7th May.—Traffic suspended, Waiiau-ua Bridge washed away.

14th May.—Running of trains resumed from Waipara to Spotswood.

21st July.—Waiiau-ua Bridge restored, and traffic to Parnassus resumed.

7th May.—Oxford and Eyreton Branches: Traffic suspended during the afternoon, and not resumed until 10th May.

7th May.—Southbridge Branch: Afternoon trains from Christchurch ran to Springston only, services through to Southbridge being resumed on 10th idem.

7th May.—Midland Branch: Serious slips occurred between Springfield and Arthur's Pass, and traffic was completely suspended between 7th and 15th May. On 16th May trains ran from Arthur's Pass and Christchurch respectively as far as the slip at No. 9 tunnel, where passengers were transferred. This method of working continued until 26th May, when the line was clear and ordinary working resumed.

Owing to floods the traffic on the Picton Section was suspended from 7th to 12th May. The line between Ward and Wharanui could not be reopened for traffic until 26th idem.

29th June.—Owing to floods near McNab, traffic between Gore and Waipahi was cancelled.

29th June.—In consequence of a washout on the line between Wyndham and Glenham, traffic was suspended from the afternoon of that date until 6th July.

4th July.—A slip on the line between Kakahi and Owhango necessitated the suspension of traffic from 5 p.m. on that date until midnight on 6th idem. Passengers on the Main Trunk express trains were transferred at the obstruction.

5th July.—Afternoon trains between Frankton Junction and Te Kuiti were cancelled owing to flood-waters on the line.

6th July.—Slip on the line near Ongarue caused serious accident to the Main Trunk express train, involving loss of life and injury to passengers.

17th July.—Slips on the Gisborne Section caused dislocation of traffic, ordinary running not being resumed until 18th idem.

17th November.—Afternoon trains between Picton and Blenheim were cancelled owing to wash-out on the line.

14th January.—A heavy gale and high waters on the lake flooding the wharves necessitated the cancellation of the steamer services on Lake Wakatipu.

11th March.—Owing to washouts on the Napier-Eskdale line, the train-services beyond Bay View were cancelled. On the 12th idem all trains on that line were suspended, and on the 14th running between Napier and Bay View only was resumed. Repairs to this line sufficient to enable the ordinary services to be run had not been completed at the close of the year.

12th March.—Traffic between Hastings and Napier was suspended owing to floods.

“ Limited ” Express Trains between Wellington and Auckland.

In 1919 a trial run was made between Wellington and Auckland with a view to establishing a “limited” express service. The necessity for adopting the policy of rigid economy, combined with the acute shortage of and difficulty in maintaining adequate coal-supplies, however, compelled a reduction of train-services, and prevented effect being given to the intention in regard to a “limited” express. The matter is again engaging attention, and an endeavour is being made, if a convenient schedule can be arranged, to time the service so that it will pass through the Main Trunk middle district in daylight, thus giving passengers an opportunity to see the scenic beauties which abound along that portion of the Main Trunk line.

It is also proposed to design suitable observation-cars to form part of the equipment of this train and of certain other suitable trains on the various tourist routes where opportunity is afforded on the rail journey of viewing the scenic beauties of the parts of the Dominion in which those lines are located.

CAPE FOULWIND RAILWAY.

The capital cost of this line, according to the balance-sheet of the Harbour Board, was £93,450. It was constructed by the Westport Harbour Board in 1884 for the purpose of enabling the Board to obtain a supply of stone for the construction of moles connected with harbour-works on the Buller River. It is seven miles in length, and connects Westport with Cape Foulwind. The system comprises the so-called main line from Westport to the point beyond Cape Foulwind, with spur lines to Tauranga Bay quarry and the moles on the east and west sides of the Buller River. Access to the mole on the east side of the river is provided by a track running through the Westport station-yard.

During the time the line was operated by the Harbour Board heavy losses were incurred in catering for such passenger and goods traffic as then existed. On the abolition of the Board the Railway Department was instructed to take over the line as part of the Westport Section. As it had not been properly maintained it was necessary to incur a considerable expenditure in effecting repairs sufficient to bring it up to the minimum standard required for light lines. The train-services were reduced, and every endeavour made to economize in the matter of expenditure. The results have nevertheless been most unsatisfactory. The revenue for the year was £1,512 short of the actual cost of working, and this added to interest on capital makes the loss for the financial year £5,016. The incorporation of this line in the Working Railways system has added one more unpayable line to the list of unprofitable branch lines forming part of the general system.

There is not the slightest prospect of the Cape Foulwind line ever paying its way or succeeding as a developmental line. The area of land served is very limited; there is no population, and an entire absence of those resources which induce settlement. The existing traffic is negligible, and the prospect of increasing traffic is so extremely remote that it may be disregarded. The line should be closed for traffic and used for the purpose for which it was originally constructed—namely, for the conveyance of material required for harbour-works.

OTIRA TUNNEL SECTION.

The section of the railway between Otira and Arthur's Pass, which formed the last connecting-link in the East-West Coast Railway of the South Island, was opened for public traffic under the control of the Public Works Department on 4th August, 1923, and the working was conducted by that

Department throughout the remainder of the fiscal year. The line was worked as a separate section of railway, and fares and freights were computed accordingly until the 18th February, 1924, from which date passengers and goods were charged on through mileage for actual distance carried. This alteration in the method of computing charges resulted in an appreciable reduction of rates, and in the absence of any marked increase of traffic for the latter portion of the financial year would have a detrimental effect on the revenue. The results of operating are shown by the following statement, which covers the period 4th August, 1923, until the 31st March, 1924 :—

<i>To Working-expenses.</i>			<i>By Revenue.</i>		
	£	s. d.		£	s. d.
Salaries and wages	6,493	5 6	Passengers	5,792	6 3
Stores and material	3,880	8 1	Parcels and mails	794	5 0
Miscellaneous	3,352	19 11	Goods	19,716	6 5
			Miscellaneous	991	6 9
Total working-expenses	13,726	13 6			
Balance	13,567	10 11			
	<u>£27,294</u>	<u>4 5</u>		<u>£27,294</u>	<u>4 5</u>
<i>Net Revenue Account.</i>					
	£	s. d.		£	s. d.
Interest on approximate capital cost, £1,500,000, at 3 $\frac{1}{4}$ per cent.	38,373	5 9	Net earnings	13,567	10 11
			Deficiency	24,805	14 10
	<u>£38,373</u>	<u>5 9</u>		<u>£38,373</u>	<u>5 9</u>

It will be seen that a substantial loss was incurred notwithstanding the fact that from August to February the fares and freights were computed on separate mileage, and consequently at higher rates than those obtaining from February till 31st March and operative at the present time.

The capital cost of the Arthur's Pass—Otira Section is of itself a heavy burden, and when to this is added the cost of maintaining and operating the plant, machinery, and line, the only conclusion that can be arrived at, taking the most optimistic view, is that there is nothing to warrant the expectation that the line is likely to be other than a burden on the finances of the Working Railways Department for many years.

It is estimated that the loss on working during the ensuing years will not be less than £70,000 per annum. While, therefore, it must be recognized that the opening of the tunnel and the connecting of the East and West Coast Railway systems has a very important bearing on the economic and social life of the community, it is equally apparent that these advantages are being gained at the expense of the financial interests of the Railway Department.

RAILWAY TARIFF, AND ROAD COMPETITION.

The revision of the tariff has been in hand during the year, but has unfortunately been delayed owing to pressure of work in other directions which could not be set aside. The principal feature calling for an adjustment of the rates is that of road competition. A careful watch has been kept on the road traffic with a view to determining the extent to which the railway traffic has been affected thereby, and while it is found that in some localities the opposition to the railway has increased it seems more than doubtful whether even those immediately concerned have obtained any substantial advantage therefrom. The information gained by the Department from time to time indicates that the road motors are not in reality cheapening the cost of transport. The method by which they are enabled to obtain the traffic which would otherwise be sent by rail lies along the line of increasing the charges for carriage to and from the railway-stations to such a degree as to make the total charge for the transport of the goods forwarded by rail higher than that at which the motorist is willing to convey the goods for the whole journey. This amounts to nothing less than compulsion exercised by the motorist on the owners of the goods, but the latter seem quite unable to grasp this aspect of the matter. They are merely content to see that the charge by the motor for the whole journey is cheaper than the total charge that would require to be paid when the railway is used, but they quite fail to analyse this latter charge, and quite wrongly come to the conclusion that the railway charge is too high, and causes the use of the railway to be, as they conclude, more expensive than the motor. In the great majority of cases an analysis of the charges would show this to be entirely wrong, and would disclose that the motorist is not content to receive a reasonable remuneration as a feeder to the railway, but by taking advantage of his position in respect of that portion of the transport of the goods to and from the railway is enabled to extract from his customers a much higher charge than the latter should really be required to pay. The Railway Department cannot, and does not, object to competition, but it does take exception to the superficial view which impels unthinking persons to hastily conclude that they can obtain transport more cheaply by motor, and that the railway is to blame for this position through charging rates that are too high. I do not hesitate to suggest that if the position were gone carefully into it would be found in the great majority of cases that the owners of goods transported by motor are paying a higher rate than they are fairly entitled to pay, under compulsion from the motorists who will not transport the goods to and from the railway at a reasonable charge.

There are other aspects of the matter which also seem to be worthy of mention as being too often overlooked. In this connection it may be mentioned that the service rendered by the railway is safe, speedy, and reliable, and available for use practically without intermission throughout the year. There is also, as has been so repeatedly emphasized, the aspect of false economy which enables the motorist to obtain the free use of the roads at the expense of the ratepayers.

Turning to a consideration of the methods by which the position can be met, it is to be noted that the last-mentioned matter is one that is in no way within the control of the Railway Department. In respect of charges and transport to and from the railway, however, the Department is in a better position. It may be possible—and the Department is now taking steps in that direction—to make suitable arrangements for transport of goods to and from the railway at a reasonable charge. So far as the position may be met by the lowering of the railway charges, definite proposals in this direction will be made in connection with the revision of the tariff, and this prompts some comment on a state of affairs that is becoming increasingly common. I refer to the practice of certain sections of the community who take advantage of free services afforded by the railway, such as the carriage of lime for agricultural purposes, but who do not hesitate to send their more remunerative traffic by other forms of transport. The purpose for which free carriage of lime was granted was to increase the productivity of the land, and it was assumed in justification of the concession that the resulting increased product would be carried by rail. The railways are required to pay a certain rate of interest on the capital invested in them, and in view of this circumstance free services such as the carriage of lime have to be paid for by the higher-rated classes of traffic. If, therefore, the Department does not get this higher-rated traffic, it is deprived of the means of affording the free services, and the ultimate result of the diversion of the paying traffic to the road must inevitably be the withdrawal of the unremunerative services.

Another aspect of the competition by road motors is that the road carriers transport only such classes of goods as suit themselves, and their services are not available, as the railways are, for the carriage at all times of every class of goods that may be presented to them so long as the goods are not of an objectionable nature. The effect is that the motorist confines himself to a comparatively small range of commodities which are capable of bearing a high rate, and it is interesting in this connection to compare the railways in New Zealand as a State institution with another State institution operating as a public utility—namely, the Post Office. As is well known, the Post Office has a statutory monopoly, and the grounds that justify the action of the Legislature in this connection are those stated by Bastable in his book on “Public Finance” as follows:—

“The bestowal of a monopoly is justified on the double ground that otherwise private agencies would compete for the more profitable parts of the business, leaving the supply of sparsely peopled and backward districts to the official Post Office, whilst the waste involved in rival establishments would hinder the reduction of rates below their actual level.”

That exactly states the position of the railways in New Zealand to-day. The motors are competing for the more profitable business, leaving the railways with that which is unprofitable, with the inevitable result, as stated in the quotation, that the financial position of the railways is adversely affected, and the Department is put in the position that it finds it difficult to reduce its charges. This is an aspect that is too often overlooked. People are too prone to decide not to send their traffic by rail until the railway charges are reduced, quite failing to grasp the fact that the only way in which the Department can be placed in a position to reduce its charges is by receiving an adequate proportion of remunerative traffic.

OFFICE ACCOMODATION.

The accommodation in the Head Office building has now become quite inadequate for requirements, and the management is much hampered in connection with its proposals owing to the lack of suitable rooms in which to establish the staff that it is desired to engage on the various matters that are contemplated. It has therefore become a matter of necessity that the present building should be considerably enlarged.

An important provision that should be made at the earliest possible moment is a suitable lecture-room in which practical lessons in railway-working can be given by the use of suitable models. The complete modernizing of the railway plant necessitates that the staff should have a thorough practical as well as theoretical training in its working if the maximum degree of advantage is to be obtained from the various improvements. An essential part of this training is the giving of lectures by the expert officers, such lectures being supplemented and explained by reference to actual working of models. Another matter that cannot be developed owing to the lack of accommodation is the provision of a suitable library in which information on every aspect of railway-working can be suitably collected and collated in a form that will admit of easy reference.

Apart from these aspects the position has become acute in connection with the accommodating of the growing staff that is necessary to cope with the increased activities of the Head Office and Branch management. At present every available room in the Head Office building is being made full use of, leaving no margin whatever for expansion, and I would therefore urge the necessity for making the provision of further accommodation a matter of urgency.

GENERAL.

The policy of rigid economy has been strictly pursued during the year, and in consequence the percentage of expenditure to revenue has been reduced below that of the previous year. It is fully realized that it is only by reducing expense to the greatest possible extent that the Department can be placed in a position where it can compete with other forms of transport and attract additional traffic

by the reduction of charges. The expenditure side of the Department's finances is, in the nature of things, more directly within the control of the Department than the revenue side, and in respect of expenditure, therefore, there is a greater scope for vigilant activity in the direction of placing the finances of the Department in the most favourable position that the nature and quantity of the traffic permit. In this connection it is interesting to note that for the year ended 31st March, 1922, there was a deficit, after allowing for interest on the capital expenditure on open lines at the "policy" rate ($3\frac{3}{4}$ per cent.), of £1,021,156. In 1923 the deficit was reduced to £284,385, and for the year now being dealt with there was a surplus of £31,802; and, as indicating the extent to which economy of expenditure has assisted towards achieving this result, it is to be noted that the percentage of expenditure to revenue in 1922 was 93·89; in 1923, 81·79; and in 1924, 77·37.

The necessity for requiring that every proposal involving further expenditure shall disclose a reasonable prospect of a commensurate return must be an absolute condition of the adoption of any such proposal if the finances of the Department are to be placed on a strong footing. This does not necessarily mean that every proposal shall be bound to afford an immediate return, but there must be a reasonably certain prospect of an adequate return within the not-too-distant future. In this connection it is necessary to guard against the usual extreme optimism of those advocating services or concessions involving expenditure, while at the same time avoiding the unduly pessimistic view which would, in a young country such as New Zealand, be a bar to progress. The avoidance of undue conservatism on one hand and of indulgence in unduly speculative expenditure on the other has been a constant care of the management throughout the year, and it is believed that in the face of many difficulties the operations of the Department have rendered general satisfaction to the people of the Dominion, while, as already indicated, it has been possible to attain this measure of achievement at a cost below that of the previous year.

Calculating the interest on the capital invested in the railways at the policy rate of 3 per cent. from 1896 to 1909, and at the policy rate of $3\frac{3}{4}$ per cent. from 1910 to 1924 inclusive, the total net amount required to be earned by the railways to meet the interest charges is £27,252,551. The net amount actually earned is £28,667,936, a surplus of £1,415,385, which was paid into the Consolidated Fund in excess of the policy requirement. In addition, reductions made in rates in pursuance of the policy amounted to over £2,000,000.

During the ten years, 1st April, 1914, to the close of the year under review, the railways have returned a sum of £327,027 in excess of the amount required to pay working-expenses and interest at the policy rate of $3\frac{3}{4}$ per cent. It should be taken into account that these ten years embrace the period affected by the war and post-war conditions.

The policy obtaining in New Zealand has been to regard the financial return as of less immediate importance than the developmental aspect, and for that reason the return required on railway capital has been fixed at $3\frac{3}{4}$ per cent., which is, of course, less than the average interest on the public debt. The value of the concessions granted in railway rates and services, however, represents a sum more than sufficient to cover the difference between the interest at the policy rate of $3\frac{3}{4}$ per cent. and the amount that would be required to meet the full liability at the average rate of interest on the public debt in respect of the capital invested in the railways.

Among the services which have been performed at less than actual cost may be mentioned—

Commodity.	Weight.	Value of Freight.	Average Distance hauled.	Rate per Ton.	Rate per Ton per Mile.
	Tons.	£	Miles.	s. d.	d.
Lime for manuring farm lands ..	71,872	4,229	66	1 2	0·21
Road-metal for local bodies. . .	229,165	33,484	45	2 11	0·78
Native brown coal.	988,898	444,884	104	9 0	1·03

During the year 75,298 tons of butter were carried an average distance of forty-eight miles at a charge of $\frac{1}{4}$ d. per pound, and 72,852 tons of cheese were carried for an average distance of fifty miles at $\frac{1}{2}$ d. per pound. It will be seen from this that the rates for dairy-produce are very low.

Comparing the result achieved on the various sections during the year, it will be observed that the South Island main line and branches section produced a return of only £2 2s. 8d. per cent. on the capital invested, while the North Island main line and branches gave a return of £6 7s. 6d. per cent. Of the smaller sections only three returned any interest on the capital invested—viz., Gisborne, which returned 17s. 7d. per cent.; Westland, 6s. 6d. per cent.; and Westport, £4 17s. 2d. per cent. Sections which failed to return sufficient revenue to cover actual working-costs are—Whangarei, £6,653; Kaihu, £1,169; Cape Foulwind, £1,512; Nelson, £5,170; Picton, £3,403; Lake Wakatipu steamer service, £1,573.

Allowing for interest at the policy rate of $3\frac{3}{4}$ per cent., the loss on the Whangarei Section was £42,747; Kaihu, £8,365; Gisborne, £20,091; South Island main line and branches, £259,709; Westland, £83,684; Nelson, £21,851; Picton, £29,191; Cape Foulwind line, £5,016; Lake Wakatipu steamers, £3,246. The North Island main line and branches and the Westport Section yielded a profit of £507,833 over the policy rate.

It will be seen by the table of branch lines given hereunder that the losses on South Island branches amounted to £173,300, representing over 66 per cent. of the deficiency of the whole South

Island main-line system, and are largely responsible for the failure of the system to pay the policy rate of interest on capital.

Branch.	Net Revenue.	Loss on Working.	Loss, including Interest.	Branch.	Net Revenue.	Loss on Working.	Loss, including Interest.
	£	£	£		£	£	£
Waiuku	36	..	7,151	Ngapara .. ..	..	2,395	8,648
Waitara .. ..	..	2,184	3,120	Waihemo .. ..	..	816	2,064
Toko .. ..	..	2,098	28,748	Otago Central ..	12,028	..	41,779
Greytown .. ..	..	2,064	2,441	Lawrence .. ..	..	2,241	13,655
Eskdale .. ..	..	1,029	5,358	Tapanui .. ..	..	4,690	9,344
Cheviot .. ..	..	1,366	14,502	Waikaka .. ..	..	761	3,322
Oxford-Eyretton ..	..	2,901	8,582	Switzers .. ..	..	2,056	4,058
Little River .. ..	..	16,801	20,896	Glenham .. ..	..	4,053	7,134
White Cliffs .. ..	..	1,561	2,497	Seaward Bush ..	3,343	..	3,599
Mount Somers .. ..	..	11,336	13,650	Forest Hill .. ..	..	1,383	2,254
Fairlie	4,988	..	381	Mararoa .. ..	..	701	1,728
Waimate .. ..	..	3,190	5,088				
Kurov .. ..	..	5,062	10,119	Totals	20,395	68,688	220,118

Another factor that contributed very materially to the difference in the returns obtained in the South Island and North Island respectively was competition by road. The South Island, by reason of its superior roads and topographical features, lends itself more readily to road transport than the North Island.

The problem of dealing with the traffic on these branch lines with a view to securing a more remunerative return has for some time been engaging the attention of the Department, and it is hoped that the experiments which it is proposed to undertake in connection with rail-motor transport may provide at least a partial solution to the problem.

I have, &c.,

R. W. McVILLY,
General Manager.

The Hon. the Minister of Railways.

APPENDIX

MAINTENANCE.

Mr. F. J. Jones, M. Inst. C.E., Chief Engineer, reports as follows:—

The track, structures, buildings, and appliances have been efficiently maintained.

Increased expenditure over last year is chiefly due to the increased quantity of relaying done and increased expenditure on banks, &c., due to slips and washouts.

Permanent-way.—An increased quantity of relaying compared with that of the previous year has been carried out. The relaying during the year has been as follows:—

Main line and branches, 40 lb., 53 lb., 55 lb., 56 lb., 65 lb., and 70 lb. rails	Miles.
relaid with 70 lb. material	62
Main line and branches, 40 lb., 45 lb., and 53 lb. relaid with 55 lb. material ..	9½
Main line and branches relaid with second-hand 53 lb. and 56 lb. material removed from main line	10¼
Total relaid for the year	81¾

Sleepers.—The number of new sleepers placed in the track during the year was 235,372.

Ballasting.—202,414 cubic yards of ballast were placed in track.

Slips and Floods.—Slips and floods during the year have been more extensive than usual. In the Auckland district they were not of a serious nature. In the Ohakune district during June and July a number of slips, not of an extensive nature, blocked traffic to some extent, one at Ongarue causing an accident to the south-bound express. In the Hawke's Bay district during March considerable damage was done to the Eskdale line by flood-waters. In the northern part of the Christchurch district heavy rains in May caused slips and floods, and considerable damage was done to the railway-lines. In the Dunedin district the floods of April caused damage through slips and washouts to the extent of some £20,000. In other districts the damage by floods was slight.

Bridges.—These have been maintained in good condition. Repairs and renewals have been carried out at a large number of bridges. In the Westland District the bridges between Otira and Greymouth have been strengthened to take the heavier class of engines necessitated by the opening of the Otira Tunnel.

A considerable amount of bridge-strengthening must be undertaken in the near future.

Water-services.—These have been maintained efficiently. Improvements to supplies have been made and additional holding-vats provided.

Wharves.—The upkeep of wharves has received the necessary attention. Owing to heavy rain in January, Lake Wakatipu rose several feet and submerged the wharves. Damage was done to some of the smaller wharves at different localities on the lake.

Buildings.—These have been maintained in good repair. Renewals and additions have been carried out. The Otorohanga station building and the Ohakune engine-shed were destroyed by fire during the year. These buildings have been rebuilt.

Station-yards.—Increased siding and general accommodation has been provided at a number of stations.

Railway Improvements.—The total expenditure under the Railways Improvement Authorization Account during the year was £10,827. Preliminary works in connection with the Auckland-Westfield deviation, new station and yards at Wellington, Christchurch, and Lyttelton are included in the expenditure.

Additions to Open Lines.—The expenditure under this heading during the year was £138,716, the principal works being station rearrangements at Whangarei (in hand), Maungaturoto (in hand), Homai (in hand), Rolleston (in hand), Arthur's Pass, Lagmhor, Punawai, Aicken's, Kokiri, and Hokitika; siding extensions at Kaipara Flats, Ahuroa, Kumeu, Morningside, Auckland, Newmarket, Tuakau, Frankton Junction, Putaruru, Otiria, Hikurangi, Rakautao, Taringamotu, Ohakune, Trentham, Ngaio (in hand), Christchurch, Temuka, Hawarden, Staircase, Cave, Hampden, Bluff, Riverton, and Greymouth; platforms extended at Waimauku, Akerama, and Heathcote; verandas provided at Rotorua, Kumeu, Waharoa, and Ranfurly; ladies' waiting-rooms at Kumeu, Paerata, and Kopu; road overbridge at Kingsland; office and showrooms for Architectural Branch, Auckland; subway at Hamilton; alterations to refreshment-rooms at Taumarunui, Taihape, and Christchurch; additions to workshops at Petone; cattle-yards erected at Lepperton, Mangamahoe, Pukehou, Rolleston, Whitecliffs, Bushey, Benmore, Mossburn, Kokiri, Moana, and Rotokohu; new houses erected at Rangiora, Little River, Rolleston, Darfield, Springfield (twelve), Garston, Pukearuhe, Tapanui, Five Rivers, and Hokitika.

Miscellaneous.—Additions and improvements amounting to £6,331, and charged to working-expenses, were carried out. The works include improvements to goods-office, Nelson; removing house from Switzers to Lumsden; loading-bank, Inangahua Junction; lighting at Cross Creek; additions to goods-office, Palmerston North; lengthening engine-pit, New Plymouth; loading-bank at Otorohanga; platform at Taumarere Station; ladies' waiting-room at Mangere; shifting crane from Ellesmere to Newmarket; lighting Westport yard; room for shunters, Lambton.

Expenditure.—The expenditure for the year was as follows :—

Maintenance (charged to working-expenses)	.. .. .	£ 1,141,684
New works (charged to capital)	.. .. .	149,543
Other Government Departments, public bodies, and private parties	.. .. .	66,453
Total expenditure	.. .. .	£1,357,680

The Maintenance expenditure charged to working-expenses amounted to £373 per mile, compared with £342 per mile in 1922-23, £367 per mile in 1921-22, £350 per mile in 1920-21, £280 per mile in 1919-20, £252 per mile in 1918-19, £240 per mile in 1917-18, £243 per mile in 1916-17, £251 per mile in 1915-16, and £254 per mile in 1914-15.

Mileage.—The mileage open for traffic on 31st March, 1924, was 3,064 miles 8 chains. During the year 27 miles 29 chains additional lines were opened for traffic.

Lands and Leases.—Number of leases registered during the year, 493; aggregate rental of same, £3,904 5s. 10d. Total number of leases current on 31st March, 1924, 6,084; aggregate rental of same, £46,595 0s. 5d. Private siding agreements registered during year, 95; aggregate rental of same, £3,583 10s. Total number of agreements current on 31st March, 1924, 493; aggregate rental of same, £18,210 10s. Miscellaneous agreements entered into, 9. Total number of Proclamations issued, taking or giving up land, 43. Total amount of compensation paid during the year for land taken, £9,991.

Staff.—Maintenance Branch—Working staff, 3,686; office staff, 140: total, 3,826.

SIGNAL AND ELECTRICAL.

Mr. H. J. Wynne, A.M.I.C.E., Signal Engineer, reports as follows :—

Fixed Signals at Officered Stations.—Home and distant signals have been provided at Cambridge and Runanga, home signals at Motuhoro, and additional home signals at Napier and Reefton. The total number of officered stations (including tablet stations) is 475, of which 304 are equipped with fixed signals, 106 are interlocked, and 65 unequipped. Four signal repeaters have been installed during the year, making a total of 390 now in use.

Interlocking of Points and Signals.—Complete all-electric-power signalling and interlocking has been installed at Rolleston, Springfield, Arthur's Pass, and Otira.

Mechanical interlocking has been provided at Onslow Road service siding and Whangarei ballast-pit siding.

Interlocking with tablet system has been installed as follows: Service siding at 14 m. 7 ch. near Homai; ballast-pit siding at 36 m., Thames Branch; Bartholomew Land and Timber Company's private siding near Ngatira; Solwyn Timber Company's private siding near Putaruru; Nelson Bros.' private siding, Tomoana; Pakipaki Brick and Lime Works private siding near Pakipaki; Hume Pipe Company's private siding near Terrace End; Gasworks siding, Palmerston North; Booth and Co.'s private siding near Carterton; Public Works Department's private siding at Otira.

Special switch locks have been provided at Whangarei, Cambridge, Motuhora, and Reefton.

The automatic signalling between Lambton and Upper Hutt has worked satisfactorily.

Automatic signalling with three-position colour light signals for single-line working has been brought into use between Rolleston and Arthur's Pass, and is working satisfactorily; good progress is being made between Otira and Stillwater. This system, for double-line working, is now in hand between Auckland and Penrose, and from Addington to Rolleston.

Total stations now interlocked, 106; tramway-crossings, 7; sidings and flag stations interlocked with tablet, 220; stations where wood locks are installed, 305.

Block Working and Electric Tablet.—The installation of tablet system between Arthur's Pass and Otira has been completed and brought into use; length, 8¼ miles. The total mileage equipped is 1,653 miles, out of a total of 3,025 miles of single line open for traffic.

The number of tablet instruments now in use is 890, at 372 stations. The total number of automatic tablet-exchangers in use is 340.

Lock and Block.—The electric lock-and-block system has worked satisfactorily during the year. The total mileage equipped is 35 miles of double line.

The number of lock-and-block instruments in use is 68, at 30 stations.

Telegraph and Telephone Facilities.—79 miles of poles and 735 miles of wire have been erected during the year. Thirty-six new connections to railway telephone circuits have been provided.

The following portions of telephone-line have been converted from earth to metallic circuit: Drury to Mercer, Palmerston North to Paekakariki, Wellington to Petone, Waitati to Sawyer's Bay.

A cable has been run between Christchurch and Addington, to include all railway wires. The cables carrying the railway wires through the Caversham and Wingatui Tunnels have been renewed.

Totals now in use: Morse sets, 277; telephones, 1,773; electric bells, 339; miles of wire, 8,365; miles of poles, 2,758.

Electric Light and Power.—Electric-lighting installations have been made as follows: Auckland, Waiuku, Frankton Junction, Matamata, St. John's, Waipukurau, Gisborne, Bryndwyr, Rangiora, Arthur's Pass, Otira, Oamaru, Dunedin.

The following work has been done in connection with the electrification of machinery in locomotive workshops: Frankton Junction—One 25 h.p. motor installed for log-hauler and circular saw. Addington—Installing electric drilling-machine; three 10 h.p. motors for planing-machines replaced by 15 h.p. motors; one 10 h.p. motor installed for sewing-machines. Hillside—One 5 h.p. motor installed for drilling-machine.

The work of installing electric-welding plants has been carried out at Newmarket, East Town, Petone, and Hillside.

Motor generator sets for charging batteries of electric platform trucks have been installed at Auckland, Lambton, Christchurch, and Dunedin. A motor generator set for train-lighting has been installed at Thorndon.

Level-crossing Automatic Alarm-bells.—Eight level crossings have been equipped with automatic warning-bells; bells only at Mount Albert (Asquith Avenue) and Kaiapoi (Peraki Street), and automatic flag visual signals (“wigwag”) at New Lynn (Titirangi Road), Mount Albert (Roslyn Terrace and Gladstone Road), Hastings (Lyndon Street), Inglewood (Rate Street), and Mosgiel (Gordon Road). The present number of level crossings fitted with warning-bells, &c., is 66.

Expenditure.—Particulars of expenditure for the Signals Branch, including work for other branches, for the year ended 31st March, 1924, are as follows:—

New works—		£	s.	d.
Signalling and interlocking	.. .. .	7,327	3	1
Electric-tablet working	.. .. .	794	16	5
Telegraph and telephone facilities	.. .. .	14,911	13	0
Electric light	.. .. .	5,149	6	0
Electric motors, &c.	.. .. .	3,034	12	7
Level-crossing alarms	.. .. .	1,588	18	7
Automatic signalling	.. .. .	101,313	10	10
Total	.. .. .	£134,120	0	6
Maintenance—				
Signalling and interlocking	.. .. .	27,134	0	10
Signals at level crossings	.. .. .	2,343	7	5
Telegraph and telephone facilities	.. .. .	9,149	2	6
Lines, &c., maintained by Post and Telegraph Department	.. .. .	1,421	11	1
Electric block and tablet working	.. .. .	11,770	3	0
Electric light	.. .. .	7,171	10	3
Electric power signalling	.. .. .	10,250	7	10
Electric motors, cranes, fire-alarms, &c.	.. .. .	4,623	3	8
Total	.. .. .	£73,863	6	7

LOCOMOTIVE.

Mr. E. E. Gillon, Chief Mechanical Engineer, reports as follows:—

The plant, locomotives, tenders, carriages, brake-vans, wagons, machinery, and tools have been maintained in good working-order during the year.

Locomotives.—On the 1st April, 1923, there were 639 engines in service, and on the 31st March, 1924, there were 655 engines. Three old engines were condemned and written off stock. Nineteen new engines were added to stock, nine of which were built in the Government railway workshops, two being Pacific-type simple superheated tender engines, Class AB, and seven heavy-tank engines, 4-6-4 type, Class Ws; five Pacific-type simple superheated tender engines, Class AB, were built by Messrs. A. and G. Price (Limited) of Thames; the balance of engines added to stock, five, completed the contract with the North British Locomotive Company (Limited) of Glasgow.

In the Government railway workshops to date 209 engines have been built, and twenty-four old locomotives have been rebuilt. During the year 798 locomotives passed through the workshops, the details of work done being as follows:—

Particulars.	Number and Type.						Total.
	Four-cylinder Balanced- compound Tender Engines.	Tender Engines.	Tank Engines.	Fell Engines.	Single Fairlies.	Electric Engines.	
Number passed through shops..	75	354	340	9	14	6	798
Built new .. .. .	..	2	7	..	..	..	9
Erected new .. .. .	..	5	6	..	..	6	17
Re-erected .. .. .	..	..	1	..	..	..	1
Thoroughly overhauled	23	64	74	7	6	..	174
Heavy repairs	5	47	30	..	2	..	84
Light repairs	47	236	222	2	6	..	513
Painted	23	64	82	6	6	..	181
Paint touched up	30	204	118	2	8	..	362

Included in the above are six electric engines erected for Public Works Department, three engines repaired for the Public Works Department, and two engines repaired for a private line.

At the close of the year there were on order in the railway workshops twenty-two engines, consisting of ten simple superheated tender engines, Pacific type, Class AB, and twelve heavy tank engines, 4-6-4 type—one Class WAB and eleven Class Ws. There were also on order from Messrs. A. and G. Price (Limited), Thames, eleven Pacific-type engines, Class AB. Altogether there were on order on the 31st March, 1924, thirty-three engines.

The tractive power of locomotives was increased by 405,836 lb., equal to 4.19 per cent.

Boilers.—The work on renewals and repairs has been kept well up to date. The following statement shows details of boiler-work done:—

Description.	Number passed through Shops.	Built new.	Heavy Re-pairs.	Light Re-pairs.	New Tubes (Sets).	Pieced and Second-hand Tubes (Sets).	Super-heater Tubes (Sets).	Pieced and Second-hand Superheater Tubes (Sets).	New Smoke-box Tube-plate.	New Fire-box.	New Firebox Tube-plate.	Number of Boilers patched.
Boilers	407	33	124	250	99	16	29	11	9	21	34	113

Included in the above are four boilers repaired for the Public Works Department, one for a private line, and one for Cape Foulwind line.

Fifty-three new boilers were in hand at the close of the year, consisting of twelve Class A, eleven Class AB, three Class B, five Class J, one Class N, one Class U, two Class UA, one Class WA, one Class WAB, four Class WB, one Class WE, and eleven Class Ws.

Carriages.—The stock on the 1st April, 1923, was 1,498, and on the 31st March, 1924, the number was 1,527. Thirty-seven new cars were built, twenty-eight of which were additional stock, the balance to replace stock condemned, sold, and converted to wagons. Six cars were condemned and written off stock, and two obsolete cars were converted into sleeping vans.

The following table shows details of car-work done during the year:—

Particulars.	Number and Type of Carriage.			Total.
	Bogie.	Six-wheel.	Four-wheel.	
Number passed through shops	2,520	90	15	2,625
Built new	37	..	..	37
Erected new	4	..	..	4
Rebuilt	2	..	..	2
Thoroughly overhauled	365	1	..	366
Heavy repairs	857	15	1	873
Light repairs	1,255	72	14	1,341
Converted .. ..	..	2	..	2
Painted	609	4	..	613
Paint touched up	953	3	..	956

Included in the above are ten cars repaired for Cape Foulwind line, and one for a private line.

One hundred and six cars were under construction at the close of the year in the railway workshops.

Brake-vans.—The number of brake-vans on the 1st April, 1923, was 461, and the number on the 31st March, 1924, was 461. One bogie brake-van was built to replace a four-wheel van condemned and written off.

The following table shows the work done on brake-vans during the year:—

Description.	Number passed through Shops.	Built new.	Erected New.	Thoroughly overhauled.	Heavy Repairs.	Light Repairs.	Painted.	Paint touched up.
Brake-vans	1,272	1	1	85	310	875	161	317

Included in the above are six brake-vans repaired for the Cape Foulwind line.

Five bogie brake-vans were under construction at the close of the year.

Wagons.—The wagon stock on the 1st April, 1923, was 25,645, and the number on the 31st March, 1924, was 25,734. Eighty-nine wagons, comprising thirty-one bogie and fifty-eight four-wheel, were built in the railway workshops. Two four-wheel wagons were converted from obsolete cars. Two four-wheel wagons were condemned and written off.

The carrying-capacity of wagon stock was increased by 1,667 tons.

The following table gives particulars of work done on wagons during the year:—

Description.	Number passed through Shops.	Built new.	Rebuilt.	Thoroughly over-hauled.	Heavy Repairs.	Light Repairs.	Painted.	Paint touched up.
Wagons	30,660	89	62	1,462	12,665	16,382	4,382	16,754

Included in the above are twenty-eight wagons repaired for the Cape Foulwind line.

At the close of the year there were under construction in the railway workshops 609 wagons, consisting of 137 bogie and 472 four-wheel wagons.

Tarpaulins.—The tarpaulin stock on the 1st April, 1923, was 20,582, and on the 31st March, 1924, the number was 20,582. 1,652 new tarpaulins were made in the railway workshops, 1,600 to replace missing sheets, 40 for the Public Works Department, and 12 for a private line. 622 worn-out tarpaulins were condemned and written off, and replaced with a similar number of new tarpaulins.

The following table gives details of the work on tarpaulins for the year:—

Description.	Number passed through Shops.	Manufactured new.	Condemned and replaced with new Tarpaulins.	Repaired.
Tarpaulins	32,705	1,652	622	30,431

Stationary Engines and Cranes.—The repairs and renewals during the year were as follows:—

Description.	Number passed through Shops.	Built new.	Thoroughly over-hauled.	Heavy Repairs.	Light Repairs.	Painted.	Paint touched up.	Boiler-repairs.						
								Built new.	Heavy Repairs.	Light Repairs.	New Tubes (Sets).	Pieced and Second-hand Tubes (Sets).	New Smoke-box Tube-plates.	No. of Boilers patched.
Hand-cranes ..	34	..	1	19	14	2	23	..	..	..	..	..	..	..
Steam-cranes ..	35	..	8	4	23	6	10	1	1	7	..	..	..	1
Stationary engines	27	..	1	1	1	..	1	..	8	19	2	6	1	10
Pneumatic coaling-cranes	14	1	4	5	4	9	3	..	..	..	..	..	..	..
Pile-drivers ..	1	..	..	..	1	..	..	..	..	..	..	..	..	..

General.—In addition to the engines, cars, brake-vans, and wagons repaired at the workshops, 38,255 engines, 64,553 cars, 11,525 brake-vans, and 84,129 wagons were repaired at out-depots in order to keep vehicles out of service the shortest possible time.

Axles.—During the year 4,872 car, van, and wagon axles were replaced with modern steel axles. This number does not include axles for new rolling-stock.

Westinghouse Brake.—The work of equipping the engines and rolling-stock on the Westland Section with the Westinghouse brake will be completed early this year. Efficient arrangements are in force for the examination and upkeep of the Westinghouse brake.

Train Running and Mileage.—There has been an increase of 677,772 miles in train-mileage as compared with 1922–23.

The engine-mileage has increased by 978,444 miles as compared with the previous year.

The following table shows particulars of the expenditure per train-mile:—

Year.	Train-mileage.	Engine-mileage.	Cost, in Pence, per Train-mile.		
			Locomotive Branch.	Car and Wagon Branch.	Total.
1923–24	9,024,503	12,450,796	50·35	14·65	65·00
1922–23	8,346,731	11,472,352	61·00	15·40	76·40

STORES.

Mr. E. J. Guinness, Comptroller of Stores, reports as follows :—

The value of the stores, material, and plant (purchased under Railway vote) on hand at the 31st March, 1924, at the various stores, depots, and sawmills amounted to £815,665 18s. 1d., as against £1,007,588 19s. 11d. on the 31st March, 1923.

The value of stores on hand on account of additions to open lines amounted to £149,902 7s. 10d., as against £132,728 11s. 11d. on the 31st March, 1923.

The value of stores on hand on account of Railway Improvement Authorization is £9,172 19s. 2d., as against £12,382 9s. 11d. on the 31st March, 1923.

The whole stock is in good order, has been systematically and carefully inspected, and is value for the amount stated.

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 - Net Revenue Account.
 - Working-expenses and Revenue Account—Advertising Branch.
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RETURN NO. 1.
CAPITAL ACCOUNT AS AT 31ST MARCH, 1924.

Expenditure.	Expenditure to 31st March, 1923.		Expenditure during 1923-24.		Total Expenditure to 31st March, 1924.		Receipts. From General Government Funds— Public Works Fund Wellington-Hutt Railway Improvement Account Railways Improvement Account, 1904 Railways Improvement Account, 1914 Consolidated Fund Westport Harbour Loans Works constructed from Harbour Board funds— Westport Greymouth Works constructed by Provinces and Midland Railway Company at valuation	Amount provided to 31st March, 1923.		Amount provided during 1923-24.		Total Provision to 31st March, 1924.	
	£	s. d.	£	s. d.	£	s. d.		£	s. d.	£	s. d.	£	s. d.
Lines open for traffic	30,963,786	6 8	812,307	18 1	31,776,094	4 9	36,325,635	9 5	1,010,295	19 3	37,335,931	8 8	
Rolling-stock	9,075,520	6 10	290,894	3 7	9,366,414	10 5	228,373	5 5	..	..	228,373	5 5
Lake Wakatipu steamer service	44,271	6 11	79	4 2	44,350	11 1	641,275	7 8	..	..	641,275	7 8
House-factory at Frankton Junction	46,472	4 5	7,020	11 7	53,492	16 0	912,141	16 4	20,520	3 4	932,661	19 8	
Balance carried down	40,130,050	4 10	1,110,301	17 5	41,240,352	2 3	4,296	7 10	21,810	0 0	4,296	7 10	
	145,111	1 10	13,964	5 2	159,075	7 0	328,190	0 0	..	..	350,000	0 0
	40,275,161	6 8	1,124,266	2 7	41,399,427	9 3	47,508	0 0	71,640	0 0	71,640	0 0	
							1,787,741	0 0	..	..	1,787,741	0 0
	40,275,161	6 8	1,124,266	2 7	41,399,427	9 3	40,275,161	6 8	1,124,266	2 7	41,399,427	9 3	

NOTE.—Unopened lines are under the control of the Public Works Department, and all expenditure in connection therewith is included in the accounts of that Department.

GENERAL BALANCE-SHEET AT 31ST MARCH, 1924.

Liabilities.		Assets.		
£	s. d.	£	s. d.	
Capital Account—Balance at credit thereof	159,075	7 0	102,305	8 0
Sundry creditors (including unpaid wages)	263,254	1 4	56,769	19 0
Collections for refunds to Harbour Boards, shipping companies, and other carriers	31,999	18 3	..	..
Treasury Adjustment Account	1,554,757	19 6	..	..
Surplus cash at stations	69	0 1	..	..
Balance of Net Revenue Account	2,009,156	6 2	249,646	2 8
	31,802	1 5	24,681	2 3
			224,965	0 5
			590,700	17 8
			815,665	18 1
			88,310	2 0
			25,475	9 1
			806,000	0 0
			831,475	9 1
			13,248	11 6
			133,182	19 11
			146,431	11 5
			£2,040,958	7 7

L. HAMANN, Chief Accountant.

RETURN No. 3.

CLASSIFIED EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 1924.

Section.	Maintenance of Way and Works.						Signal and Electrical.	Locomotive Power.					Carriages.	Wagons.	Traffic.	Head Office.	Departmental Offices.	Lake Wakatipu Steamers.	Totals.		
	Permanent-way.	Structures.	Buildings.	Miscellaneous.	General Charges.	Total.		Working Locomotives.	Fuel and Water.	Oil, Tallow, &c.	Renewals and Repairs.	General Charges.								Total.	
WAGES AND SERVICES.																					
Whangarei	£ 17,681 15 2	£ 2,954 4 11	£ 1,348 3 6	£ 33 15 6	£ ..	£ 22,017 19 1	£ 539 8 6	£ 8,574 2 4	£ 570 6 1	£ ..	£ 3,865 17 8	£ ..	£ 13,010 6 1	£ 533 10 11	£ 3,123 4 2	£ 13,618 16 5	£ 685 18 11	£ 2,232 10 11	£ ..	£ 55,761 15 0	
Kaihu	2,696 12 6	84 11 9	70 16 9	30 17 0	..	2,882 18 0	21 10 6	843 0 0	89 9 7	..	666 9 8	..	1,598 19 3	201 16 8	288 6 9	2,107 10 8	67 11 1	49 6 1	..	7,217 19 0	
Gisborne	7,465 13 4	954 3 9	333 19 9	..	..	8,753 16 10	328 7 6	3,355 10 5	226 9 10	..	2,049 0 7	..	5,631 0 10	592 10 6	1,036 13 9	6,185 17 3	298 18 5	218 4 0	..	23,045 9 1
North Island Main Lines and Branches	241,099 13 2	55,724 6 4	41,008 17 1	1,842 10 8	..	339,675 7 3	25,936 5 11	311,658 19 7	29,610 13 8	..	155,116 9 4	..	496,386 2 7	69,266 19 2	101,559 16 8	685,530 12 8	30,824 2 3	79,644 8 8	..	1,828,823 15 2	
South Island Main Lines and Branches	235,203 19 7	39,126 8 11	31,300 4 3	1,196 9 5	..	306,827 2 2	13,663 4 0	198,488 13 3	17,331 7 9	..	101,915 0 4	..	317,735 1 4	37,329 8 9	70,510 2 2	544,874 8 4	18,046 0 0	49,564 19 5	..	1,358,550 6 2	
Westland	35,291 5 8	9,175 9 2	5,239 16 3	136 8 2	..	49,842 19 3	1,499 8 11	24,901 3 7	1,433 3 1	..	6,989 12 5	..	33,323 19 1	2,218 9 6	6,802 6 3	42,670 16 1	1,722 9 6	7,398 18 2	..	145,479 6 9	
Westport	8,813 15 6	2,079 14 7	866 12 7	94 3 10	..	11,854 6 6	447 11 11	9,372 1 10	751 11 10	..	6,222 18 11	..	16,346 12 7	871 6 8	8,626 9 1	20,761 5 2	889 4 11	3,495 8 11	..	63,292 5 9	
Nelson	6,028 0 6	2,428 1 9	802 6 5	60 16 2	..	9,319 4 10	26 10 2	3,248 13 4	272 3 0	..	1,399 16 0	..	4,920 12 4	673 17 2	824 5 0	6,522 8 7	188 1 10	137 12 4	..	22,612 12 3	
Pictou	11,733 1 11	1,411 16 10	943 6 2	22 5 2	..	14,110 10 1	87 0 5	3,797 16 9	114 16 0	..	1,711 16 1	..	5,624 8 10	348 8 11	1,072 13 4	8,819 0 3	284 6 3	207 19 4	..	30,554 7 5	
Lake Wakatipu	7,361 0 10	7,361 0 10
Total	566,013 17 4	113,938 18 0	81,914 2 9	3,417 5 11	..	765,284 4 0	42,549 7 10	564,240 1 1	50,400 0 10	..	279,937 1 0	..	894,577 2 11	112,036 8 3	193,843 17 2	1,331,090 15 5	53,006 13 2	142,949 7 10	7,361 0 10	3,542,698 17 5	
STORES.																					
Whangarei	22,658 0 6	1,513 9 0	386 19 5	29 5 7	..	24,587 14 6	164 14 7	..	6,251 18 9	389 8 0	2,297 4 2	..	8,938 10 11	394 6 0	2,066 16 5	1,191 9 8	77 6 11	32 5 1	..	37,453 4 1	
Kaihu	519 5 3	43 5 6	49 14 6	..	..	612 5 3	..	..	1,102 17 0	51 10 10	301 17 2	..	1,456 5 0	109 9 1	228 2 9	169 5 7	8 0 0	3 5 6	..	2,586 13 2
Gisborne	197 8 6	179 10 9	136 12 7	..	..	513 11 10	19 18 3	..	5,815 6 8	176 1 1	912 6 9	..	6,903 14 6	206 6 6	719 14 2	521 4 9	34 1 8	13 17 10	..	8,932 9 6
North Island Main Lines and Branches	95,843 11 4	14,742 6 0	22,351 8 3	1,548 2 6	..	134,485 8 1	16,599 13 10	..	449,818 0 6	16,083 14 10	79,381 15 5	..	545,283 10 9	39,927 17 10	66,093 14 0	54,999 0 1	3,482 14 7	1,431 9 5	..	862,303 8 7	
South Island Main Lines and Branches	103,684 15 5	15,327 14 0	17,679 18 0	529 10 10	..	137,221 18 3	10,118 7 2	..	263,365 16 6	8,911 7 5	52,804 3 5	..	325,081 7 4	16,669 14 1	40,179 13 6	34,692 17 3	2,041 4 6	836 13 3	..	566,841 15 4	
Westland	25,351 3 1	4,114 0 1	2,304 19 5	77 4 9	..	31,847 7 4	509 5 8	..	15,560 1 8	908 18 8	4,574 8 11	..	21,043 9 3	1,301 6 5	3,966 15 9	3,481 18 11	193 3 1	77 1 3	..	62,420 7 8	
Westport	331 11 9	841 12 4	595 1 2	95 14 4	..	1,863 19 7	52 2 2	..	4,551 11 3	327 16 9	2,244 15 3	..	7,124 3 3	374 7 10	5,451 0 9	1,741 16 2	100 15 1	42 17 9	..	16,751 2 7	
Nelson	883 12 2	286 19 9	252 15 10	80 1 4	..	1,503 9 1	2 14 0	..	3,000 3 1	135 15 4	793 13 10	..	3,929 12 3	355 5 10	529 5 10	371 19 10	21 10 10	8 12 10	..	6,722 10 6	
Pictou	1,533 10 6	396 2 9	502 10 1	15 13 4	..	2,447 16 8	32 6 1	..	3,842 2 0	146 12 5	1,005 18 0	..	4,994 12 5	264 2 2	643 10 2	605 6 5	32 6 4	13 11 1	..	9,033 11 4	
Lake Wakatipu	2,965 6 3	2,965 6 3
Total	251,002 18 6	37,445 0 2	44,259 19 3	2,375 12 8	..	335,083 10 7	27,499 1 9	..	753,307 17 5	27,131 5 4	144,316 2 11	..	924,755 5 8	59,602 15 9	119,878 13 4	97,774 18 8	5,991 3 0	2,459 14 0	2,965 6 3	1,576,010 9 0	
MISCELLANEOUS.																					
Whangarei	66 2 0	28 8 4	4 4 9	0 12 8	112 15 7	212 3 4	108 18 5	..	4 10 6	..	1,104 13 3	42 9 2	1,151 12 11	100 8 8	853 16 2	1,149 19 8	..	..	..	3,576 19 2
Kaihu	3 4 1	0 13 9	4 3 5	..	1 16 1	9 17 4	..	..	0 15 2	..	110 18 10	2 14 11	114 8 11	5 3 7	11 7 4	165 15 7	..	..	..	306 12 9
Gisborne	33 8 0	146 16 11	57 3 4	..	7 3 4	244 11 7	25 5 4	..	6 6 1	..	296 17 4	29 18 2	333 1 7	14 13 1	91 4 8	347 5 2	..	..	..	1,056 1 5
North Island Main Lines and Branches	3,184 2 8	7,319 17 5	7,591 6 6	347 5 10	4,419 9 4	22,862 1 9	1,094 2 6	..	147 2 7	..	37,266 5 0	3,870 5 6	41,283 13 1	15,662 11 4	24,297 19 4	46,336 0 10	..	..	..	151,536 8 10
South Island Main Lines and Branches	3,288 18 0	5,281 1 10	6,123 3 9	135 8 6	1,921 19 3	16,750 11 4	Cr. 720 3 0	..	221 10 10	..	24,979 7 7	2,242 15 9	27,443 14 2	5,312 11 3	15,339 9 5	44,989 4 7	..	..	..	109,115 7 9
Westland	810 0 8	390 19 2	Cr. 60 14 4	27 5 7	305 15 0	1,473 6 1	249 3 1	..	30 16 1	..	1,647 13 8	112 16 3	1,791 6 0	317 19 3	1,251 15 5	4,782 3 7	..	..	..	9,865 13 5
Westport	124 11 8	366 0 1	175 17 3	23 9 7	81 0 0	770 18 7	86 13 8	..	0 3 0	..	1,154 0 4	172 15 4	1,326 18 8	318 16 7	1,851 19 11	3,293 8 11	..	..	..	7,648 16 4
Nelson	2 19 0	41 3 1	1 19 1	..	44 16 10	90 18 0	5 3 0	..	..	..	134 15 7	7 10 6	142 6 1	9 16 10	23 5 8	336 6 7	..	..	..	607 16 2
Pictou	66 5 3	201 15 2	191 17 7	4 9 0	35 1 0	499 8 0	13 18 10	..	0 16 5	..	218 2 5	17 9 7	236 8 5	21 9 10	56 3 1	385 16 1	..	..	..	1,213 4 3
Lake Wakatipu	129 5 11	129 5 11
Total	7,579 11 4	13,776 15 9	14,089 1 4	538 11 2	6,929 16 5	42,913 16 0	863 1 10	..	412 0 8	..	66,912 14 0	6,498 15 2	73,823 9 10	21,763 10 5	43,777 1 0	101,786 1 0	..	..	129 5 11	285,056 6 0
Grand total	824,596 7 2	165,160 13 11	140,263 3 4	6,331 9 9	6,929 16 5	1,143,281 10 7	70,911 11 5	564,240 1 1	804,119 18 11	27,131 5 4	491,165 17 11	6,498 15 2	1,893,155 18 5	193,402 14 5	357,499 11 6	1,530,651 15 1	58,997 16 2	145,409 1 10	10,455 13 0	5,403,765 12 5	

RETURN NO. 5.

COMPARATIVE STATEMENT OF PASSENGER AND GOODS TRAFFIC FOR THE YEAR ENDED 31ST MARCH, 1924.

Section.	Length Open for Traffic.	Passengers.						Live-stock.				Goods.			Gross Total Tonnage.	
		First Class.		Second Class.		Total.		Season Tickets.	Cattle.	Sheep and Pigs.	Total.	Equivalent Tonnage.	Timber.	Goods.		Total.
		Single.	Return.	Single.	Return.	Number.	Number.									
1923-24.																
Whangarei ..	88	7,284	96,829	95,136	226,416	2,090	1,513	51,727	53,240	2,528	24,580	173,638	198,218	200,746		
Kaihu ..	24	1,320	14,235	18,954	35,336	..	21	396	417	22	6,784	4,200	10,984	11,006		
Gisborne ..	49	8,481	48,618	33,560	93,817	364	1,072	114,529	115,601	4,906	13,061	44,162	57,223	62,129		
North Island Main Lines and Branches	1,151	445,029	2,213,133	4,926,966	8,322,954	376,759	227,809	3,409,378	3,637,187	205,408	370,517	2,295,687	2,666,204	2,871,612		
South Island Main Lines and Branches	1,429	260,690	998,937	2,747,788	4,546,801	128,520	84,655	3,941,699	4,026,354	183,321	143,230	2,342,301	2,485,531	2,668,852		
Westland ..	159	22,155	104,893	202,430	350,136	14,523	3,561	40,476	44,037	2,698	152,562	363,354	515,916	518,614		
Westport ..	36	326	33,975	67,742	102,819	2,123	76	2,475	2,551	122	7,192	469,292	476,484	476,606		
Nelson ..	61	1,654	25,980	36,552	66,150	945	452	19,925	20,377	934	4,946	37,907	42,853	43,787		
Pictou ..	56	9,975	27,420	31,104	72,949	405	1,052	134,204	135,256	5,687	605	58,705	59,310	64,997		
Lake Wakatipu steamers	..	3,008	5,455	7,176	18,933	15	223	9,162	9,385	434	639	6,095	6,734	7,168		
Totals ..	3,053	779,402	3,569,475	8,167,408	13,836,311	525,744	320,434	7,723,971	8,044,405	406,060	724,116	5,795,341	6,519,457	6,925,517		
1922-23.																
Whangarei ..	80	7,190	89,245	92,746	213,085	2,234	1,147	53,858	55,005	2,501	28,268	142,250	170,518	173,019		
Kaihu ..	20	1,277	15,760	17,500	35,997	4	55	197	252	25	6,431	4,337	10,768	10,793		
Gisborne ..	49	7,991	44,041	33,856	89,318	368	1,636	129,301	130,937	5,672	12,273	44,486	56,759	62,431		
North Island Main Lines and Branches	1,140	442,810	2,215,082	5,130,572	8,553,046	337,116	209,617	3,194,326	3,403,943	191,293	337,356	2,068,167	2,405,523	2,596,816		
South Island Main Lines and Branches	1,429	258,321	1,026,984	2,902,600	4,751,507	128,190	75,519	3,746,057	3,821,576	172,726	155,424	2,292,420	2,447,844	2,620,570		
Westland ..	157	20,513	100,066	209,576	351,683	13,975	4,019	57,912	61,931	3,534	111,139	313,502	424,641	428,175		
Westport ..	36	358	31,319	59,664	92,197	2,446	129	2,991	3,120	158	7,098	599,710	606,808	606,966		
Nelson ..	61	1,634	28,303	37,864	69,905	921	611	32,221	32,832	1,474	4,205	32,069	36,274	37,748		
Pictou ..	56	10,750	28,991	32,774	77,055	418	953	140,293	141,246	5,900	482	68,267	68,749	74,649		
Lake Wakatipu steamers	..	3,259	5,302	8,340	22,817	9	244	10,607	10,851	498	537	6,386	6,923	7,421		
Totals ..	3,028	770,817	3,585,093	8,525,492	14,256,610	485,681	293,930	7,367,763	7,661,693	388,781	663,213	5,571,594	6,234,807	6,618,588		

RETURN No. 6.

EXPENDITURE ON CONSTRUCTION OF RAILWAYS, ROLLING-STOCK, ETC., TO 31ST MARCH, 1924; NET REVENUE, AND RATE OF INTEREST EARNED ON CAPITAL EXPENDED ON OPENED LINES FOR YEAR ENDED SAME DATE.

Section of Railway.	Cost of Construction.		Net Revenue.	Rate of Interest earned.
	Opened Lines.	Unopened Lines.		
	£	£	£	£ s. d.
Whangarei	962,512	..	- 6,653	..
Kaibu	191,902	529,488	- 1,169	..
Tauranga .. .. .	..	..	..	..
" .. .. .	..	1,107,661	..	..
Gisborne	699,362	..	6,135	0 17 7
" .. .. .	..	714,114	..	..
North Island Main Lines and Branches ..	19,076,401	..	1,216,479	6 7 6
South Island Main Lines and Branches ..	15,994,401	2,642,373	340,091	2 2 8
" .. .. .	..	315,086	..	..
Westland	2,438,977	..	7,778	0 6 6
" .. .. .	..	1,502,724	..	..
Westport	606,490	..	29,462	4 17 2
" (Cape Foulwind Line)	98,450	..	- 1,512	..
" .. .. .	..	97,627	..	..
Nelson	444,816	..	- 5,170	..
" .. .. .	..	98,684	..	..
Picton	687,691	..	- 3,403	..
" .. .. .	..	18,128	..	..
Lake Wakatipu steamer service	44,350	..	- 1,583	..
<i>In suspense—</i>				
Surveys, North Island .. .. .	..	35,103	..	..
Miscellaneous, North Island .. .. .	..	5,169	..	..
Surveys, South Island .. .. .	..	5,763	..	..
Miscellaneous, South Island .. .. .	..	5,168	..	..
P.W.D. stock of permanent-way .. .. .	..	200,580	..	..
W.R.D. stock of A.O.L. and R.I.A. stores ..	159,075	..	..	..
Balance of cost of raising loan of £1,000,000 for Railways Improvement Authorization Act 1914 Account .. .. .	..	61,726	..	..
	£41,399,427	..	£1,580,445	£3 16 6
		£7,339,394		
Total cost of opened and unopened lines at 31st March, 1924	£48,738,821		..	£3 4 10

NOTE.—The amount stated in this return as the cost of construction of opened lines includes the Provincial and General Government expenditure on railways. It also includes the Midland Railway and expenditure by the Greymouth and Westport Harbour Boards on railways and wharves under the provisions of section 7 of the Railways Authorization Act, 1885, the information regarding the last-mentioned being furnished by the respective Boards. The rate of interest earned has been computed on cost proportionately to the time during which the lines, taken over by the Working Railways Department, within the financial year were earning Revenue, thus:—

Whangarei Section: Kalkohe-Okaihau opened for traffic 29th October, 1923.

Kaibu Section: Tarawhati-Donnelly's Crossing opened for traffic 1st April, 1923.

North Island Main Lines and Branches: Napier-Eskdale opened for traffic 23rd July, 1923.

Westland Section: Runanga-Rapahoe opened for traffic 3rd September, 1923.

L. HAMANN, Chief Accountant.

RETURN No. 7.

EXPENDITURE UNDER VOTE FOR ADDITIONS TO OPEN LINES, CHARGED TO CAPITAL ACCOUNT, FOR THE YEAR ENDED 31ST MARCH, 1924.

	Amount.	Total.
	£ s. d.	£ s. d.
Material on hand at 31st March, 1923	132,728 11 11	
Expenditure charged to Vote No. 46 by Treasury	643,648 4 3	
	776,376 16 2	
Less material on hand at 31st March, 1924	149,902 7 10	626,474 8 4
Expenditure on works, &c.—		
Way and Works Branch	340,483 4 5	
Locomotive Branch	285,991 3 11	626,474 8 4

WAY AND WORKS BRANCH: PARTICULARS OF WORKS, ETC.

Railway.	Work, &c.	Amount.	Total.
		£ s. d.	£ s. d.
Whangarei	Sidings, loading-banks, stockyards, crossings, &c. ..	792 12 7	
	Additions to station buildings, extension of station-yard, and other facilities	16,604 3 0	
	Purchase of land	25 0 0	
	Additional dwellings	734 3 4	
	Tablet installation	101 13 7	
	Telephone and telegraph facilities	4,938 11 8	23,196 4 2
Gisborne	Additions to station buildings, extension of station-yard, and other facilities	197 14 7	197 14 7
North Island Main Lines and Branches	Sidings, loading-banks, stockyards, crossings, &c. ..	16,197 8 1	
	Additions to station buildings, extension of station-yards, and other facilities	20,417 6 3	
	Additional water-services for Locomotive Branch ..	86 16 3	
	Purchase of land	4,212 17 8	
	Additional dwellings	55,471 15 7	
	Bridge-work and subways	14,876 1 8	
	Additions to workshops	8,085 0 7	
	Engine depots	504 11 8	
	Tablet installation	336 15 10	
Telegraph and telephone facilities	4,168 14 1	124,357 7 8	
South Island Main Lines and Branches	Sidings, loading-banks, stockyards, crossings, &c. ..	9,044 4 11	
	Additions to station buildings, extension of station-yards, and other facilities	36,335 14 8	
	Additional dwellings	2,176 12 2	
	Bridge-work and subways	548 7 1	
	Cranes, weighbridges, turntables, &c.	102 10 0	
	Signalling and interlocking	63,819 16 9	
	Tablet installation	45 6 0	
Telegraph and telephone facilities	3,925 10 3	115,998 1 10	
Westland	Sidings, loading-banks, stockyards, crossings, &c. ..	859 17 11	
	Additions to station buildings, extension of station-yards, and other facilities	26,429 8 2	
	Additions to water-service for Locomotive Depot ..	346 16 6	
	Purchase of land	2,021 17 3	
	Cranes, weighbridges, turntables, &c.	129 1 2	
	Signalling and interlocking	46,810 10 0	
Tablet installation	14 3 0	76,611 14 0	
Picton	Sidings, loading-banks, stockyards, crossings, &c. ..	122 2 2	
			122 2 2
			£340,483 4 5

RETURN No. 7—continued.

LOCOMOTIVE BRANCH: PARTICULARS OF ROLLING-STOCK, ETC.

Description of Stock ordered.	Order.	Number Incomplete on 31st Mar., 1923.	Number Completed on 31st March, 1924.	Number Incomplete on 31st March, 1924.	Expenditure, Year ended, 31st March, 1924.
					£ s. d.
Carriages, Classes A and AA, 1916-17 programme	I-10	24	21	3	24,893 6 6
Brake-vans, Class F, 1916-17 programme	J-10	..	..	..	Cr. 325 2 0
Wagons, bogie, 1916-17 programme	K-10	25	5	20	1,690 6 10
Wagons, four-wheel, 1916-17 programme	L-10	27	27	..	Cr. 10,571 19 0
Fitting Westland and Westport rolling-stock with Westinghouse brake	S-10	..	..	..	5,987 19 7
Locomotives, Class AB, third lot	X-10	2	2	..	4,040 4 8
Wagons, four-wheel, 1919-20 programme	Z-10	4	4	..	65 16 4
Locomotives, Class AB (A. and G. Price (Limited))	A-11	16	5	11	50,356 13 11
Locomotives, Class WAB and Ws, second lot	D-11	9	7	2	27,975 5 8
Replacement of cars written off or sold (difference in value)	H-11	..	..	..	11,644 15 0
Replacement of wagons written off or sold (difference in value)	I-11	..	..	..	969 10 4
Additional seating for cars	N-11	..	..	..	58 12 4
Locomotives, Class AB (British contract)	P-11	5	5	..	32,629 8 4
Wagons, four-wheel (British contract)	Q-11	..	..	..	Cr. 26 18 2
Steam-heating locomotives and cars	U-11	..	..	..	1,924 19 9
Additional superheater gear for locomotives	V-11	..	..	..	1,794 18 6
Replacement of brake-vans written off or sold (difference in value)	W-11	..	..	..	1,285 12 5
Electric headlights for locomotives	X-11	..	..	..	1,183 12 3
Carriages, classes A and AA, 1922-23 programme	Y-11	96	7	89	38,452 0 6
Brake-vans, Class F, 1922-23 programme	Z-11	3	..	3	406 11 5
Wagons, bogie, 1922-23 programme	A-12	143*	26	117	38,111 5 11
Wagons, four-wheel, 1922-23 programme	B-12	485†	25	460	51,212 10 8
Locomotives, Class AB, fourth lot	C-12	10	..	10	17,557 2 9
Additional fittings for brake-vans, Westland Section	D-12	..	..	..	119 11 9
Equipment for electric locomotives and power-house, Otira	E-12	..	..	..	1,231 13 10
Spare bogies for sleeping-cars	F-12	..	..	..	314 2 0
Fitting Pintsch gas to cars, Westland Section	G-12	..	..	..	870 10 0
Additional lavatories for cars	H-12	..	..	..	25 10 11
Locomotives, Class Ws, third lot	I-12	10	..	10	435 7 5
Wagon-seats for passenger traffic, Picton Section	J-12	..	..	..	194 16 8
Electric lighting for cars	K-12	..	..	..	125 16 6
Obsolete locomotives written off	..	..	..	..	Cr. 21,000 0 0
Sale of locomotives	..	..	..	..	Cr. 2,600 0 0
Workshops machinery	..	..	..	..	5,443 0 4
Sale of workshops machinery	..	..	..	..	Cr. 486 0 0
Total	..	..	..	..	£285,991 3 11
Total locomotives	..	52	19	33	..
„ carriages	..	120	28	92	..
„ brake-vans	..	3	..	3	..
„ wagons, bogie	..	168	31	137	..
„ wagons, four-wheel	..	516	56	460	..

* Order increased by two.

† Order increased by fifteen.

EXPENDITURE UNDER THE RAILWAYS IMPROVEMENT AUTHORIZATION ACT, 1914, CHARGED TO CAPITAL ACCOUNT, FOR THE YEAR ENDED 31ST MARCH, 1924.

	£	s.	d.	£	s.	d.
Material on hand at 31st March, 1923	12,382	9	11			
Expenditure charged by Treasury	19,054	3	4			
Proportionate cost of raising loan	1,466	0	0			
	32,902	13	3			
Less material on hand at 31st March, 1924	9,172	19	2			
				£23,729	14	1
New station and station-yards, goods-sheds, and terminal facilities at Wellington,				£	s.	d.
Christchurch, and Lyttelton				9,868	5	4
Grade easements—Penrose-Mercer				1,086	9	11
New line, Auckland-Westfield				583	13	11
Signalling, interlocking, and safety appliances				12,191	4	11
				£23,729	14	1

L. HAMANN, Chief Accountant.

RETURN NO. 8.
STATEMENT SHOWING CLASSIFICATION OF EXPENDITURE ON WAY AND WORKS FOR THE YEAR ENDED 31ST MARCH, 1924.

Classification of Work.	SECTIONS.										Totals.									
	Whangarei.		Kaithu.		Gisborne.		North Island Main Lines and Branches.		South Island Main Lines and Branches.		Westland.		Westport.		Nelson.		Picton.			
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.		
Track surfacing	10,395	13 1	2,147	9 0	5,566	2 6	178,221	1 0	171,075	18 4	21,594	13 10	7,109	13 11	4,537	6 8	6,137	16 11	407,315	15 3
Track renewals	27,691	19 2	545	19 5	214	19 9	120,166	11 0	120,077	19 6	31,500	13 4	1,371	1 10	1,010	19 2	1,073	5 0	303,653	8 2
Ballasting	1,853	8 11	133	11 9	25	0 5	26,599	0 4	11,338	10 7	3,181	15 4	553	15 1	188	8 4	597	0 1	44,470	10 10
Banks, cuttings, ditches, &c.	464	16 6	392	1 8	1,890	7 2	15,140	14 10	39,155	4 7	5,175	6 11	235	8 1	1,177	17 6	5,324	15 8	69,156	12 11
Tree-planting (architectural)	2,266	12 11	80	10 3	702	7 7	43,023	8 5	33,449	6 3	9,046	6 7	428	7 7	1,270	1 10	1,249	6 4	91,516	7 9
Bridges, culverts, drains	1,629	17 1	38	4 8	341	5 2	15,364	10 5	15,184	7 8	3,133	0 11	478	8 11	1,216	6 7	395	14 1	37,781	15 6
Fences, gates, cattlestops	94	15 4	4	10 6	139	13 11	6,668	11 9	3,789	2 11	593	17 9	112	16 1	189	1 2	70	11 3	11,663	0 8
Roads, approaches, &c.	424	17 3	3	17 7	97	4 9	12,004	13 1	7,155	18 10	907	3 2	280	1 6	80	5 10	214	7 5	21,168	9 5
Water-services, cranes, &c.	79	19 8	1	8 0	527	15 8	725	6 1	156	9 1	7,484	1 4	1,987	12 11	0	9 2	79	15 8	3,081	0 7
Buildings	1,739	7 8	124	14 8	3,737	19 0	69,374	3 6	55,083	8 6	7,484	1 4	1,637	11 0	1,057	1 4	1,637	13 10	138,665	17 6
Buildings (architectural)	63	13 9	30	17 0	..	..	1,101	8 3	19	17 6	240	18 6	..	..	..	..	..	..	1,121	5 9
Miscellaneous	112	13 7	1	16 1	7	3 4	3,737	19 0	1,861	8 9	305	15 0	213	7 9	140	17 6	42	7 6	6,331	9 9
General charges	..	..	..	..	..	..	4,419	9 4	1,921	19 3	..	..	81	0 0	44	16 10	35	1 0	6,929	16 5
Totals	46,817	16 11	3,505	0 7	9,512	0 3	497,022	17 1	460,799	11 9	83,163	12 8	14,489	4 8	10,913	11 11	17,057	14 9	1,143,281	10 7
Rate per average mile opened	561	9 5	146	0 10	194	2 5	433	1 10	322	9 0	525	16 10	402	9 7	178	18 2	304	12 0	375	11 5

RETURN NO. 8A.
STATEMENT SHOWING CLASSIFICATION OF SIGNAL AND ELECTRICAL EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 1924.

Classification of Work.	SECTIONS.										Totals.									
	Whangarei.		Kaithu.		Gisborne.		North Island Main Lines and Branches.		South Island Main Lines and Branches.		Westland.		Westport.		Nelson.		Picton.			
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.		
Signals and interlocking	256	16 5	..	..	264	14 6	19,349	7 5	5,951	7 2	1,009	9 4	249	11 5	14	13 8	38	0 11	27,134	0 10
Signals at level crossings	224	10 1	..	..	..	..	1,524	0 10	594	16 6	..	..	..	..	..	..	..	..	2,343	7 5
Telegraphs and telephones	180	1 4	21	10 6	67	3 9	4,669	17 1	3,485	11 11	255	6 6	163	7 6	19	5 7	77	5 0	8,939	9 2
Block working	113	19 9	..	..	..	..	9,669	13 11	3,213	11 9	232	17 2	171	4 10	..	..	..	..	13,401	7 5
Electric lighting	36	3 9	..	..	..	..	4,130	17 4	2,985	12 9	1	10 1	..	..	..	..	..	..	7,171	10 3
Electric power	..	..	..	..	..	..	3,273	16 3	6,356	4 10	620	6 9	..	..	..	..	..	..	10,250	7 10
Buildings	..	..	..	..	41	0 0	570	7 2	272	19 11	134	11 10	..	..	..	..	..	..	977	18 11
Miscellaneous	1	10 2	..	..	0	12 10	176	16 9	137	0 6	3	16 0	2	4 0	0	7 11	0	13 1	370	8 4
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	323	1 3
Totals	813	1 6	21	10 6	373	11 1	43,630	2 3	23,061	8 2	2,257	17 8	586	7 9	34	7 2	133	5 4	70,911	11 5
Rate per average mile opened	9	15 0	0	1 10	7	12 5	38	0 5	16	2 10	14	5 7	16	5 10	0	11 2	2	7 7	23	5 10

RETURN NO. 9.

STATEMENT OF SEASON TICKETS ISSUED FOR THE YEAR ENDED 31ST MARCH, 1924.

Description of Tickets.	Number.	Amount.		
		£	s.	d.
Travellers' annual, all lines	28	2,575	0	0
Travellers' annual, North Island	114	7,646	18	4
Travellers' annual, South Island	27	1,698	7	4
Reporters' annual	100	1,253	6	0
Sectional annual, North Island	526	21,810	2	0
Sectional annual, South Island	298	12,054	7	4
Tourist, all lines	331	5,360	17	6
Tourist, North Island	1,019	10,946	5	0
Tourist, South Island	84	909	15	0
School	37,008	27,170	8	2
Twelve-trip weekly	133,002	24,330	8	0
Weekly workmen's	313,111	38,223	11	0
All other season	40,096	58,621	14	2
Totals	525,744	212,600	19	10

L. HAMANN, Chief Accountant.

RETURN NO. 10.

COMPARATIVE STATEMENT OF THE NUMBER OF EMPLOYEES FOR YEARS 1923-24 AND 1922-23.

Department.	Whangarei.	Kaihu.	Gisborne.	North Island Main Lines and Branches.	South Island Main Lines and Branches.	Westland.	Westport.	Nelson.	Picton.	Stores.	Refreshment Branch.	Architectural Branch.	Total.
1923-24.													
General	6	1	3	479	124	28	4	4	3	160	231	104	1,147
Traffic	53	6	23	2,623	2,119	173	76	22	29	..	..	..	5,124
Maintenance	131	13	37	2,048	1,451	274	38	39	56	..	..	..	4,037
Locomotive	56	6	25	3,146	2,397	211	109	22	23	..	..	..	5,995
Totals	246	26	88	8,296	6,091	686	227	87	111	160	231	104	16,353
1922-23.													
General	5	1	3	470	123	27	4	4	3	153	197	48	1,038
Traffic	46	6	23	2,594	2,088	153	77	23	29	..	..	..	5,039
Maintenance	102	12	37	1,871	1,378	279	37	38	42	..	..	..	3,796
Locomotive	49	5	25	3,089	2,364	169	109	22	23	..	..	..	5,855
Totals	202	24	88	8,024	5,953	628	227	87	97	153	197	48	15,728

RETURN NO. 11.

RETURN SHOWING NUMBER OF PASSENGER TICKETS ISSUED AT CHEAP EXCURSION RATES FOR YEAR ENDED 31ST MARCH, 1924.

Sections.	SCHOOLS, FACTORIES, AND FRIENDLY SOCIETIES.				HOLIDAY EXCURSIONS.				GROSS TOTAL.—SCHOOL AND HOLIDAY EXCURSIONS.								
	Schools, Factories, and Friendly Societies.		Schools, Factories, and Friendly Societies.		First Class.		Second Class.		Total.		Revenue.		Number of Tickets.		Revenue.		
	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.	£	s.	d.	Number.	£	s.	d.
Whangarei	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kaiti	632	582	1,214	87 16 3	548	1,115	1,663	1,045 7 6	1,663	1,045 7 6	1,663	1,045 7 6	1,663	1,045 7 6	1,663	1,045 7 6	1,663
Auckland	9,701	4,456	16,096	1,376 8 11	8,388	660	600	69 12 0	600	69 12 0	600	69 12 0	600	69 12 0	600	69 12 0	600
Ohakune	2,123	467	3,447	170 11 3	1,587	74,621	83,009	48,281 5 5	83,009	48,281 5 5	83,009	48,281 5 5	83,009	48,281 5 5	83,009	48,281 5 5	83,009
Gisborne	1,457	810	2,332	142 2 1	99	9,449	11,036	10,589 9 11	459	10,589 9 11	459	10,589 9 11	459	10,589 9 11	459	10,589 9 11	459
Wanganui	12,377	3,049	24,291	2,742 16 4	5,457	34,844	40,301	28,644 3 2	34,844	28,644 3 2	34,844	28,644 3 2	34,844	28,644 3 2	34,844	28,644 3 2	34,844
Wellington	17,976	15,350	37,281	3,360 13 0	28,648	44,700	73,348	48,925 3 5	44,700	48,925 3 5	44,700	48,925 3 5	44,700	48,925 3 5	44,700	48,925 3 5	44,700
Pictou	1,168	307	1,651	92 8 0	985	2,527	3,512	574 10 3	2,527	574 10 3	2,527	574 10 3	2,527	574 10 3	2,527	574 10 3	2,527
Nelson	1,941	1,057	3,404	186 7 7	299	2,420	2,719	339 14 11	2,420	339 14 11	2,420	339 14 11	2,420	339 14 11	2,420	339 14 11	2,420
Westport	455	247	860	40 15 10	..	1,911	1,911	230 2 11	1,911	230 2 11	1,911	230 2 11	1,911	230 2 11	1,911	230 2 11	1,911
Westland	3,453	872	8,240	753 10 7	1,790	14,522	16,312	5,578 2 4	14,522	5,578 2 4	14,522	5,578 2 4	14,522	5,578 2 4	14,522	5,578 2 4	14,522
Christchurch	27,713	3,056	61,081	6,419 0 6	24,582	68,467	93,049	54,055 14 8	68,467	54,055 14 8	68,467	54,055 14 8	68,467	54,055 14 8	68,467	54,055 14 8	68,467
Dunedin	9,056	2,152	22,889	2,212 0 9	35,321	40,226	75,547	46,825 13 8	40,226	46,825 13 8	40,226	46,825 13 8	40,226	46,825 13 8	40,226	46,825 13 8	40,226
Invercargill	8,286	7,998	17,962	2,114 14 1	3,420	26,299	29,719	22,365 9 9	26,299	22,365 9 9	26,299	22,365 9 9	26,299	22,365 9 9	26,299	22,365 9 9	26,299
Totals	96,338	86,047	200,748	19,699 5 2	111,124	322,061	433,185	267,717 7 0	322,061	433,185	322,061	267,717 7 0	433,185	267,717 7 0	433,185	267,717 7 0	433,185
Total year ending—																	
31st March, 1898	39,963	35,094	80,425	5,569 18 1	66,012	383,569	449,581	80,822 8 1	383,569	449,581	383,569	80,822 8 1	449,581	383,569	449,581	80,822 8 1	449,581
31st March, 1899	45,748	39,955	91,895	6,215 11 8	70,531	411,747	482,278	84,794 15 6	411,747	482,278	411,747	84,794 15 6	482,278	411,747	482,278	84,794 15 6	482,278
31st March, 1900	37,839	31,164	74,619	4,752 3 10	81,528	501,176	582,704	96,154 7 5	501,176	582,704	501,176	96,154 7 5	582,704	501,176	582,704	96,154 7 5	582,704
31st March, 1901	38,864	34,550	79,016	5,234 16 8	87,544	541,624	629,168	102,932 10 9	541,624	629,168	541,624	102,932 10 9	629,168	541,624	629,168	102,932 10 9	629,168
31st March, 1902	42,506	37,708	89,143	5,466 16 9	95,628	588,813	684,441	136,813 0 1	588,813	684,441	588,813	136,813 0 1	684,441	588,813	684,441	136,813 0 1	684,441
31st March, 1903	41,540	41,555	89,143	6,050 11 3	84,448	517,566	602,014	103,279 8 6	517,566	602,014	517,566	103,279 8 6	602,014	517,566	602,014	103,279 8 6	602,014
31st March, 1904	50,364	54,344	111,683	7,424 19 7	100,417	594,967	695,384	125,624 4 0	594,967	695,384	594,967	125,624 4 0	695,384	594,967	695,384	125,624 4 0	695,384
31st March, 1905	52,742	53,558	113,659	7,490 16 0	100,968	592,485	693,453	130,068 16 9	592,485	693,453	592,485	130,068 16 9	693,453	592,485	693,453	130,068 16 9	693,453
31st March, 1906	55,478	57,027	120,220	7,882 16 1	110,823	626,852	737,675	140,939 16 3	626,852	737,675	626,852	140,939 16 3	737,675	626,852	737,675	140,939 16 3	737,675
31st March, 1907	48,044	39,783	95,664	6,514 18 4	125,280	731,132	856,412	194,185 2 9	731,132	856,412	731,132	194,185 2 9	856,412	731,132	856,412	194,185 2 9	856,412
31st March, 1908	51,031	53,886	113,659	7,604 10 4	113,617	618,518	732,135	141,519 16 11	618,518	732,135	618,518	141,519 16 11	732,135	618,518	732,135	141,519 16 11	732,135
31st March, 1909	55,199	52,579	117,044	7,641 5 10	122,312	667,867	790,179	166,471 6 3	667,867	790,179	667,867	166,471 6 3	790,179	667,867	790,179	166,471 6 3	790,179
31st March, 1910	53,917	53,677	116,405	7,964 15 7	128,277	735,561	863,838	211,133 6 10	735,561	863,838	735,561	211,133 6 10	863,838	735,561	863,838	211,133 6 10	863,838
31st March, 1911	66,381	66,695	143,875	9,488 14 7	107,208	576,251	683,459	155,444 10 11	576,251	683,459	576,251	155,444 10 11	683,459	576,251	683,459	155,444 10 11	683,459
31st March, 1912	62,289	63,612	134,825	9,702 15 3	135,590	704,883	840,473	206,472 13 1	704,883	840,473	704,883	206,472 13 1	840,473	704,883	840,473	206,472 13 1	840,473
31st March, 1913	63,040	61,134	133,897	9,509 8 7	159,730	804,965	964,695	271,611 17 7	804,965	964,695	804,965	271,611 17 7	964,695	804,965	964,695	271,611 17 7	964,695
31st March, 1914	111,029	59,712	188,987	13,235 8 4	131,416	683,851	815,267	219,098 2 5	683,851	815,267	683,851	219,098 2 5	815,267	683,851	815,267	219,098 2 5	815,267
31st March, 1915	47,846	48,197	104,017	7,919 1 9	144,260	782,355	926,615	259,547 10 6	782,355	926,615	782,355	259,547 10 6	926,615	782,355	926,615	259,547 10 6	926,615
31st March, 1916	43,038	36,091	87,327	6,072 18 9	136,401	763,690	900,091	269,097 16 0	763,690	900,091	763,690	269,097 16 0	900,091	763,690	900,091	269,097 16 0	900,091
31st March, 1917	38,477	32,901	80,166	6,159 17 6	168,098	735,468	903,566	313,006 7 3	735,468	903,566	735,468	313,006 7 3	903,566	735,468	903,566	313,006 7 3	903,566
31st March, 1918	591	743	1,458	131 6 7	20,148	110,482	130,630	62,968 15 11	110,482	130,630	110,482	62,968 15 11	130,630	110,482	130,630	62,968 15 11	130,630
31st March, 1919*	NH	NH	NH	NH	NH	NH	NH	NH	NH	NH	NH	NH	NH	NH	NH	NH	NH
31st March, 1920	38,357	3,968	84,786	7,173 12 2	76,713	260,159	336,872	161,401 18 3	260,159	336,872	260,159	161,401 18 3	336,872	260,159	336,872	161,401 18 3	336,872
31st March, 1921	94,175	12,846	177,315	14,966 19 8	146,404	324,246	670,650	371,525 9 4	324,246	670,650	324,246	371,525 9 4	670,650	324,246	670,650	371,525 9 4	670,650
31st March, 1922	76,537	13,835	162,224	14,955 1 5	109,414	338,791	448,205	242,464 18 6	338,791	448,205	338,791	242,464 18 6	448,205	338,791	448,205	242,464 18 6	448,205
31st March, 1923	83,716	15,700	173,271	16,228 5 3	119,261	393,682	512,943	323,015 18 8	393,682	512,943	393,682	323,015 18 8	512,943	393,682	512,943	323,015 18 8	512,943
31st March, 1924	96,338	18,363	200,748	19,699 5 2	111,124	322,061	433,185	267,717 7 0	322,061	433,185	322,061	267,717 7 0	433,185	322,061	433,185	267,717 7 0	433,185

* The issue of school, factory, friendly-society, and holiday excursion tickets was suspended in connection with staff-saving time-table on 23rd April, 1919.

RETURN No. 12.
STATEMENT OF REVENUE FOR EACH STATION FOR THE YEAR ENDED 31ST MARCH, 1924.

Stations.	OUTWARD.																INWARD.				Stations.										
	NUMBER OF TICKETS.					Number of Season Tickets.	Cattle.	Sheep and Pigs.	Timber, Hundreds of Superficial Feet.	Other Goods.	Ordinary Passengers.	Season Tickets.	Parcels, &c.	Luggage, Mails, &c.	Goods.	Miscellaneous.	Rents and Commission.	Total Value forwarded.	Cattle.	Sheep and Pigs.		Timber, Hundreds of Superficial Feet.	Other Goods.								
	First-class Single.	First-class Return.	Second-class Single.	Second-class Return.	Total.																										
NORTH ISLAND MAIN LINES AND BRANCHES—																															
Auckland (Coaching) (Goods)	64,998	26,604	251,870	221,201	564,673	20,380	403	11,345	41,100	312,343	243,403	12 4	24,029	5 3	23,438	5 5	10,888	13 3	Cr. 200 0 2	1,388	5 8	803	8 1	303,751	9 10	787	3,255	104,477	269,034	Auckland (Coaching) (Goods).	
Newmarket	6,343	5,844	39,885	56,243	108,315	9,935	13	11	2,301	6,370	13,767	4 4	2,133	14 9	677	9 10	168	10 3	319,584	16 4	4,479	17 8	10,606	19 11	334,671	13 11	5	82,928	39,189	Newmarket.	
Mount Eden	1,625	1,305	29,796	47,557	80,283	6,903	53	170	3,619	38,987	6,421	6 2	1,271	13 7	235	7 1	40	13 10	13,222	18 7	322	17 6	2,286	13 4	32,579	8 7	293	72,034	Mount Eden.		
Avondale	703	453	43,062	116,391	160,609	52,192	267	40	730	54,356	8,509	13 6	7,617	18 3	322	15 3	34	15 3	9,470	4 5	495	1 8	327	15 0	18,262	1 9	297	95,366	Avondale.		
Henderson	669	724	24,250	66,078	91,721	14,734	1,103	9,476	26,524	7,078	7,663	18 10	3,168	10 5	1,164	4 8	25	5 7	6,343	18 11	88	1 11	127	16 6	18,581	16 10	609	3,531	21,702	Henderson.	
Helensville	7,134	2,329	21,998	24,406	55,867	432	6,047	32,997	30,547	10,232	10,264	7 8	331	16 7	1,851	0 1	56	10 2	15,284	15 1	186	12 3	187	19 8	28,163	1 6	2,019	11,375	6,713	Helensville.	
Wellsford	846	171	3,922	2,388	7,327	82	3,255	9,531	1,271	2,357	1,897	5 7	51	7 6	506	19 2	9	16 11	3,718	12 1	5	3 10	83	15 0	6,273	0 1	695	5,930	1,703	Wellsford.	
Maungaturoto	2,712	462	9,663	2,596	15,433	12,797	19,402	808	1,795	5,463	14 6	6	245	18 4	12	18 1	8,876	10 10	777	19 0	14	10 0	15,391	10 9	15,391	10 9	857	8,462	4,400	Maungaturoto.	
Remuera	1,452	1,565	3,615	2,742	9,374	3,124	505	97	70	250	505	8 8	1,439	8 2	265	18 9	4	9 6	10,171	16 6	28	5 3	76	10 0	2,918	1 11	1,026	2,477	11,316	Remuera.	
Green Lane	3,926	8,146	13,577	23,675	49,324	10,745	21	20	232	71	2,384	1 1	2,638	11 5	51	11 11	12	6 0	103	12 8	50	5 5	3	2 6	5,243	11 0	8	13,871	3,218	Green Lane.	
Ellerslie	2,806	9,292	18,717	48,043	78,858	14,398	21	20	51	219	3,989	18 3	3,107	17 6	2,136	15 11	14	17 0	172	13 11	27	5 10	76	2 6	9,525	10 11	49	5,701	2,099	Ellerslie.	
Penrose	911	2,399	11,031	22,782	37,123	6,672	649	10,167	2,251	99,910	2,291	6 3	1,166	6 5	87	14 5	11	11 1	48,201	7 0	26	17 2	82	0 0	51,867	2 4	45,952	260,042	11,637	51,637	Penrose.
Onehunga (Town) (Wharf)	598	472	10,601	11,615	23,286	15,189	25	18	2,634	2,446	1,380	15 0	2,262	10 2	185	1 11	12	18 5	1,034	19 5	25	0 10	134	0 0	5,035	5 9	61	15,811	40,026	Onehunga (Town) (Wharf).	
Otahuu	2,010	6,064	21,780	88,224	118,078	17,039	1,533	21,668	41,124	9,621	11 3	3,755	6 2	378	8 11	54	12 3	33,762	16 4	438	11 7	153	16 9	48,165	3 3	18,597	66,649	10,864	65,947	Otahuu.	
Papatoetoe	991	2,840	12,436	48,519	64,786	7,173	547	1,376	3,158	4,181	5,371	12 3	1,921	11 2	1,465	3 6	22	17 1	1,617	2 5	13	7 5	109	16 1	10,521	9 11	1,050	4,614	17,739	Papatoetoe.	
Papakura	2,318	4,323	31,320	71,466	109,427	10,938	1,728	18,497	4,641	13,047	13 10	2,694	17 11	1,129	16 5	66	8 8	2,219	10 8	42	8 0	29	18 0	19,230	13 6	961	8,733	8,090	16,281	Papakura.	
Drury	363	216	6,149	7,507	14,235	171	911	8,149	1,890	5,313	1,939	9 1	146	3 1	1,079	19 5	13	18 3	3,318	9 0	37	9 10	15	13 0	6,551	1 8	307	1,965	5,680	Drury.	
Waiuku	989	426	7,947	4,615	13,937	39	730	4,387	90	820	3,566	18 5	27	15 0	172	1 0	16	18 10	996	9 11	47	9 2	4	0 0	4,831	12 4	337	5,159	6,329	17,687	Waiuku.
Pukekohe	2,485	1,355	21,101	14,526	39,467	970	4,606	11,895	182	10,442	9,256	19 7	374	14 1	1,246	6 6	107	8 11	11,398	2 0	101	6 0	627	15 10	23,112	12 11	2,683	4,472	10,210	23,409	Pukekohe.
Tuakau	884	508	7,387	7,541	16,320	428	2,929	28,884	168	5,224	3,378	1 2	194	16 4	293	12 8	41	11 0	5,572	0 6	54	19 7	90	0 7	9,625	1 10	726	8,591	4,077	9,701	Tuakau.
Pokeno	314	87	4,698	3,615	8,714	167	901	7,092	69	628	1,493	4 5	90	1 9	841	15 8	9	3 1	840	3 3	46	5 0	4	0 0	3,324	13 2	453	2,985	3,627	6,612	Pokeno.
Mercer	758	729	7,950	6,263	15,700	102	10	694	16,845	10,997	3,311	16 6	92	16 3	498	4 3	29	8 3	5,498	14 8	28	17 10	41	7 4	9,501	4 11	83	579	2,897	3,260	Mercer.
Te Kauwhata	406	212	3,350	1,946	5,914	24	4,157	23,538	3,805	11,288	1,678	9 1	14	7 6	1,845	1 10	12	8 3	6,813	10 9	22	17 6	60	17 11	10,447	12 10	744	14,243	3,259	10,852	Te Kauwhata.
Huntly	1,682	1,038	28,641	26,618	57,979	9,724	678	2,054	3,034	407,316	10,600	15 5	2,246	12 0	748	18 11	84	6 2	218,689	15 8	2,656	4 11	320	1 0	235,346	14 1	903	4,722	10,864	18,825	Huntly.
Taupiri	481	177	5,581	2,422	8,661	135	760	6,861	246	2,929	1,679	17 7	86	17 6	771	13 7	19	17 2	2,559	8 7	23	3 3	5	5 0	5,146	2 8	639	2,717	4,415	6,313	Taupiri.
Ngaruawahia	1,035	389	12,572	5,741	19,737	165	2,015	14,209	471	75,020	4,232	4 6	95	9 3	332	5 11	75	3 6	44,956	4 7	906	8 8	178	1 7	50,775	18 0	1,430	19,560	4,797	9,414	Ngaruawahia.
Frankton Junction	12,812	4,044	76,732	28,163	121,751	73	8,960	69,562	2,225	16,522	47,159	0 5	569	16 1	2,085	17 2	773	13 8	31,173	3 4	966	0 7	650	1 6	83,377	12 9	3,774	51,949	63,666	31,334	Frankton Junction.
Hamilton	8,990	2,710	44,012	11,391	67,103	550	2,853	13,066	14,196	14,539	22,605	6 1	1,213	14 4	4,356	13 2	639	3 4	22,379	7 9	331	17 6	1,965	8 4	53,491	5 6	1,052	2,185	64,243	55,282	Hamilton.
Cambridge	2,698	510	18,998	10,180	32,256	142	1,607	13,083	8,144	1,801	7,979	5 0	142	15 8	1,653	2 9	126	2 7	3,966	17 9	156	1 1	525	2 3	14,549	7 1	1,593	5,292	16,755	28,434	Cambridge.
Morrinsville	2,329	934	20,111	13,742	37,166	593	7,921	50,899	3,175	13,911	8,809	16 7	504	10 10	2,257	3 3	186	14 1	29,642	13 1	137	2 1	316	13 0	41,848	13 0	2,213	22,358	25,605	46,217	Morrinsville.
Matamata	2,219	711	14,706	8,731	26,367	183	5,162	26,084	5,274	3,480	8,209	15 7	167	6 7	2,141	6 0	91	17 1	8,111	6 8	293	16 3	213	6 1	19,318	14 3	1,920	9,597	12,468	34,994	Matamata.
Putaruru	1,447	379	11,518	5,091	18,435	199	1,446	5,934	127,061	2,955	5,598	3 10	240	18 1	709	3 10	63	13 0	24,651	12 10	72	5 6	323	16 0	31,659	12 1	2,016	12,007	1,902	26,878	Putaruru.
Mamaku	217	469	2,975	5,253	8,914	213	2,569	8,921	98,745	6,454	2,052	2 4	157	14 8	276	17 2	13	12 2	23,381	4 8	7	14 6	126	5 0	26,015	10 6	415	1,262	1,837	4,238	Mamaku.
Rotorua	9,191	1,077	28,536	13,467	52,271	1,030	2,130	21,070	2,062	2,017	30,096	16 4	414	16 7	1,449	18 5	315	17 6	6,123	15 8	174	3 6	490	17 7	38,976	5 7	3,442	8,852	9,968	18,647	Rotorua.
Te Aroha	3,875	970	28,936	16,590	50,371	833	894	4,340	1,117	23,887	11,833	14 6	344	1 1	1,052	8 9	155	0 5	7,236	4 9	219	16 4	480	18 6	21,322	4 4	1,572	7,508	14,538	32,412	Te Aroha.
Paeroa	2,739	1,058	28,417	22,506	54,720	1,130	2,557	13,627	6,195	21,149	10,275	18 0	511	5 7	1,150	11 4	89	16 6	8,933	1 1	185	18 5	230	16 8	21,377	7 7	1,048	2,048	9,646		

RETURN NO. 12—continued.

STATEMENT OF REVENUE FOR EACH STATION FOR THE YEAR ENDED 31ST MARCH, 1924—continued.

Table with columns for Stations, Number of Tickets (First-class Single, First-class Return, Second-class Single, Second-class Return, Total), Number of Season Tickets, Cattle, Sheep and Pigs, Timber (Hundreds of Superficial Feet), Other Goods, Ordinary Passengers, Season Tickets, Parcels, &c., Luggage, Mails, &c., Goods, Miscellaneous, Rents and Commission, Total Value forwarded, and other goods. It is divided into sections: NORTH ISLAND MAIN LINES AND BRANCHES—contd., WHANGAREI SECTION—, KAIHU SECTION—, and GISBORNE SECTION—.

RETURN No. 12—continued.
STATEMENT OF REVENUE FOR EACH STATION FOR THE YEAR ENDED 31ST MARCH, 1924—continued.

Stations.	OUTWARD																INWARD					Stations.																	
	NUMBER OF TICKETS.					Number of Season Tickets.	Cattle.	Sheep and Pigs.	Hundreds of Superficial Feet.	Other Goods.	Ordinary Passengers.	Season Tickets.	Parcels, &c.	Luggage, Mails, &c.	Goods.	Miscellaneous.	Rents and Commission.	Total Value forwarded.	Cattle.	Sheep and Pigs.	Timber, Hundreds of Superficial Feet.		Other Goods.																
	First-class Single.	First-class Return.	Second-class Single.	Second-class Return.	Total.																			£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£
SOUTH ISLAND MAIN LINES AND BRANCHES—																																							
Lyttelton (Wharf)	41,182	43,024	39,245	88,814	212,265	11,415	2,558	48,266	140,569	354,085	26,608	2 4	2,715	19 1	1,239	0 4	118	17 11	127,608	16 7	14,309	0 9	1,751	2 9	174,350	19 9	1,207	11,900	5,721	230,346	47,425	6,636	10,164	6					
Heathcote	655	3,789	2,709	23,651	30,804	2,955	..	..	10	2,634	1,447	12 9	817	5 4	112	19 11	10	3 1	1,224	18 9	11	1 4	92	10 0	3,717	1 2	..	..	..	..	..	..	..	..
Woolston	441	681	2,104	6,326	9,552	1,949	..	..	..	5,004	579	18 8	343	7 0	109	18 10	4	14 1	1,844	12 3	9	1 2	25	0 0	2,916	12 0	69	1,055	344	10,164	6	..	..	..		
Opawa	466	482	1,357	2,288	4,593	3,479	..	..	..	33	416	18 3	573	12 11	15	14 1	6	2 3	1	16 6	0	6 10	..	..	1,014	10 10	..	..	..	..	..	..	..	..
Christchurch (Coaching)	71,293	64,776	149,129	207,419	492,617	25,701	..	..	..	..	139,911	5 2	9,166	3 1	17,082	18 7	5,758	12 3	Cr. 112	12 1	547	0 10	864	15 6	173,217	17 4	..	..	..	..	..	..	..	..
Christchurch (Goods)	437	824	5,234	5,985	11,590	1,623	6,138	324,920	7,519	36,169	1,863	10 0	258	5 5	719	17 4	54	3 1	23,608	19 0	497	13 11	789	3 6	27,791	12 3	25,404	558,074	27,653	20,788	79,983	20,533	..	..	..	
Addington	654	164	1,631	679	3,128	369	..	..	..	1,640	5,828	657	7 3	78	9 0	30	16 0	16	18 6	798	4 7	17	1 2	25	0 0	1,623	16 6	..	..	..	..	..	..	..	..
Riccarton	1,722	651	5,633	3,317	11,323	1,927	59	37	221	5,300	1,793	19 1	446	2 8	148	7 1	40	16 9	2,533	19 5	2	16 9	69	10 0	5,035	11 9	146	39	4,703	5,795	..	..	..	..	..
Papanui	451	924	4,506	12,358	18,239	414	75	2,303	256	24,721	1,411	13 7	216	12 8	57	9 6	19	18 3	11,149	19 3	4	18 10	134	9 0	12,995	1 1	426	564,177	2,981	7,895	9,788	13,464	6,111	..	..	..
Belfast	1,492	2,258	11,359	27,656	42,765	633	819	15,789	5,440	22,231	4,987	6 10	505	5 1	473	6 0	90	5 2	8,442	0 0	50	13 8	213	10 2	14,762	6 11	474	178,239	3,429	9,788	13,464	6,111	..	..	..	..	..
Kaipoi	2,618	3,695	20,245	29,519	56,077	627	1,388	38,140	902	19,684	8,087	19 3	445	18 7	764	16 3	123	11 6	8,871	18 8	83	15 4	219	1 0	18,597	0 7	761	17,993	5,509	13,464	6,111	..	..	..	..	..	..
Rangiora	74	38	1,395	1,144	2,651	116	387	20,260	26	4,236	405	4 5	87	4 7	46	9 8	12	4 7	1,859	11 2	6	6 7	52	15 0	2,469	16 0	145	6,044	611	1,379	5,043	5 8	..	..	..	..	..
Cust	271	58	2,092	1,869	4,290	39	742	65,160	103	5,054	926	5 11	48	12 2	515	9 3	16	17 1	3,496	6 10	5	13 2	34	1 3	5,043	5 8	172	18,908	1,379	5,043	5 8	..	..	..	..	..	..
Oxford East	83	79	1,428	1,794	3,384	61	406	8,816	..	4,064	472	10 0	42	17 3	345	11 4	11	19 2	1,772	1 4	4	6 2	75	8 10	2,724	14 1	127	3,072	351	1,585	2,195	..	..	..	..	..	..
Sefton	801	230	2,489	1,562	5,082	72	370	57,460	16	1,615	1,043	0 5	56	4 6	187	0 0	29	1 0	2,062	10 4	10	15 3	116	18 0	3,505	10 3	352	23,429	884	2,195	..	..	..	..	..	..	..
Amberley	1,183	390	3,615	1,059	6,247	24	1,545	139,505	3	3,643	1,772	3 8	24	0 1	381	10 4	11	11 4	6,970	17 1	28	19 11	109	0 0	9,298	2 5	175	16,462	359	6,978	1,585	2,195	..	..	..	..	..	..
Waipara	263	41	829	1,631	1,296	5	630	62,690	538	3,221	607	19 7	3	15 0	405	4 11	9	0 4	4,733	17 10	23	16 9	27	7 6	5,811	1 11	425	8,805	1,654	3,261	..	..	..	..	..	..	..
Mina	196	44	483	138	861	..	433	56,618	35	719	413	6 0	..	..	358	0 8	9	12 7	3,325	4 11	22	13 4	44	10 0	4,173	7 6	266	8,258	636	3,261	..	..	..	..	..	..	..	..
Parnassus	785	423	3,631	3,068	7,907	27	241	32,941	16	2,647	1,738	10 7	25	9 9	159	15 8	25	1 6	2,261	10 5	5	19 11	30	10 0	4,246	17 10	104	9,505	830	1,554	..	..	..	..	..	..	..	..
Waikari	497	111	1,254	428	2,290	15	936	77,387	33	5,630	854	10 0	18	2 0	292	6 0	10	10 3	5,793	17 2	5	12 8	9	5 0	6,984	3 1	170	11,421	402	1,491	..	..	..	..	..	..	..	..
Hawarden	896	115	2,189	244	3,444	8	1,502	75,027	6,212	4,252	1,501	12 7	10	1 7	402	0 3	22	19 8	7,708	16 3	33	10 6	78	6 0	9,757	6 10	677	12,785	484	3,285	..	..	..	..	..	..	..	..
Culverden	452	92	1,264	429	2,237	1	473	46,489	26	2,047	1,044	13 11	1	5 0	200	11 4	12	16 4	3,743	13 7	4	1 5	2	5 0	5,009	6 7	445	7,134	817	1,828	..	..	..	..	..	..	..	..
Waiatu	229	61	1,876	1,146	3,312	107	78	4,078	256	45,923	389	11 1	104	15 6	1,627	10 2	8	7 7	20,194	7 3	97	12 8	92	10 0	22,514	14 3	984	15,047	614	27,145
Hornby	62	29	995	1,915	3,001	53	17	14	..	9,237	275	2 11	37	10 0	14	10 5	2	18 3	2,568	0 6	0	1 6	2	0 0	2,900	3 7	21	..	..	..	..	..	..	..	..	..	..	..
Prebbleton	297	266	1,774	2,110	4,447	73	1,103	42,637	79	6,765	699	1 10	53	2 6	274	18 9	14	1 8	2,914	8 2	5	9 5	86	18 0	4,048	0 4	226	9,335	781	2,602	..	..	..	..	..	..	..	..
Lincoln	59	68	937	999	2,063	50	637	22,662	24	10,062	265	13 6	41	7 6	148	15 8	6	19 8	3,062	19 8	0	13 4	6	0 0	4,072	9 4	67	1,912	121	1,066	..	..	..	..	..	..	..	..
Springton	502	383	2,356	1,901	5,232	50	571	15,069	90	5,223	1,140	2 8	40	12 6	709	6 6	21	15 0	2,495	13 10	16	3 10	88	1 4	4,511	15 8	361	16,433	1,980	4,988	..	..	..	..	..	..	..	..
Leeston	556	352	6,048	5,273	12,229	10	850	22,702	20	8,256	2,383	1 3	11	5 0	569	5 3	20	3 11	4,023	14 0	15	13 4	26	5 0	7,049	8 1	150	9,788	811	2,050	..	..	..	..	..	..	..	..
Southbridge	439	489	3,116	2,857	6,901	18	3,682	100,359	79	1,457	1,541	0 3	13	2 6	344	8 1	9	3 4	3,928	13 3	33	7 0	152	11 9	6,022	6 2	1,504	27,155	1,584	3,267	..	..	..	..	..	..	..	..
Little River	249	98	1,852	1,256	3,455	79	1	82	115	13,697	262	16 10	44	7 3	67	8 3	4	17 2	6,062	14 10	7	10 4	1	0 0	6,450	14 7	656	336,661	1,192	9,236	..	..	..	..	..	..	..	..
Islington	278	242	2,426	3,808	6,754	152	44	1,747	..	4,734	704	5 3	103	15 0	203	8 7	8	16 2	1,111	15 11	3	12 0	33	11 0	2,169	3 11	212	2,086	148	1,639	..	..	..	..	..	..	..	..
Templeton	184	566	2,235	5,901	8,886	52	546	34,668	2,572	6,274	1,168	2 11	36	5 0	195	11 1	12	1 4	2,988	11 7	2	14 3	3	15 0	4,407	1 2	204	9,855	224	1,061	..	..	..	..	..	..	..	..
Rolleston	131	134	1,230	2,742	4,074	40	870	21,639	558	3,334	565	4 2	35	5 9	68	19 11	7	8 8	1,953	7 10	6	3 10	5	15 0	2,642	5 2	126	14,213	627	2,034	..	..	..	..	

RETURN No. 12—continued.

STATEMENT OF REVENUE FOR EACH STATION FOR THE YEAR ENDED 31ST MARCH, 1924—continued.

Stations.	OUTWARD.														INWARD.				Stations.				
	NUMBER OF TICKETS.					Number of Season Tickets.	Cattle.	Sheep and Pigs.	Timber, Hundreds of Superficial Feet.	Other Goods.	Ordinary Passengers.	Season Tickets.	Parcels, &c.	Luggage, Mails, &c.	Goods.	Miscellaneous.	Rents and Commission.	Total Value forwarded.		Cattle and Calves.	Sheep and Pigs.	Timber, Hundreds of Superficial Feet.	Other Goods.
	First-class Single.	First-class Return.	Second-class Single.	Second-class Return.	Total.																		
SOUTH ISLAND MAIN LINES AND BRANCHES—contd.																							
Waiholā	186	105	2,749	3,005	6,045	139	192	5,049	119	776	760 5 6	49 7 11	144 6 10	5 17 4	528 15 4	5 9 5	5 0 0	1,499 2 4	217	2,411	71	3,257	Waiholā
Milburn	31	50	1,329	1,031	2,441	45	118	10,591	596	36,798	362 0 11	23 10 3	36 8 5	3 0 0	5,228 3 3	213 10 4	59 10 0	5,926 3 8	52	1,343	238	14,256	Milburn
Milton	1,446	1,454	7,962	9,504	20,366	59	604	35,508	20	17,918	6,002 18 1	55 1 2	549 5 2	81 2 8	9,928 13 9	134 17 6	174 12 6	16,926 10 10	592	5,427	4,341	12,928	Milton
Waitahuna	94	69	871	1,088	2,122	16	223	17,213	26	1,408	475 8 8	22 17 11	162 7 4	6 19 1	1,440 15 10	21 3 1	3 5 0	2,132 16 11	104	1,530	717	2,479	Waitahuna
Lawrence	1,236	861	4,583	4,239	10,909	6	161	16,955	67	2,367	3,232 15 4	13 1 0	396 17 1	47 8 1	3,911 0 9	14 0 6	15 16 0	7,630 18 9	222	1,969	1,443	4,868	Lawrence
Beaumont	774	103	2,357	459	3,693	94	94	5,083	20	4,832	1,530 10 0	..	336 6 3	30 10 8	5,693 12 0	478 10 1	2 15 0	8,072 4 0	168	5,689	4,119	7,098	Beaumont
Lovell's Flat	75	132	916	1,062	2,185	28	177	7,327	237	34,286	386 7 8	58 12 6	79 6 8	3 11 5	12,883 12 7	401 6 9	25 0 0	13,837 17 7	27	2,010	1,479	2,035	Lovell's Flat
Stirling	517	324	5,502	5,529	11,872	131	3,342	5,703	17	103,440	3,153 9 9	108 8 0	205 7 5	20 18 7	48,401 2 7	861 8 8	59 5 0	52,810 0 0	1,905	1,861	4,013	8,084	Stirling
Balclutha	2,062	1,175	17,668	8,380	29,285	77	1,786	59,670	2,508	10,618	8,412 4 2	220 10 7	859 10 0	170 13 7	12,260 13 6	87 10 5	157 10 7	22,168 12 10	1,236	31,041	6,091	10,589	Balclutha
Owaka	253	79	3,591	3,210	7,133	13	829	16,476	65,515	7,988	1,961 17 1	8 2 6	517 2 8	25 15 5	17,549 18 0	21 11 9	116 5 0	20,200 12 5	544	49,916	1,776	10,174	Owaka
Tahakopa	123	63	3,303	5,158	8,647	1	202	769	50,699	1,453	2,682 16 9	0 12 6	153 6 4	4 16 5	10,597 6 0	72 1 11	325 2 0	13,836 1 11	179	3,189	254	3,394	Tahakopa
Waiwera	119	52	1,046	746	1,963	5	372	25,146	91	2,263	551 17 4	3 15 0	340 13 11	5 19 7	2,346 3 0	3 14 5	..	3,252 3 3	118	4,511	777	5,488	Waiwera
Clinton	533	310	8,703	6,477	16,023	62	520	29,455	12	1,693	3,740 5 6	117 13 7	153 9 9	24 10 10	2,794 14 2	17 2 9	296 5 7	7,144 2 2	73	7,665	1,623	4,446	Clinton
Waipahi	152	137	1,290	2,411	3,990	24	499	45,795	35	7,051	1,039 14 8	18 11 3	341 18 6	9 9 1	6,328 3 6	5 11 0	159 19 4	7,903 7 4	178	5,452	3,315	8,251	Waipahi
Tapuanui	336	133	1,886	840	3,195	..	128	11,386	21	1,091	1,137 12 6	..	273 8 8	18 16 5	1,576 0 0	4 7 4	2 10 0	3,012 14 11	161	2,555	1,452	5,208	Tapuanui
Kelso	75	29	732	797	1,653	7	140	15,488	42	1,614	473 1 0	4 7 6	99 12 8	5 4 1	1,931 18 0	3 4 4	36 2 6	2,553 10 1	53	1,514	665	3,040	Kelso
Heriot	283	74	2,286	1,613	4,256	17	506	48,454	65	3,946	1,487 10 11	18 18 6	292 5 9	18 11 5	6,284 5 6	8 17 5	60 5 0	8,170 14 6	105	2,089	1,433	6,790	Heriot
Gore	3,265	2,191	27,178	18,357	50,991	989	1,430	53,725	838	22,772	15,767 14 8	612 10 4	1,948 0 11	321 18 0	16,818 1 1	213 18 2	1,757 5 8	37,439 8 10	814	13,688	10,609	30,524	Gore
Riversdale	315	211	4,137	5,124	9,787	94	857	69,611	40	11,171	2,343 1 8	75 10 7	440 11 9	17 0 8	9,791 1 9	16 1 7	99 0 0	12,782 17 0	153	13,712	4,493	14,494	Riversdale
Mataura	489	364	7,849	11,033	19,735	364	378	7,172	2,896	23,972	4,280 4 6	262 10 8	304 4 1	50 10 1	13,370 2 3	24 14 11	155 0 0	18,447 15 6	316	60,217	2,441	11,112	Mataura
Edendale	683	434	6,471	6,613	14,201	245	1,951	11,950	66	5,239	3,838 15 8	164 8 10	276 0 5	36 12 7	5,786 12 9	83 3 10	116 15 0	10,302 8 7	722	16,097	4,969	18,930	Edendale
Wyndham	360	248	5,140	3,065	8,813	124	1,562	16,116	4,268	2,938	1,985 3 9	97 9 2	375 8 8	32 12 7	4,466 13 9	17 12 4	30 19 0	7,005 19 3	130	8,616	2,622	9,622	Wyndham
Woodlands	136	128	3,495	4,298	8,057	177	847	25,295	603	5,293	1,591 0 11	94 11 6	219 3 3	19 0 3	3,645 11 5	13 8 9	20 2 0	5,602 18 1	731	11,382	4,235	18,126	Woodlands
Invercargill (Coaching)	12,752	10,723	86,724	89,811	200,010	4,831	..	..	..	55,647 3 0	4,055 12 4	6,762 8 4	1,233 14 8	Cr.	22 11 0	194 7 2	..	67,870 14 6	..	..	..	..	Invercargill (Coaching)
Waimahaka	291	267	7,581	9,685	17,824	159	1,484	27,559	24,670	4,006	3,132 10 3	105 15 0	455 15 9	4 3 5	5,873 15 7	33 15 8	116 11 6	9,743 7 2	569	3,378	6,805	18,911	Waimahaka
Bluff	1,170	2,525	9,202	19,242	32,139	1,838	76	280	47,850	89,083	4,857 8 7	1,038 2 0	554 0 11	37 3 9	46,183 7 4	4,264 12 11	765 8 9	57,700 4 3	957	172,323	22,733	76,580	Bluff
.. (Wharf)	..	..	..	..	..	..	..	..	..	8,068	..	..	..	..	1,611 8 4	..	..	1,611 8 4	..	..	..	..	.. (Wharf)
Makarewa	67	174	1,770	1,547	3,558	610	1,253	27,602	7,324	40,206	334 7 7	190 15 2	167 17 1	9 10 0	11,804 0 10	25 11 10	90 19 0	12,623 1 6	1,084	102,162	5,446	10,442	Makarewa
Thornbury	193	130	2,839	1,038	5,100	179	473	30,374	9,370	6,724	761 3 8	122 19 10	169 19 8	11 19 11	4,550 15 1	5 14 0	1 10 0	5,624 2 2	121	4,440	5,099	9,296	Thornbury
Riverton	1,203	649	8,156	3,438	13,446	252	183	1,680	51,435	4,417	2,619 9 3	148 7 11	814 11 2	41 9 2	11,515 19 0	9 15 0	172 18 0	15,322 9 6	88	892	4,325	6,704	Riverton
Orepuki	392	372	4,892	5,411	11,067	536	450	9,800	30,811	2,518	2,056 19 10	199 9 1	209 17 0	17 16 9	8,579 18 3	7 1 7	242 15 6	11,313 18 0	161	2,834	1,448	3,853	Orepuki
Tuatapere	893	558	11,545	10,008	23,004	83	451	18,475	63,085	3,834	4,798 18 5	62 4 9	452 3 11	26 5 7	17,933 19 3	279 17 0	214 5 0	23,767 13 11	204	3,675	1,179	6,294	Tuatapere
Otautau	557	347	4,366	3,700	8,970	281	851	39,589	16,350	175,468	2,120 6 7	210 9 1	437 11 6	21 0 4	92,876 13 6	1,801 8 4	93 18 6	97,561 7 10	305	2,043	7,464	8,677	Otautau
Nightcaps	469	419	5,419	5,379	11,686	113	35	2,852	5,166	3,213 8 2	76 1 2	186 1 2	19 7 6	2,061 19 10	10 17 9	1 13 0	5,569 8 7	125	1,889	11,932	19,107	Nightcaps	
Winton	829	493	9,906	6,090	17,318	341	1,237	83,671	14,524	40,383	3,130 4 4	258 9 6	998 6 2	45 11 0	13,097 4 8	20 16 11	165 3 6	17,715 16 11	525	10,696	11,174	18,995	Winton
Centre Bush	12	6	117	72	207	2	86	10,111	429	1,008	40 3 2	1 19 5	11 9 4	0 15 4	738 6 6	0 19 6	15 10 0	809 3 3	10	341	90	199	Centre Bush
Dipton	168	129	1,286	1,186	2,769	85	222	22,225	678	7,553	707 3 9	62 15 0	151 6 1	7 19 1	2,163 17 2	8 3 0	40 13 0	3,141 17 1	237	2,730	7,397	8,660	Dipton
Lumsden	1,226	757	12,134	7,758	21,875	286	939	46,069	49	5,721	5,324 15 1	199 15 4	752 16 10	84 6 4	6,668 18 3	14 3 2	122 12 6	13,167 7 6	302	7,569	3,147	8,150	Lumsden
Kingston	455	90	2,310	1,454	4,309	37	238	2,382	23	301	1,547 13 3	..	49 2 5	69 19 11	385 6 5	1 17 7	27 4 9	2,081 4 4	45	8,646	1,007	2,804	Kingston
Through traffic (Lake Wakatipu)	903	204	1,344	260	2,711	..	..	1,990	1,004	1,917	2,413 6 3	..	682 18 8	24 3 5	2,818 6 4	..	..	5,938 14 8	150	1,414	372	3,779	Through traffic (Lake Wakatipu)
Through traffic (Westland)	826	116	825	99	1,866	..	..	..	..	..	1,341 16 3	..	..	..	..	..	..	1,341 16 3	..	..	..	..	Through traffic (Westland)
Chief Accountant	3,497	228	2,143	8,352	14,220	185	..	..	..	..	5,767 14 1	6,590 17 11	..	..	36,138 0 0	..	..	..	..	..	..	..	Chief Accountant
Totals	260,690	269,693	998,937	1,373,894	2,903,214	128,520	84,655	3,941,699	644,529	2,342,301	681,316 1 3	57,794 4 3	91,979 19 11	52,023 4 1	1,399,650 18 3	350,193 9 3	341,630 13 0	2,374,588 10 0	84,655	3,941,699	644,529	2,342,301	Totals
WESTLAND SECTION—																							
Ross	414	374	4,608	7,203	12,599	16	764	6,380	40,050	1,669	1,706 18 1	13 2 6	213 12 6	12 2 4	4,326 10 5	5 13 10	102 10 0	6,380 9 7	29	393	510	3,264	Ross
Hokitika	3,914	1,601	13,576	7,091	26,182	99	41	364	164,303	3,098	6,161 13 7	63 19 9	1,044 17 5	117 10 9	16,592 5 2	63 7 4	422 14 7	24,466 8 7	159	1,893	2,479	12,772	Hokitika
Kumara	385	353	1,989	1,739	4,466	82	434	3,733	124,973	620	60 6 10	62 5 0	116 13 5	13 0 4	6,684 8 3	18 19 3	116 4 6	7,631 17 7	67	1,722	593	2,781	Kumara

RETURN No. 13—continued.

STATEMENT OF CARRIAGE, BRAKE-VAN, AND WAGON STOCK, AND TARPAULINS, FOR THE YEAR ENDED 31ST MARCH, 1924—continued.

Description.	Class.	Location										Total.
		Whangarei.	Kaihu.	North Island Main Line and Branches.	Gisborne.	South Island Main Line and Branches, and Westland.	Westport.	Nelson.	Pictou.			
Brought forward		582	60	11,243	146	11,103	756	163	242			24,295
WAGONS—continued.												
Sheep, bogie	S	..	..	73	..	52	..	..	..			125
Cattle,	T	..	..	49	..	26	..	..	..			75
Platform,	U	8	..	213	40	110	4	4	6			385
Gas-storeholders, bogie	UA	2	..	9	..	7	..	..	..			18
Platform,	UB	..	..	127	..	159	..	..	..			286
Horse-boxes,	UG	..	..	32	..	29	..	..	..			61
Frozen meat,	V	..	..	54	..	75	..	..	..			129
"	VB	..	..	115	..	60	..	..	..			175
Covered goods,	Z	..	..	61	..	40	..	..	..			101
"	ZP	..	..	36	..	48	..	..	..			84
Totals		592	60	12,012	186	11,709	760	167	248			25,734
TARPAULINS		147	24	8,874	115	10,905	52	175	290			20,582

RETURN No. 14.

STATEMENT OF LOCOMOTIVE STOCK FOR THE YEAR ENDED 31ST MARCH, 1924.

Class.	Type.	Cylinder.		Coupled Wheels.		Truck Wheels.		Whangarei.	Kaihu.	North Island Main Line and Branches.	Gisborne.	South Island Main Line and Branches, and Westland.	Westport.	Nelson.	Pictou.	Total.
		Dia-meter.	Stroke.	No.	Dia-meter.	No.	Dia-meter.									
A	Tender (4-cyl. balanced compound)	12 & 19	22	6	4 6	6	30½	..	..	50	..	7	..	..	..	57
AA	Tender (superheated) ..	18	24	6	4 1	6	30½	..	..	10	..	..	..	..	..	10
AB	" ..	17	26	6	4 6	4	30½	..	..	51	..	34	..	..	..	85
AB	" (409) ..	17	26	6	4 6	6	30½	..	..	..	..	8	..	..	..	1
B	" ..	16	22	8	3 6½	4	30½	..	..	..	..	..	..	..	..	8
Ba	" ..	16	22	8	3 6½	4	26½	..	..	..	..	10	..	..	..	10
Bb	" (superheated) ..	17	22	8	3 6½	4	26½	..	..	30	..	..	..	..	..	30
Bc	" (compound) ..	11½ & 19	20	8	3 7	2	28	..	..	1	..	..	..	..	..	1
D	Tank ..	9½	18	4	3 0½	2	18	..	..	1	..	1	..	..	..	2
F	" ..	10½	18	6	3 0½	2	..	..	2	24	..	42	2	1	..	71
FA	" ..	12	18	6	3 0½	2	24	3	..	4	1	3	2	3	2	18
H	" (Fell) ..	14	16	4	2 8	2	30½	..	..	6	..	..	..	..	..	6
J	Tender ..	14	20	6	3 6½	2	24½	..	..	14	..	14	..	..	..	28
K	" ..	12	20	4	4 1½	4	30½	..	..	..	..	5	..	..	..	5
L	Tank ..	12	18	4	3 6½	6	26½	..	..	4	..	1	..	..	..	5
LA	" ..	12	18	4	3 9	4	26½	..	..	..	..	4	..	..	..	4
M	" ..	13	20	4	3 6½	6	28½	..	..	4	..	..	..	..	..	4
N	Tender ..	15	20	6	4 1½	4	28½	..	..	9	..	1	..	..	..	10
N	" ..	15	20	6	4 1½	4	30½	..	..	..	..	2	..	..	..	2
NA	" (compound) ..	10 & 17	20	6	4 1	4	30½	..	..	2	..	..	..	..	..	2
Nc	" ..	10 & 17	20	6	4 1	4	30½	..	..	2	..	..	..	..	..	2
OA	" ..	11 & 18	20	8	3 7	2	30½	..	..	1	..	..	..	..	..	1
OB	" ..	16	20	8	3 7	2	30½	..	..	2	..	..	..	..	..	2
OC	" (compound) ..	11 & 18	20	8	3 7	2	30½	..	..	1	..	..	..	..	..	1
P	" ..	15	20	8	3 5	2	26½	..	..	2	..	6	..	..	..	8
Q	" ..	16	22	6	4 1½	4	30½	..	..	6	..	7	..	..	..	13
R	Single Fairlie ..	12½	16	6	3 0½	4	26½	..	..	5	..	7	..	..	..	12
S	" ..	13	16	6	3 0½	4	36½	..	..	3	..	..	..	..	..	3
T	Tender ..	15	18	8	3 0½	2	24½	..	..	1	..	4	..	..	..	5
U	" ..	16	20	6	4 6	4	30½	..	..	..	..	9	..	..	..	9
UA	" ..	16	20	6	4 1½	4	30½	..	..	..	..	6	..	..	..	6
UB	" ..	16	20	6	4 1½	4	26½	..	..	..	..	20	..	..	..	20
UB	" ..	16	22	6	4 1½	4	30½	..	..	..	..	2	..	..	..	2
UC	" ..	16	22	6	4 1½	4	30½	..	..	..	..	10	..	..	..	10
UD	" ..	16½	22	6	4 10	4	28	..	..	2	..	..	..	..	..	2
V	" ..	15	20	6	4 1½	4	26½	..	..	1	..	10	..	..	..	11
W	Tank ..	14	20	6	3 0½	4	26½	..	..	..	..	2	..	..	..	2
WA	" ..	14	20	6	3 3½	4	28½	..	..	2	6	3	..	..	..	11
WA	" (converted) ..	14	20	6	3 6½	4	24½	..	..	3	..	1	..	..	..	4
WAB	" (superheated) ..	17	26	6	4 6	4	30½	..	..	2	..	..	..	..	..	2
WB	" ..	14	20	6	3 3½	4	25	7	..	..	..	..	5	..	..	12
WD	" ..	14	20	6	3 3½	6	25	1	..	10	..	7	..	..	..	18
WE	" ..	16	22	6	3 6½	8	30½	..	..	1	..	1	..	..	..	2
WF	" ..	14	22	6	3 9	6	30½	..	..	16	..	16	..	2	4	38
WG	" ..	14	22	6	3 9	8	26½	..	..	20	..	..	..	..	..	20
WH	" ..	12	18	6	3 1	4	24½	..	..	2	..	..	..	..	..	2
WJ	" ..	17	20	8	3 7	4	30½	..	..	1	..	..	..	..	..	1
Ws	" (superheated) ..	17	26	6	4 6	4	30½	..	..	8	..	..	..	..	..	8
Ww	" ..	16½	22	6	3 9	8	26½	..	..	48	..	2	..	..	..	50
X	Tender (4-cyl. balanced compound) ..	13½ & 22	..	8	3 9	2	30½	..	..	18	..	..	..	..	..	18
..	Small Tank ..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Totals .. .. .		..	..	..	..	..	..	11	2	368	7	246	9	6	6	655

RETURN No. 15.

COMPARATIVE STATEMENT OF THE MILEAGE OPENED, CAPITAL EXPENDED, EARNINGS, EXPENSES, ETC., OF RAILWAYS IN THE FOLLOWING STATES (TAKEN FROM LATEST OFFICIAL RECORDS).

—	Area in Square Miles.	Population.	Miles open.	Gauge.	Total Cost.	Cost per Mile.	Population per Mile of Railway.	Cost per Head of Population.	Train-miles run.	Gross Earnings.	Earnings per Train-mile.	Working-expenses.	Working-expenses per Train-mile.	Profit on Working.	Net Earnings per Train-mile.	Percentage of Net Earnings to Capital.	Percentage of Working-expenses to Earnings.	Earnings per Head of Population.	Passengers carried.*	Tonnage of Goods.	Earnings per Average Mile open.	Working-expenses per Average Mile open.	Net Earnings per Average Mile.	Expenses.					Number of Locomotives.	Number of Passenger-carriages.	Number of Wagons and Brake-vans.	Year ending
																								Maintenance per Mile of Railway.	Locomotive, Car, and Wagon per Train-mile.	Traffic per Cent. of Revenue.	General Charges (including Com-pensation, &c.) per Cent. of Revenue.	£				
Victoria ..	87,884	1,607,586	4,341	Ft. in. 5 3	£ 64,854,594	£ 14,940	371	£ s. d. 40 6 10	16,394,239	£ 11,347,057	d. 166-11	£ 8,181,926	d. 119-78	£ 3,165,131	d. 46-33	4-88	72-11	£ s. d. 7 1 2	155,957,240	7,517,216	£ 2,625	£ 1,893	£ 732	£ 408	£ d. 45-02	23-46	2-43	804	1,852	20,673	30 June, 1923.	
New South Wales ..	309,460	2,189,379	5,317	4 8½	89,276,871	16,788	412	40 15 7	21,693,861	15,221,333	168-39	10,649,974	117-82	4,751,359	50-57	5-22	69-97	6 19 6	123,714,639	13,801,310	2,929	2,049	880	364	58-06	18-44	4-62	1,341	1,774	23,897	„ „	
Queensland ..	670,500	805,636	5,905	3 6	47,138,611	7,982	136	58 10 3	10,917,584	5,420,400	119-25	4,714,262	103-75	706,138	15-50	1-50	86-97	6 14 7	28,358,170	4,208,989	924	803	121	188	46-60	25-84	1-65	698	902	15,364	„ „	
South Australia ..	380,070	515,135	2,358	{ 3 6 5 3 }	20,613,825	8,687	217	40 0 3	6,206,256	3,710,922	143-50	2,781,547	107-56	929,375	35-94	4-58	74-95	7 4 1	24,475,170	3,283,594	1,573	1,179	394	176	61-08	19-47	1-75	494	731	9,833	„ „	
Western Australia ..	975,920	343,430	3,555	3 6	19,160,202	5,390	98	55 15 10	4,505,299	2,915,985	155-34	2,210,348	117-75	705,637	37-59	3-68	75-80	8 9 10	17,830,292	3,006,063	821	622	199	145	55-55	20-32	2-10	422	430	10,208	„ „	
Tasmania ..	26,215	218,924	663	{ 3 6 2 0 }	6,199,725	9,346	330	28 6 4	1,434,816	572,417	95-74	514,350	86-03	58,066	9-71	0-74	89-85	2 12 3	2,884,210	568,346	863	775	88	219	38-19	20-54	4-09	96	148	1,867	„ „	
New Zealand ..	103,861	857,985	2,262	3 6	19,081,735	8,436	379	22 4 10	5,443,333	1,974,038	87-00	1,343,415	59-23	630,623	27-77	3-30	68-05	2 6 0	7,575,390	3,730,394	873	594	279	204	21-36	18-24	3-19	372	751	12,992	31 Mar., 1903.	
„ ..	103,861	882,097	2,305	3 6	20,692,911	8,977	383	23 9 2	5,685,399	2,180,641	91-75	1,438,724	60-48	741,917	31-27	3-58	65-98	2 9 5	8,306,383	4,072,576	943	622	321	213	22-21	17-22	3-14	377	809	13,433	„ 1904.	
„ ..	103,861	908,114	2,347	3 6	21,701,572	9,141	387	23 17 11	6,107,079	2,209,231	86-50	1,492,900	58-46	716,331	28-04	3-30	67-58	2 8 8	8,514,112	4,011,511	938	634	304	217	21-05	18-28	3-10	389	864	13,885	„ 1905.	
„ ..	103,861	933,111	2,391	3 6	22,498,972	9,410	391	24 2 3	6,413,573	2,349,704	87-75	1,621,239	60-47	728,465	27-28	3-24	69-00	2 10 4	8,826,382	4,241,422	980	676	304	229	21-99	18-86	3-01	395	906	14,127	„ 1906.	
„ ..	103,861	961,604	2,427	3 6	23,504,272	9,570	396	24 8 10	6,755,454	2,624,600	93-00	1,812,482	64-21	812,118	28-79	3-45	69-06	2 14 7	9,600,786	4,592,099	1,078	744	334	253	23-37	18-90	2-80	398	966	14,605	„ 1907.	
„ ..	103,861	985,318	2,469	3 6	24,365,647	9,861	399	24 14 7	7,051,274	2,761,938	93-75	1,949,759	66-18	812,179	27-57	3-33	70-59	2 16 1	9,756,716	4,834,534	1,114	786	328	258	24-96	19-40	2-76	410	1,002	15,475	„ 1908.	
„ ..	103,861	1,016,044	2,556	3 6	27,762,592	10,351	398	27 6 6	7,458,236	2,929,526	94-00	2,114,815	67-89	814,711	26-11	3-13	72-19	2 17 8	10,457,144	4,871,874	1,148	828	320	258	25-56	20-73	3-16	452	1,116	16,476	„ 1909.	
„ ..	103,861	1,035,211	2,704	3 6	28,513,476	10,494	383	27 10 10	7,889,166	3,249,790	98-75	2,169,474	65-84	1,080,316	32-91	3-80	66-76	3 2 9	11,141,142	5,223,414	1,203	803	400	230	25-35	18-96	2-96	465	1,140	17,220	„ 1910.	
„ ..	103,861	1,055,640	2,742	3 6	29,606,546	10,723	385	28 1 0	8,141,075	3,494,182	102-75	2,303,272	67-75	1,190,910	35-00	4-06	65-92	3 6 2	11,200,613	5,555,292	1,275	840	435	254	25-81	18-10	2-81	478	1,166	18,036	„ 1911.	
„ ..	103,861	1,081,344	2,801	3 6	30,506,089	10,864	386	28 4 2	8,371,687	3,676,509	105-25	2,465,896	70-52	1,210,613	34-73	3-98	67-07	3 8 0	20,336,577	5,599,756	1,314	881	433	263	27-30	18-27	2-76	493	1,212	18,521	„ 1912.	
„ ..	103,861	1,111,592	2,840	3 6	31,611,220	11,053	391	28 8 9	9,016,224	3,971,002	105-50	2,705,609	71-84	1,265,393	33-66	4-04	68-13	3 11 5	22,310,867	5,957,005	1,400	954	446	271	28-20	19-40	2-64	513	1,282	19,515	„ 1913.	
„ ..	103,861	1,139,669	2,861	3 6	32,355,087	11,309	398	28 7 9	9,319,268	4,043,328	104-00	2,880,323	74-00	1,163,005	30-00	3-61	71-24	3 10 11	23,173,472	5,661,340	1,416	1,008	408	268	29-72	20-73	2-91	534	1,363	20,251	„ 1914.	
„ ..	103,861	1,150,430	2,917	3 6	34,133,825	11,702	394	29 13 5	9,383,420	4,105,457	104-75	2,920,455	74-54	1,185,002	30-21	3-53	71-14	3 11 4	23,542,903	6,075,282	1,410	1,002	408	254	30-26	21-20	2-98	557	1,397	21,226	„ 1915.	
„ ..	103,861	1,152,048	2,959	3 6	34,857,882	11,780	389	30 5 2	9,356,522	4,548,356	116-50	2,910,883	74-50	1,637,473	42-00	4-72	64-00	3 19 0	24,600,693	5,960,562	1,540	985	555	251	29-77	19-60	2-50	585	1,452	21,994	„ 1916.	
„ ..	103,861	1,150,605	2,970	3 6	35,378,664	11,912	387	30 15 0	9,146,331	4,800,810	125-75	2,926,864	76-63	1,873,946	49-12	5-30	60-97	4 3 5	24,782,602	5,826,265	1,619	987	632	244	30-88	18-87	2-47	607	1,480	22,380	„ 1917.	
„ ..	103,861	1,154,559	2,977	3 6	36,001,432	12,029	389	32 0 11	7,468,646	4,687,700	150-50	3,042,907	97-54	1,644,793	52-96	4-60	64-91	4 1 3	21,438,325	5,373,136	1,578	1,023	555	240	40-02	20-38	2-67	624	1,488	22,517	„ 1918.	
„ ..	103,861	1,175,325	2,993	3 6	36,167,681	12,084	393	30 15 6	7,477,583	4,988,632	160-00	3,308,575	105-97	1,680,057	54-03	4-65	66-32	4 4 11	22,030,327	5,611,738	1,670	1,107	563	252	44-35	20-73	2-70	620	1,489	22,658	„ 1919.	
„ ..	103,861	1,223,915	3,006	3 6	36,390,115	12,106	407	29 14 8	7,408,608	5,752,487	186-00	4,105,067	132-72	1,647,420	53-28	4-53	71-36	4 14 0	24,582,186	6,000,279	1,923	1,372	551	281	57-84	22-66	2-99	616	1,492	22,937	„ 1920.	
„ ..	103,861	1,268,046	3,018	3 6	37,235,254	12,338	420	29 7 3	9,303,392	6,908,531	178-00	5,636,601	145-14	1,271,930	32-86	3-42	81-59	5 9 0	28,821,783	6,487,279	2,293	1,870	423	350	68-54	24-82	2-95	608	1,492	23,119	„ 1921.	
„ ..	103,861	1,300,967	3,030	3 6	39,309,097	12,973	429	30 4 4	8,717,265	6,643,591	182-69	6,237,727	171-37	405,864	11-32	1-07	93-89	5 2 0	28,121,763	6,321,351	2,199	2,063	136	393	86-29	25-66	3-06	637	1,496	23,974	„ 1922.	
„ ..	103,861	1,325,310	3,037	3 6	40,275,161	13,261	436	30 7 9	8,346,731	6,727,802	193-18	5,502,497	157-81	1,225,305	35-37	3-04	81-79	5 1 6	28,221,362	6,618,588	2,219	1,813	406	366	76-40	22-73	2-91	639	1,498	26,106	„ 1923.	
„ ..	103,861	1,347,723	3,053	3 6	41,399,427	13,560	441	30 14 4	9,024,503	6,984,211	185-50	5,403,766	143-43	1,580,445	42-07	3-83	77-37	5 3 8	28,436,475	6,925,517	2,291	1,772	519	399	65-00	21-94	2-93	655	1,527	26,195	„ 1924.	

RETURN SHOWING MILEAGE, CAPITAL COST, TRAFFIC, REVENUE, AND EXPENDITURE OF NEW ZEALAND GOVERNMENT RAILWAYS FROM 1ST APRIL, 1916, TO 31ST MARCH, 1924.

Year.	Miles.	Capital Cost.	Train-mileage.	Passengers.		Season Tickets.		Coaching.		Cattle.	Sheep and Pigs.	Timber.
				Number.	Revenue.	Number.	Revenue.	Revenue.	Revenue.			
1916-1917	2,970	35,378,664	9,146,331	14,173,115	1,717,847	355,892	155,201	243,892	402,769	7,269,544	579,428	
1917-1918	2,993	36,001,432	7,468,646	11,408,156	1,663,922	322,487	138,675	254,110	362,134	6,502,090	593,784	
1918-1919	2,993	36,167,681	7,477,588	11,374,521	1,799,381	351,124	130,901	258,524	346,844	6,691,760	487,729	
1919-1920	3,006	36,390,115	7,408,608	12,760,814	2,189,391	400,621	165,596	290,453	367,976	7,316,556	611,171	
1920-1921	3,018	37,235,254	9,303,392	15,315,640	2,459,362	464,691	198,717	335,754	376,745	7,129,222	717,701	
1921-1922	3,030	39,309,097	8,717,265	14,262,440	2,212,693	472,865	205,594	339,482	279,904	7,635,515	708,212	
1922-1923	3,037	40,275,161	8,346,731	14,256,610	2,416,514	485,681	204,106	393,822	293,930	7,367,763	663,213	
1923-1924	3,053	41,399,427	9,024,503	13,836,311	2,136,999	525,744	212,601	406,832	320,434	7,723,971	724,116	

Year.	Goods.	Total.	Miscellaneous Revenue.	Rents and Commission.	Total Revenue.	Revenue per Train-mile.
1916-1917	5,246,837	5,826,265	98,473	86,595	4,800,810	125.75
1917-1918	4,849,352	5,373,136	78,761	86,991	4,687,700	150.50
1918-1919	4,750,728	5,238,457	78,828	92,662	4,986,682	160.00
1919-1920	4,986,061	5,597,237	105,072	96,738	5,752,487	186.00
1920-1921	5,367,659	6,085,360	136,505	101,528	6,908,531	178.00
1921-1922	5,222,900	5,931,112	124,106	115,182	6,643,591	182.69
1922-1923	5,571,594	6,234,807	119,933	122,919	6,727,802	193.18
1923-1924	5,795,341	6,519,457	141,968	132,598	6,984,211	185.50

EXPENDITURE.

Year.	Expenditure per Train-mile.	Expenditure per Cent. of Revenue.	Maintenance of Way and Signals.			Locomotive Power.			Carriages and Wagons.		
			Amount.	Per Cent. of Revenue.	Per Mile of Railway.	Amount.	Per Cent. of Revenue.	Per Train-mile.	Amount.	Per Cent. of Revenue.	Per Train-mile.
1916-1917	76.63	60.97	720,840	15.04	243.52	937,780	19.56	24.61	238,868	4.98	6.27
1917-1918	97.54	64.91	710,655	15.18	239.54	962,222	20.56	30.92	233,248	6.05	9.10
1918-1919	105.97	66.32	752,558	15.10	252.28	1,075,439	21.34	34.52	306,308	6.15	9.83
1919-1920	132.72	71.36	837,910	14.59	280.54	1,397,993	24.34	45.29	337,498	6.74	12.55
1920-1921	145.14	81.59	1,053,049	15.26	349.97	2,124,877	30.80	54.82	531,935	7.71	13.72
1921-1922	171.37	93.89	1,184,326	17.85	392.42	2,867,383	38.69	70.68	566,782	8.54	15.61
1922-1923	157.81	81.79	1,108,317	16.50	366.03	2,421,532	31.58	61.00	535,621	7.97	15.40
1923-1924	143.43	77.37	1,214,193	16.41	398.86	1,893,156	27.14	50.35	550,902	7.90	14.65

Year.	Amount.	Per Cent. of Revenue.	Head and Departmental Offices.			Lake Wakatipu Steamers.			Total Expenditure.
			Amount.	Per Cent. of Revenue.	Per Train-mile.	Amount.	Per Cent. of Revenue.	Per Train-mile.	
1916-1917	904,318	18.87	118,456	2.47	3.10	6,602	0.14	2,926,864	
1917-1918	954,142	20.38	124,976	2.67	4.02	7,664	0.16	3,042,907	
1918-1919	1,032,609	33.14	134,626	2.70	4.32	6,985	0.15	3,308,575	
1919-1920	1,301,935	42.17	171,767	2.99	5.57	7,964	0.17	4,105,067	
1920-1921	1,712,375	24.82	203,906	2.95	5.26	10,458	0.23	5,636,601	
1921-1922	1,703,049	25.66	202,948	3.06	5.59	13,339	0.29	6,237,727	
1922-1923	1,527,033	22.73	195,894	2.91	5.63	14,100	0.31	5,502,497	
1923-1924	1,530,652	21.94	204,407	2.93	5.44	10,456	0.23	5,403,766	

RETURN No. 17.

STATEMENT OF RAILS RELAID DURING THE YEAR ENDED 31ST MARCH, 1924.

Weight.	Whangarei-Kawakawa.	Kaihu.	Gisborne.	North Island Main Line and Branches.	South Island Main Line and Branches.	Westland.	Westport.	Nelson.	Picton.	Total.
RAILS RELAID :—										
53 lb. steel	2,036	..	2	30	21	..	5	..	..	2,441
55 " .. ..	..	..	..	..	368	..	..	..	..	18
56 "	126	..	..	7,891	4,349	2,067	5	..	..	14,438
70 " .. ..	..	..	..	..	..	..	..	..	..	..
Totals	2,162	..	2	7,921	4,756	2,067	10	..	..	16,918

RETURN No. 18.

STATEMENT OF SLEEPERS RELAID AND REMOVED DURING THE YEAR ENDED 31ST MARCH, 1924.

Description.	Whangarei-Kawakawa.	Kaihu.	North Island Main Line and Branches.	Gisborne.	South Island Main Line and Branches.	Westland.	Westport.	Nelson.	Picton.	Total.
SLEEPERS RELAID :—										
Ironbark .. ..	..	..	1,544	..	1	717	..	141	..	2,403
Jarrah	18,491	..	79,733	563	80,608	479	9	..	935	180,818
Totara .. ..	..	579	293	..	929	..	..	449	400	2,650
Birch .. ..	..	..	..	..	..	764	3,798	..	..	4,562
Silver-pine .. ..	..	..	..	50	20,632	17,393	178	415	121	38,789
Puriri .. ..	..	..	1,730	..	..	..	..	..	..	1,730
Hardwood .. ..	..	..	..	..	19	..	..	..	..	19
Powellized .. ..	..	..	..	..	15	..	..	..	..	15
Yellow Pine .. ..	..	..	4,386	..	..	..	..	..	..	4,386
Totals	18,491	579	87,686	613	102,204	19,353	3,985	1,005	1,456	235,372
SLEEPERS REMOVED :—										
Kauri .. ..	..	18	..	..	..	..	..	..	..	18
Maire .. ..	..	..	34	..	..	..	..	..	..	34
Ironbark .. ..	..	..	2,518	..	918	..	..	..	..	3,436
Jarrah	99	..	24,082	..	25,930	..	23	..	28	50,162
Matai and Rimu .. ..	..	..	955	..	3,271	..	..	..	..	4,226
Totara	14,083	138	40,929	37	3,687	..	..	124	..	58,998
Birch .. ..	..	..	2,436	..	1,035	1,125	657	55	..	5,308
Silver-pine	1,755	..	5,692	576	38,667	18,228	3,305	685	1,428	70,336
Powellized .. ..	..	..	1,338	..	4,245	..	..	..	..	5,583
Puriri	2,554	423	7,692	..	441	..	..	..	..	11,110
Creosoted .. ..	..	..	1,682	..	12,178	..	..	..	..	13,860
Grey-gum .. ..	..	..	..	..	3,142	..	..	..	..	3,142
Kamahī .. ..	..	..	..	..	4	..	..	..	..	4
Mixed .. ..	..	..	..	..	858	..	..	..	..	858
Totals	18,491	579	87,358	613	94,376	19,353	3,985	864	1,456	227,075

RETURN No. 19.

RETURN OF NUMBER OF STATIONS AND PRIVATE SIDINGS ON EACH SECTION FOR THE YEAR ENDED 31ST MARCH, 1924.

Section.	Length.	Number of Stations and Stopping-places in the Time-tables.	Number of Private Sidings		
			At Stations.	Out of Stations.	Total.
Whangarei	M. 87 ch. 72	35	4	5	9
Kaihu	24 10	13	..	1	1
Gisborne	49 10	17	8	2	10
North Island Main Line and Branches	1,160 16	412	171	37	208
South Island Main Line and Branches	1,430 41	520	186	26	212
Westland	159 69	67	22	7	29
Westport	35 78	17	3	1	4
Nelson	60 20	23	3	..	3
Picton	56 12	22	8	..	8
Totals	3,064 8	1,126	405	79	484

RETURN NO. 20.
COMPARATIVE STATEMENT OF MILEAGE OF RAILWAYS OPEN FOR TRAFFIC AND UNDER MAINTENANCE ON 31ST MARCH, 1924.

Section.	Mileage open for traffic on 31st March, 1923.		Additional Lengths opened during Year.			Reduced Mileage equivalent to Maintenance for whole Period.		Length closed during Year.		Net Addition to Mileage open for Traffic.		Net Addition to Mileage under Maintenance.		Total Mileage open for Traffic on 31st March, 1924.		Equivalent Total Mileage maintained during Financial Year ended 31st March, 1924.	
	M. ch.	..	Line opened.	Date of Opening.	Length opened.	M. ch.	..	Line.	Length.	M. ch.	..	M. ch.	..	M. ch.	..	M. ch.	..
Whangarei-Kawakawa ..	79	49	Kaikohe-Okaihau ..	29th Oct., 1923 ..	8	23	..	..	..	8	23	8	23	87	72	83	10
Kaihu ..	19	41	Tarawhatai - Donnelly's Crossing ..	1st April, 1923 ..	4	49	..	..	..	4	49	4	49	24	10	24	10
North Island Main Lines and Branches	1,148	22	Napier-Eskdale ..	23rd July, 1923 ..	11	74	..	..	..	11	74	11	74	1,160	16	1,156	43
Gisborne ..	49	10	..	..	..	..	..	..	..	..	..	..	..	49	10	49	10
South Island Main Lines and Branches	1,428	7	..	..	..	..	..	..	..	..	..	..	..	1,428	7	1,428	7
Ditto, Private Line—Nightcaps Branch ..	2	34	..	..	..	..	..	..	..	..	..	..	..	2	34	2	34
Westland ..	157	26	Runanga-Rapahoe ..	3rd Sept., 1923 ..	2	43	..	..	..	2	43	2	43	159	69	158	63
Westport ..	35	78	..	..	..	..	..	..	..	..	..	..	..	35	78	35	78
Nelson ..	60	20	..	..	..	..	..	..	..	..	..	..	..	60	20	60	20
Pictou ..	56	12	..	..	..	..	..	..	..	..	..	..	..	56	12	56	12
Totals ..	3,036	59	..	..	27	29	..	..	..	27	29	27	29	3,064	8	3,054	47

RETURN NO. 21.
STATEMENT SHOWING WEIGHTS OF RAILS IN VARIOUS LINES ON 31ST MARCH, 1924.

Line.	40 lb. Iron.	40 lb. Steel.	45 lb. Steel.	52 lb. Iron.	52 lb. Steel.	53 lb. Steel.	55 lb. Steel.	56 lb. Iron.	56 lb. Steel.	65 lb. Steel.	70 lb. Iron.	70 lb. Steel.	100 Steel.	Total.
Whangarei-Kawakawa Section—														
Whangarei Line ..	..	..	..	..	..	8 23	33 52	0 26	12 53	..	..	2 78	..	57 72
Kaikōhe Branch ..	..	..	..	..	..	..	24 59	..	..	..	..	..	..	24 59
Kiororo-Portland ..	..	..	..	..	..	..	5 21	..	..	..	..	..	..	5 21
Kaihu Section—														
Kaihu Branch ..	..	..	..	..	..	17 15	6 75	..	..	..	..	..	..	24 10
North Island Main Lines and Branches—														
Auckland-Wellington..	..	..	..	..	..	0 5	..	..	10 7	16 27	..	399 26	..	425 65
Kaipara Branch ..	..	..	..	..	..	0 44	26 18	..	21 61	..	..	41 77	..	90 40
Onehunga Branch ..	..	..	..	..	..	2 23	..	..	..	..	..	0 26	..	2 59
Waiuku Branch ..	..	..	..	..	..	..	12 70	..	..	..	..	..	..	12 70
Huntly-Awaroa Railway	..	..	..	..	..	..	7 43	..	..	..	..	..	..	7 43
Thames Branch ..	..	..	..	..	..	10 1	..	..	..	..	..	..	..	62 75
Waipi Branch ..	..	..	..	..	..	..	..	..	..	..	..	..	..	12 24
Cambridge Branch ..	..	..	..	..	..	6 75	2 36	..	..	..	..	..	..	12 1
Rotorua Branch ..	..	..	..	..	..	34 20	..	..	0 9	..	..	34 31	..	68 60
Raetihi Branch ..	..	..	..	..	..	6 37	2 1	..	..	..	..	..	..	8 28
Marton-New Plymouth	..	..	..	..	..	0 16	..	..	..	..	..	100 68	..	137 3
Waitara Branch ..	..	..	..	..	..	3 77	..	..	0 3	..	..	..	..	4 62
Toko Branch ..	..	..	..	..	..	15 45	26 30	..	0 30	..	..	..	..	42 25
Mount Egmont Branch	..	..	..	..	..	..	..	..	6 2	..	..	..	..	6 2
Wanganui Branch ..	..	..	..	..	..	..	..	..	1 79	..	..	1 21	..	3 20
Foxton Branch ..	..	..	..	..	..	10 77	..	..	8 14	..	..	..	..	19 33
Palmerston North - Eskdale	..	..	..	0 22	..	0 47	11 73	..	29 12	..	..	82 24	..	133 76
Port Ahuriri Branch ..	..	..	..	..	..	1 68	0 1	..	..	..	..	0 1	..	1 70
Wellington-Woodville	..	..	..	..	..	17 78	0 1	..	12 17	..	..	84 27	..	114 43
Greytown Branch ..	..	..	..	3 7	..	..	..	..	..	..	..	..	..	3 7
Gisborne Section—														
Gisborne Line ..	0 20	..	..	..	..	..	31 8	..	17 62	..	..	..	..	49 10
South Island Main Lines and Branches—														
Lytelton-Bluff ..	..	..	..	0 3	..	0 25	12 79	..	0 67	..	..	389 27	1 31	392 1
Main North Line ..	..	..	..	..	..	28 28	0 2	..	3 36	..	..	39 25	..	80 52
Oxford Branch ..	..	11 46	..	..	..	18 35	0 7	..	..	..	..	0 6	..	33 45
Eyreton Branch ..	..	..	..	..	..	20 14	..	..	..	..	..	..	..	20 21
Cheviot Branch ..	..	..	..	..	..	..	12 52	..	31 29	..	..	..	..	44 1
Southbridge Branch ..	..	..	..	..	..	23 19	1 0	..	1 20	..	..	..	..	25 39
Little River Branch ..	..	0 9	..	..	..	0 48	17 47	..	4 24	..	..	..	..	22 48
Midland Line ..	..	..	..	..	..	..	..	..	17 45	..	..	54 47	0 14	72 26
White Cliffs Branch ..	..	..	..	..	22 20	11 29	..	..	0 10	..	..	0 7	..	11 46
Methven Branch ..	..	..	..	..	..	..	..	..	..	..	..	..	..	22 20
Mount Somers Branch ..	3 33	18 20	..	..	..	..	..	..	5 55	..	..	0 8	..	27 36
Albury Branch ..	0 65	..	..	..	2 2	22 40	4 78	..	7 66	..	..	0 4	..	36 13
Waimate Branch ..	..	..	..	7 31	..	2 44	..	..	..	..	..	..	..	4 46
Waimate Gorge Branch	..	..	..	0 4	..	0 70	..	..	..	..	..	..	..	8 21
Duntroon Branch ..	1 16	..	..	..	..	28 51	3 61	..	3 69	..	..	..	..	37 41
Carried forward	5 68	30 61	..	10 67	24 22	294 14	244 14	0 26	265 0	16 27	..	1,266 60	1 45	2,160 4

RETURN NO. 21—continued.
STATEMENT SHOWING WEIGHTS OF RAILS IN VARIOUS LINES ON 31st MARCH, 1924—continued.

Line.	40 lb. Iron.	40 lb. Steel.	45 lb. Steel.	52 lb. Iron.	52 lb. Steel.	53 lb. Steel.	55 lb. Steel.	56 lb. Iron.	56 lb. Steel.	65 lb. Steel.	70 lb. Iron.	70 lb. Steel.	100 lb. Steel.	Total.
Brought forward	M. ch. 5 68	M. ch. 30 61	M. ch. ..	M. ch. 10 67	M. ch. 24 22	M. ch. 294 14	M. ch. 244 14	M. ch. 0 26	M. ch. 265 0	M. ch. 16 27	M. ch. ..	M. ch. 1,266 60	M. ch. 1 45	M. ch. 2,160 4
South Island Main Lines and Branches—continued.	0 23	..	..	..	..	0 40	..	..	..	..	..	..	..	0 63
Oamaru Breakwater Branch	11 44	..	..	3 45	..	..	..	..	15 9
Ngapara Branch	0 16	10 36	..	1 39	..	..	..	..	11 75
Livingstone Branch	..	6 76	..	0 53	..	0 16	..	..	1 0	..	..	..	..	8 65
Waihero Branch	0 16	..	..	..	..	..	..	..	1 26
Port Chalmers Branch	0 2	..	..	..	..	1 48	0 19	..	0 48	..	..	0 1	..	2 38
Walton Park Branch	1 57	..	..	..	..	..	..	..	1 57
Fernhill Branch	65 73	15 27	..	65 58	..	..	0 7	..	146 78
Otago Central Railway	0 1	..	..	..	..	6 26	0 73	..	1 53	..	..	..	..	9 0
Lawrence Branch	1 40	18 20	..	15 8	..	..	..	..	34 68
Catlin's River Branch	15 26	20 5	..	3 46	..	..	4 1	..	42 78
Tapuanui Branch	10 40	9 3	..	6 58	..	..	..	..	26 21
Waikato Branch	12 56	..	..	..	..	0 1	..	12 57
Glenham Branch	9 1	..	..	..	..	..	0 84	..	9 35
Seaward Bush Branch	1 52	25 9	..	7 4	..	..	..	..	33 65
Kingston Branch	44 56	8 6	..	23 57	..	..	18 45	..	86 78
Orepuki Branch	17 74	..	..	10 17	..	..	22 24	..	48 23
Wairoa Branch	2 17	..	2 34
Nightcaps Branch	..	0 17	..	..	..	..	2 18	..	..	..	..	..	..	12 66
Forest Hill Branch	2 41	8 5	..	..	..	0 24	..	..	0 2	..	..	..	..	10 41
Mararoa Branch	..	10 16	..	..	..	3 56	..	..	0 10	..	..	..	..	36 37
Waimea Plains Branch	1 77	11 69	..	..	..	..	32 51	..	13 67
Switzers Branch	0 4	..	..	..	..	..	0 1	..	..
Westland Section—
Grey mouth-Otira	17 68	..	..	10 38	..	..	39 52	0 34	50 48
Stallwater-Inangahua	31 1	13 51	..	17 42	..	..	2 79	..	38 29
Blackball Branch	0 15	1 0	..	6 64	..	..	5 37	..	56 73
Point Elizabeth Branch	4 58	2 43	..	2 31	..	..	3 24	..	8 5
7-Mile Branch	0 01	5 61	..	..	..	..	21 12	..	2 43
Westport-Mokihinui	0 7	..	25 38	17 60	..	..	..	..	..	..	30 17
Westport-Te Kuha	17 13	22 48	..	16 73	..	..	0 9	..	5 61
Nelson Line	16 29	..	..	0 2	..	60 20
Pictou Line	56 12
Totals	8 55	56 15	..	11 47	24 22	585 17	441 59	0 26	484 68	16 27	..	1,432 73	1 79	3,064 8

RETURN No. 22.

STATEMENT SHOWING APPROXIMATELY SLEEPERS LAID AND REMOVED UP TO 31ST MARCH, 1924.

Year.	Approximate Length opened each Year.			Sleepers.	
	North Island.	Middle Island.	Total.	Laid during Construction. (2,100 per mile.)	Removed during Maintenance.*
	M. ch.	M. ch.	M. ch.		
1867	..	45 70	45 70	96,338	..
1870-71	..	18 58	18 58	39,323	..
1871-72	..	11 68	11 68	24,885	..
1872-73	..	27 62	27 62	58,327	..
1873-74	..	11 21	21 76	40,095	..
1874-75	..	61 19	126 78	395,246	..
1875-76	..	69 23	248 4	666,409	..
1876-77	..	64 24	152 39	455,254	..
1877-78	..	103 76	94 58	417,217	..
1878-79	..	27 19	56 46	176,006	..
1879-80†	..	26 33	40 73	141,382	..
1880-81	..	68 39	32 71	212,888	74,261
1881-82	..	22 67	40 16	132,379	103,947
1882-83	..	2 2	40 19	88,751	106,763
1883-84	..	22 19	22 50	94,211	125,632
1884-85	..	56 0	24 0	168,000	148,325
1885-86	..	43 26	47 52	191,048	137,993
1886-87	..	58 72	11 39	147,814	139,040
1887-88	..	11 47	17 32	60,874	122,027
1888-89	..	18 31	..	42,814	108,690
1889-90	..	11 57	20 68	68,381	129,634
1890-91	..	28 21	5 68	71,636	133,954
1891-92	27 27	57,408	139,912
1892-93	..	17 26	..	36,382	132,569
1893-94	..	28 38	33 58	130,620	155,827
1894-95	..	16 62	27 24	92,558	170,681
1895-96	..	14 73	3 48	38,876	188,291
1896-97	..	3 64	1 11	10,370	210,588
1897-98	..	27 46	10 2	78,960	243,479
1898-99	..	22 46	11 13	70,848	282,326
1899-1900	19 26	40,582	302,354
1900-1901	..	4 30	103 38	226,485	345,433
1901-1902	..	11 20	12 32	49,665	369,339
1902-1903	..	28 40	27 43	117,679	330,029
1903-1904	..	33 12	4 44	79,170	309,296
1904-1905	..	17 61	27 75	95,970	302,252
1905-1906	..	23 5	8 52	66,596	309,183
1906-1907	50 7	105,184	283,293
1907-1908	..	10 38	4 61	31,999	331,678
1908-1909	..	186 21	23 21	440,003	279,190
1909-1910	..	3 60	31 43	74,104	236,390
1910-1911	..	14 64	29 76	93,975	282,682
1911-1912	..	23 30	23 1	97,414	273,586
1912-1913	..	25 37	26 77	110,092	235,378
1913-1914	3 6	6,458	201,748
1914-1915	..	40 22	51 3	191,756	227,674
1915-1916	..	7 43	7 73	32,445	157,970
1916-1917	86,595
1917-1918	..	22 70	..	48,038	88,540
1918-1919	70,743
1919-1920	12 75	27,169	78,663
1920-1921	..	11 54	0 7	24,701	100,280
1921-1922	12 27	25,909	139,187
1922-1923	..	7 70	..	16,538	163,735
1923-1924	..	24 66	2 43	57,461	227,075
Totals	6,370,693	8,616,322

* Complete information not recorded until 1880-81.

† Nine months only.

RETURN NO. 23.

STATEMENT OF ACCIDENTS FOR THE YEAR ENDED 31ST MARCH, 1924.

	Accidents to Passengers in connection with Train-working.				To Employees while in Execution of their Duty in connection with Train-running and Movement of Rolling-stock.				To other than Employees in Execution of their Duty, and Passengers.				Accidents in Railway Workshops, &c.				Total.								
	Through Causes beyond their own Control.		Through contributory Negligence.		Solely through their own Actions or Negligence.		Through contributory Negligence.		Solely through their own Actions or Negligence.		Employees proceeding to or from Duty within Railway Boundaries.		At Railway Crossings.		Trespassers.		Miscellaneous.		Railway Employees.		Other Persons.		Killed.	Injured.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.					
Whangarei	43	
Kaihu	3
Gisborne	43
North Island Main Lines and Branches ..	19	34	1	1	10	6	3	460	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	897
South Island Main Lines and Branches	2	1	4	253	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	753
Westland	47	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	77
Westport	12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	57
Nelson	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Pictou	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9
Totals ..	19	34	1	1	12	7	7	815	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,840

RETURN NO. 24.
LOCOMOTIVE RETURNS FOR THE YEAR ENDED 31ST MARCH, 1924.

Type.	Number of Engines.		Engine-mileage.				Quantity of Stores.				Cost.				Cost per Engine-mile, in Pence.				Days in Steam.	Type.									
	Details.		Running.		Repairs.		Running.		Repairs.		Running.		Repairs.		Running.		Total.												
	Train.	Shunting and Empty.	Work train.	Total.	Coal.	Oil.	Tallow.	Waste.	lb.	lb.	£	£	£	£	Cwt.	Qt.	lb.	lb.			£	£	£	£	Wages and Material.	Stores.	Fuel.	Wages.	Total.
F*	2	194	593	18,163	18,950	3,518	323	26	116	85	16	198	420	719	1-08	0-20	2-51	5-32	9-11	280	F*								
FA*	3	16,315	4,859	14,984	36,158	12,874	898	74	309	968	48	726	1,061	2,803	6-43	0-32	4-82	7-04	18-61	478	FA*								
WB	7	82,010	31,042	3,837	116,889	74,810	4,779	350	1,712	5,718	261	4,217	4,659	14,855	11-74	0-54	8-66	9-56	30-50	1,278	WB								
WD	2	19,142	5,355	90	24,587	15,288	905	64	329	299	47	862	929	2,137	2-92	0-46	8-41	9-07	20-86	259	WD								
WF*	2	10,079	2,324	8,432	20,835	7,589	462	38	151	308	25	428	370	1,131	3-55	0-29	4-93	4-26	13-03	204	WF*								
Totals	16	127,740	44,173	45,506	217,419	114,079	7,367	552	2,617	7,378	397	6,431	7,439	21,645	8-14	0-44	7-10	8-21	23-89	2,499									
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	2,369	..	..	..	..	2-62	..	..						
Totals	..	127,740	44,173	45,506	217,419	114,079	7,367	552	2,617	7,378	397	6,431	7,439	21,645	8-14	0-44	7-10	8-21	23-89	2,499									
				6,826	6,826†	..	..	..	..	..	..	..	..	24,014	..	..	..	..	26-51	..	..						
Totals	..	127,740	44,173	38,680	210,593	..	..	..	..	..	..	..	..	23,100	..	..	..	..	..	..	..	

WHANGAREI SECTION.

KAIHU SECTION.

Type.	Number of Engines.		Engine-mileage.				Quantity of Stores.				Cost.				Cost per Engine-mile, in Pence.				Days in Steam.	Type.									
	Details.		Running.		Repairs.		Running.		Repairs.		Running.		Repairs.		Running.		Total.												
	Train.	Shunting and Empty.	Work train.	Total.	Coal.	Oil.	Tallow.	Waste.	lb.	lb.	£	£	£	£	Cwt.	Qt.	lb.	lb.			£	£	£	£	Wages and Material.	Stores.	Fuel.	Wages.	Total.
F	2	18,132	4,814	224	23,170	6,502	537	41	189	1,047	26	1,094	846	3,013	10-85	0-27	11-33	8-76	31-21	317	F								
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	174	..	..	..	..	1-80	..	..						
Totals	..	..	..	..	..	..	..	..	..	..	..	..	..	3,187	..	..	..	..	33-01	..	..						
				224	23,170	..	..	..	..	..	..	..	..	174†	..	..	..	..	..	..	..	
Totals	..	..	..	..	22,946	..	..	..	..	..	..	..	..	3,170	..	..	..	..	..	..	..	

GISBORNE SECTION.

Type.	Number of Engines.		Engine-mileage.				Quantity of Stores.				Cost.				Cost per Engine-mile, in Pence.				Days in Steam.	Type.									
	Details.		Running.		Repairs.		Running.		Repairs.		Running.		Repairs.		Running.		Total.												
	Train.	Shunting and Empty.	Work train.	Total.	Coal.	Oil.	Tallow.	Waste.	lb.	lb.	£	£	£	£	Cwt.	Qt.	lb.	lb.			£	£	£	£	Wages and Material.	Stores.	Fuel.	Wages.	Total.
FA	1	63,570	15,363	241	79,174	36,927	3,131	131	992	3,326	29	5,709	2,730	11,939	10-08	0-53	17-31	8-27	36-19	688	FA								
WA	6	63,570	15,363	241	79,174	36,927	3,131	131	992	3,355	174	5,709	2,730	11,968	10-17	0-53	17-31	8-27	36-28	688	WA								
Totals	7	63,570	15,363	241	79,174	36,927	3,131	131	992	3,355	174	5,709	2,730	11,968	10-17	0-53	17-31	8-27	36-28	688									
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	934	..	..	..	..	2-83	..	..						
Totals	..	63,570	15,363	241	79,174	36,927	3,131	131	992	3,355	174	5,709	2,730	12,902	..	..	..	..	39-11	..	..						
				241	79,174	..	..	..	..	..	..	..	..	34†	..	..	..	..	..	..	..	
Totals	..	63,570	15,363	..	78,933	..	..	..	..	..	..	..	..	12,868	..	..	..	..	..	..	..	

* Gang, fuel, and stores for one F for four months, one FA for seven months, and one WF for five months, supplied by Public Works Department. † Mileage run by engines performing work-train services for Maintenance Branch, "working-expenses" classifications. ‡ Credits for same from Maintenance Branch.

RETURN NO. 24—continued.
LOCOMOTIVE RETURNS FOR THE YEAR ENDED 31ST MARCH, 1924—continued.

Type.	Engine-mileage.				Quantity of Stores.				Cost.				Cost per Engine-mile, in Pence.				Days in Steam.	Type.				
	Details.		Total.		Running.		Waste.		Repairs.		Running.		Total.		Repairs.				Running.		Total.	
	Train.	Shunting and Empty.	Work train.	Total.	Coal.	Oil.	Tallow.	Waste.	Wages and Material.	Stores.	Fuel.	Wages.	Total.	Wages and Material.	Stores.	Fuel.			Wages.	Total.	Wages and Material.	Stores.	Fuel.	Wages.	Total.
A	937,743	130,147	26,838	1,094,728	551,976	47,985	1,934	16,083	49,012	2,705	66,901	37,642	156,260	10.75	0.59	14.67	8.25	34.26	10.020	A.		
AA	232,204	20,187	565	252,956	149,316	10,022	466	3,124	8,289	563	18,473	8,073	35,398	7.86	0.53	17.53	7.66	33.58	2,034	AA.		
AB	1,353,572	97,864	392	1,451,828	663,216	51,848	1,993	17,149	18,628	2,881	80,718	39,635	141,862	3.08	0.48	13.34	6.55	23.45	11,237	AB.		
BB	619,777	97,771	9,488	727,036	430,930	27,942	1,069	7,934	28,991	1,512	51,910	25,316	107,729	9.57	0.50	17.13	8.36	35.56	7,026	BB.		
BC	10,026	1,254	2,246	13,526	9,480	723	37	327	537	41	1,153	547	2,278	9.53	0.73	20.46	9.70	40.42	195	BC.		
D*	..	5,312	..	5,312	..	..	..	..	74	..	..	11	85	..	..	..	..	3.84	280	D*.
F†	7,076	181,323	16,562	204,961	59,654	5,630	293	2,526	9,130	330	7,209	10,567	27,236	10.69	0.39	8.44	12.37	31.89	3,953	F†.		
FA	152	63,000	24	63,176	22,886	1,887	60	638	1,846	114	2,782	3,438	8,180	7.01	0.43	10.57	13.06	31.07	808	FA.		
H	26,217	17,505	509	44,231	47,645	3,076	270	1,790	6,364	199	5,819	4,097	16,479	34.53	1.08	31.58	22.23	89.42	1,152	H.		
J	3,261	199,173	145	202,579	87,469	6,991	314	2,395	12,174	414	10,382	11,111	34,081	14.42	0.49	12.30	13.16	40.37	2,373	J.		
L†	13,353	11,587	20,199	45,139	7,990	725	73	472	1,177	47	952	1,368	3,544	6.26	0.25	5.06	7.27	18.84	731	L†.		
M	6,193	9,890	15,477	25,637	16,394	725	43	292	1,265	42	1,031	1,172	3,510	11.84	0.39	9.65	10.97	32.85	360	M.		
N	3,750	1,126	..	4,876	1,780	177	14	74	74	11	211	144	440	33.15	0.52	16.41	13.17	63.25	400	N.		
N (compound)	16,875	2,800	146	19,821	10,568	751	56	381	1,375	47	1,375	715	2,328	2.31	0.57	16.65	8.66	28.19	208	NA.		
NA	22,164	3,306	..	25,470	10,448	950	61	436	1,847	57	1,321	838	3,563	12.69	0.54	12.45	7.90	33.58	236	NA.		
NC	14,892	2,329	..	17,421	8,711	739	43	261	204	42	1,009	575	1,830	2.81	0.58	13.90	7.92	25.21	230	NC.		
OA	37,722	4,227	..	41,949	23,123	1,561	72	443	1,793	72	2,634	1,409	5,908	10.26	0.41	15.07	8.06	33.80	424	OA.		
OB	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	OB.
OC	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	OC.
P	8,530	21,958	6,268	36,756	4,351	398	20	121	137	22	563	534	1,256	3.85	0.62	15.84	15.02	35.33	130	P.		
Q	127,533	17,107	21,323	165,963	91,843	5,863	220	1,743	3,954	324	11,207	5,926	21,311	6.09	0.50	17.27	8.98	32.84	1,496	Q.		
R†	1,370	86	..	1,456	8,456	647	35	283	864	36	944	1,079	2,923	5.21	0.22	5.69	6.51	17.63	698	R†.		
S†	..	..	..	..	2,320	185	10	92	59	11	291	299	660	1.56	0.29	7.69	7.90	17.44	169	S†.
T	..	..	..	..	2,869	192	5	58	1,034	262	315	262	1,622	49.77	0.53	15.16	12.61	78.07	64	T.
Ud	16,498	2,866	506	19,870	11,202	774	48	364	123	49	1,419	670	2,261	1.49	0.59	17.14	8.09	27.31	215	Ud.		
V	1,054	13,699	..	14,753	7,813	527	20	163	87	30	978	811	1,906	1.41	0.49	15.91	13.19	31.00	200	V.		
WA (converted)	25,152	14,181	1,594	40,927	16,101	1,174	60	424	1,277	66	1,919	1,493	6,755	7.49	0.39	11.25	8.75	27.88	408	WA.		
WA	15,048	17,410	13,779	46,237	17,537	1,490	87	626	2,071	86	2,046	1,840	6,043	10.75	0.45	10.62	9.55	31.37	525	WA (converted).		
WAB	34,578	1,955	253	36,786	21,983	1,766	77	543	1,832	90	2,645	1,239	5,806	11.95	0.59	17.26	8.08	37.88	415	WAB.		
WB	..	..	..	..	495	38	..	4	..	2	57	62	123	..	..	..	..	..	..	WB.
WD	94,205	75,242	12,983	182,430	97,212	6,175	325	2,382	8,085	355	11,673	7,864	27,977	10.64	0.47	15.36	10.34	36.81	2,277	WD.		
WE	3,178	10,137	2	13,317	7,570	526	57	364	96	36	930	734	1,796	1.73	0.65	16.76	13.23	32.37	282	WE.		
WF	139,023	94,522	20,350	253,895	108,491	8,667	433	3,475	15,045	495	12,816	10,706	39,052	14.22	0.47	12.11	10.12	36.92	3,307	WF.		
Wct	183,690	135,495	17,022	336,217	184,317	13,445	572	4,951	13,310	767	22,449	14,580	51,103	9.30	0.55	16.02	10.41	36.48	4,053	Wct.		

NORTH ISLAND MAIN LINE AND BRANCHES.

RETURN NNO. 24—continued.
LOCOMOTIVE RETURNS FOR THE YEAR ENDED 31ST MARCH, 1924—continued.

Type.	Number of Engines.		Engine-mileage.				Quantity of Stores.				Cost.						Cost per Engine-mile, in Pence.			Days in Steam.	Type.		
			Details.		Running.		Coal.	Oil.	Tallow.	Waste.	Repairs.		Running.		Total.	Repairs.	Running.		Total.				
			Train.	Shunting and Empty.	Work train.	Total.					Wages and Material.	Stores.	Fuel.	Wages.			Wages and Material.	Stores.				Fuel.	Wages.
WH	2	4,221	33,780	24	38,025	12,929	1,423	120	662	341	90	1,394	2,076	3,901	2-15	0-57	8-80	13-10	24-62	457	WH.		
WJ	1	16,562	4,990	..	21,552	16,880	811	41	292	808	49	2,072	1,114	4,043	9-00	0-55	23-07	12-40	45-02	242	WJ.		
WS	7	95,852	14,008	..	109,860	60,150	4,120	94	1,132	998	232	6,949	3,888	12,067	2-18	0-51	13-18	8-49	26-36	997	WS.		
WW	48	851,226	224,798	19,542	1,095,566	571,868	41,885	1,670	12,894	34,114	2,307	69,166	42,074	147,661	7-47	0-51	13-15	9-22	32-35	12,523	WW.		
X	18	343,882	18,650	402	362,934	279,430	28,962	569	5,951	21,223	1,444	34,090	14,491	71,248	14-03	0-95	22-55	9-58	47-11	3,479	X.		
Small tank*	1	..	308	..	308	..	..	..	..	..	..	..	..	..	..	..	..	..	..	69	Small tank.*
Rail motor No. 1	1	Not working	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Rail motor No. 1.
Rail motor No. 2	1	Not working	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Rail motor No. 2.
Totals	365	5,268,111	1,596,740	196,201	7,061,052	3,634,587	281,674	11,317	91,240	250,488	15,641	439,749	259,861	965,740	8-51	0-53	14-95	8-83	32-82	73,743			
General charges	196,201	7,061,052	131,633	4-47		
Totals	..	5,268,111	1,596,740	196,201	6,955,264	1,097,373	37-29		
Totals	105,788	105,788†	14,420‡		

NORTH ISLAND MAIN LINE AND BRANCHES—continued.

NOTE.—Three engines were written off during the year.

* Gang, fuel, and stores supplied by Stores Branch, also for one F for six months.

† Gang, fuel, and stores for one F for three months, one L for nine months, one R for seven months, one S for two months, and one Wg for two months, supplied by Public Works Department.

‡ Mileage run by engines performing work-train services for Maintenance Branch, "working-expenses" classifications.

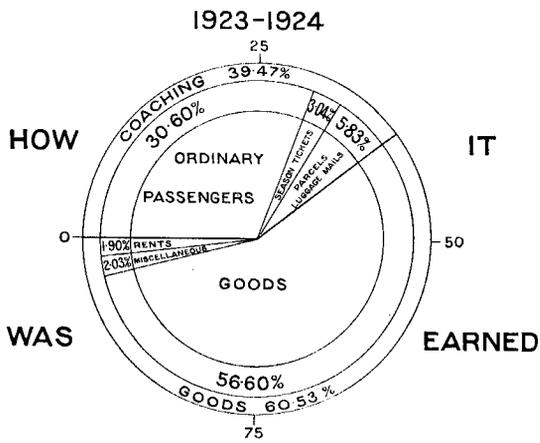
RETURN NO. 24—continued.
LOCOMOTIVE RETURNS FOR THE YEAR ENDED 31ST MARCH, 1924—continued.

Type.	Number of Engines.		Engine-mileage.				Quantity of Stores.				Cost.				Cost per Engine-mile, in Pence.				Days in Steam.	Type.		
			Details.		Running.		Running.		Running.		Repairs.		Running.		Repairs.		Running.					
			Train.	Shunting and Empty.	Work train.	Total.	Coal.	Oil.	Tallow.	Waste.	Wages and Material.	Stores.	Fuel.	Wages.	Total.	Wages and Material.	Stores.	Fuel.			Wages.	Total.
A	7	118,068	8,163	4	126,235	79,453	5,992	243	2,015	7,822	337	9,431	4,710	22,300	14-87	0-64	17-93†	8-95	42-39	A.		
AB 409	1	19,551	1,329	..	20,880	11,230	860	20	286	922	46	1,337	676	3,001	10-60	0-53	15-60	7-77	34-50	AB		
AB	34	921,164	85,272	115	1,006,551	489,516	35,439	1,598	12,409	28,987	1,984	58,650	30,136	119,757	6-91	0-47	13-98	7-19	28-55	AB.		
B	8	167,689	34,990	101	202,780	146,759	8,482	294	2,315	6,191	474	16,840	7,975	31,480	7-32	0-56	19-93	9-44	37-25	B.		
BA	10	100,589	45,001	130	145,720	105,211	7,355	314	2,489	11,702	418	12,314	7,062	31,496	19-27	0-69	20-28	11-63	51-87	BA.		
D	1	..	8,430	..	8,430	2,224	233	25	172	45	16	106	246	413	1-28	0-46	3-02	7-00	11-76	D.		
F*	37	43,149	462,232	21,559	526,940	179,735	18,601	1,073	7,211	18,843	1,019	19,060	28,541	67,463	8-58	0-46	8-68	13-00	30-72	F*.		
FA	2	18,069	15,109	580	33,758	12,620	1,182	64	600	1,717	74	1,552	1,649	4,992	12-21	0-53	11-03	11-72	35-49	FA.		
J	14	118,469	90,735	32,913	242,107	101,495	7,487	516	3,601	5,302	454	12,330	10,812	28,898	5-26	0-45	12-22	10-72	28-65	J.		
K	5	31,841	3,880	..	35,721	10,415	816	96	505	394	53	1,281	1,103	2,831	2-65	0-36	8-60	7-41	19-02	K.		
L	1	8,860	3,198	372	12,430	4,994	350	29	249	305	24	606	696	1,631	5-89	0-48	11-70	13-44	31-49	L.		
N	1	5,452	1,441	69	6,962	3,680	252	15	127	336	14	415	286	1,051	11-58	0-46	14-31	9-86	36-23	N.		
P	6	88,267	10,016	588	107,871	51,212	2,827	247	1,621	2,364	179	6,266	4,412	13,221	5-26	0-40	13-94	9-82	29-42	P.		
Q	7	158,425	11,967	5	170,397	111,692	6,564	220	1,743	12,453	359	12,802	5,574	31,188	17-54	0-51	18-03	7-85	43-93	Q.		
R	7	16,938	62,821	3,037	82,796	33,026	2,550	257	1,593	5,492	163	4,043	4,626	14,324	15-92	0-47	11-72	13-41	41-52	R.		
T	4	15,323	3,485	15	18,773	12,628	859	80	533	676	56	1,398	1,058	3,188	8-64	0-72	17-87	13-53	40-76	T.		
U	9	158,449	11,645	358	170,452	75,803	5,538	332	2,429	15,972	326	9,283	5,422	31,003	22-49	0-46	13-07	7-63	43-65	U.		
UA	6	136,076	9,123	..	145,199	66,586	4,540	240	1,860	6,896	267	8,207	4,655	20,025	11-40	0-44	13-57	7-69	33-10	UA.		
UB	22	455,178	43,891	3,753	502,822	311,527	17,441	746	5,899	21,352	974	37,023	17,094	76,443	10-20	0-46	17-67	8-16	36-49	UB.		
UC	5	86,609	15,662	1,077	103,348	64,197	4,349	217	1,615	5,708	257	7,698	4,113	17,776	13-25	0-59	17-88	9-56	41-28	UC.		
V	10	162,501	20,779	79	183,359	83,532	5,627	370	2,562	3,324	339	10,295	6,365	20,323	4-35	0-44	13-48	8-33	26-60	V.		
WA (converted)	1	4,272	8,428	218	12,918	4,749	533	20	273	230	32	595	712	1,569	4-28	0-59	11-05	13-23	29-15	WA (converted).		
WD	3	8,995	44,675	5,963	59,633	36,664	2,645	88	855	2,239	159	4,247	3,114	9,759	9-02	0-64	17-09	12-53	39-28	WD.		
WF	14	185,908	69,576	54,416	309,900	151,516	11,147	540	4,293	13,476	656	18,638	11,942	44,712	10-44	0-51	14-43	9-25	34-63	WF.		
WS	1	..	161	..	161	280	30	2	9	2	2	30	20	54	2-98	2-98	44-72	29-81	80-49	WS.		
WW	2	39,135	11,266	395	50,796	28,094	2,187	55	511	2,730	119	3,203	2,018	8,070	12-90	0-56	15-14	9-53	38-13	WW.		
Totals	218	3,068,977	1,092,215	125,747	4,286,939	2,178,838	153,886	7,671	57,775	175,480	8,801	257,670	165,017	606,968	9-82	0-49	14-43	9-24	33-98	46,115		
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	75,251	..	..	..	..	4-21	..
	..	..	..	125,747	4,286,939	..	..	..	..	..	..	..	..	682,219	..	..	..	..	38-19	..
	..	..	..	77,478	77,478†	..	..	..	..	..	..	..	..	11,959‡	..	..	..	..	..	..
Totals	..	3,068,977	1,092,215	48,269	4,209,461	..	..	..	..	..	..	..	..	670,260	..	..	..	..	..	..

SOUTH ISLAND MAIN LINE AND BRANCHES.

NOTE.—One N transferred from Westland Section. Gang, fuel, and stores for one F for three months supplied by outside firm.
† Mileage run by engines performing work-train services for Maintenance Branch. "working-expenses" classifications.
‡ Credits for same from Maintenance Branch.

REVENUE.



EXPENDITURE.

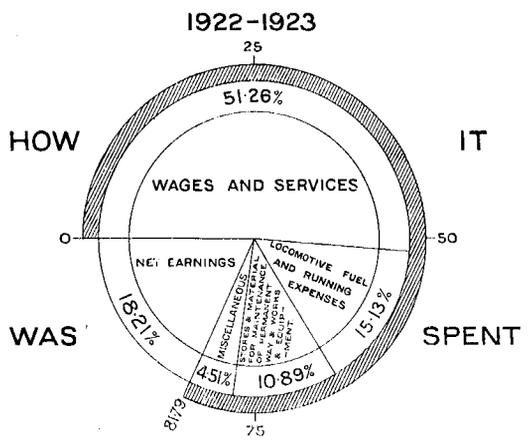
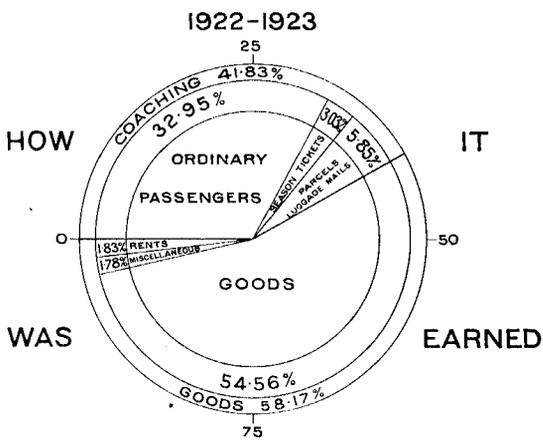
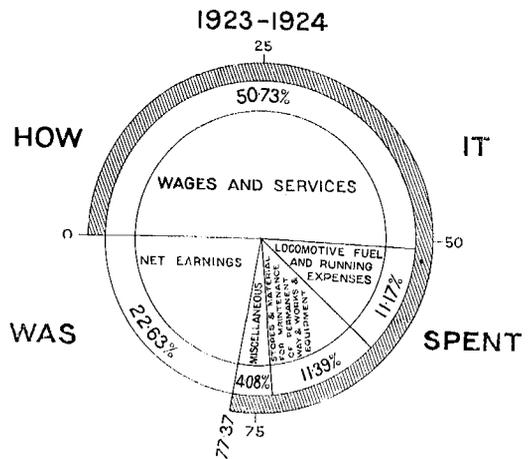
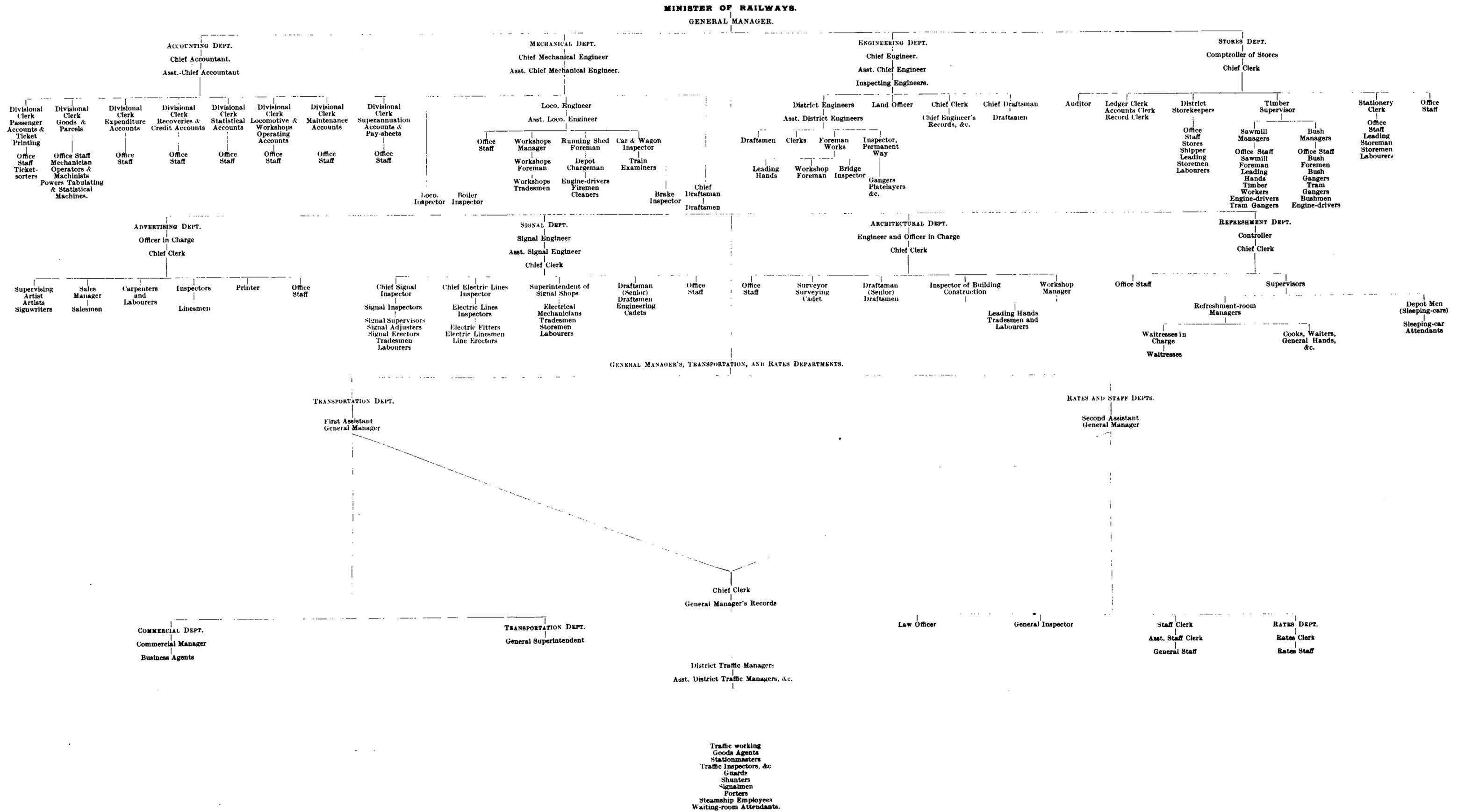
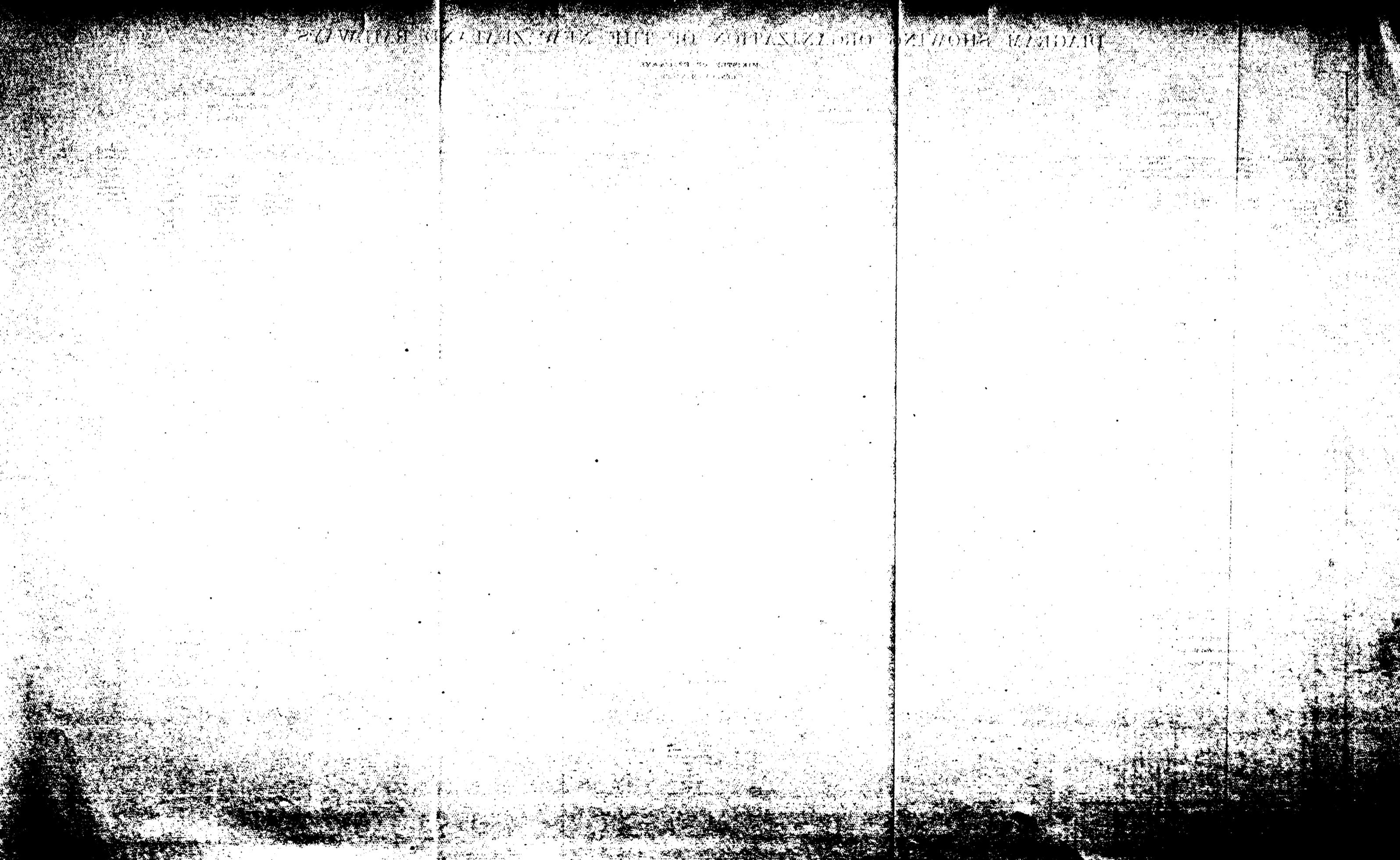


DIAGRAM SHOWING ORGANIZATION OF THE NEW ZEALAND RAILWAYS.



PROCEEDINGS OF THE NATIONAL ANTHROPOLOGICAL ARCHIVES

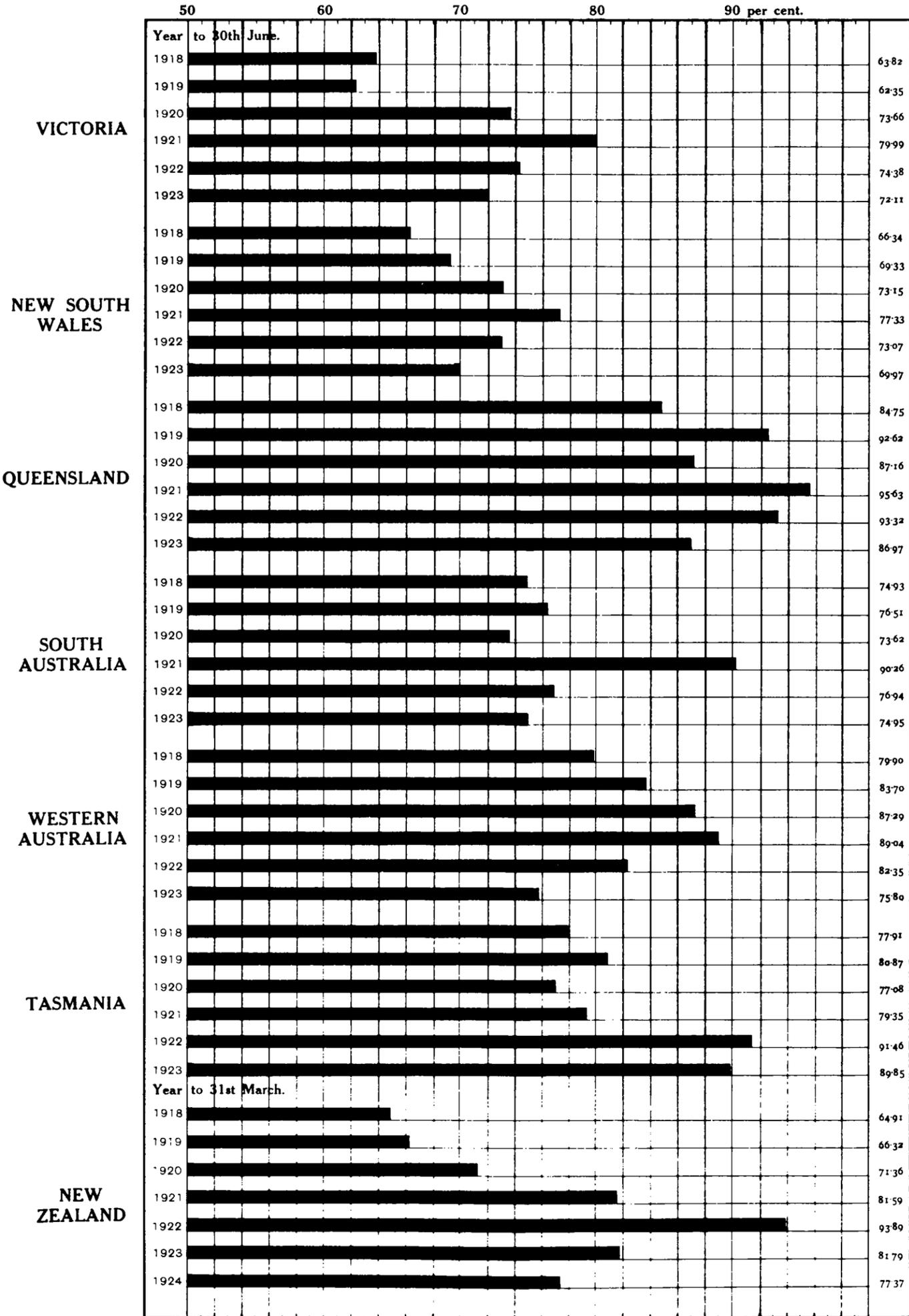
INSTITUTION OF THE NATIONAL ANTHROPOLOGICAL ARCHIVES



GOVERNMENT RAILWAYS OF AUSTRALASIA.

COMPARATIVE STATEMENT.

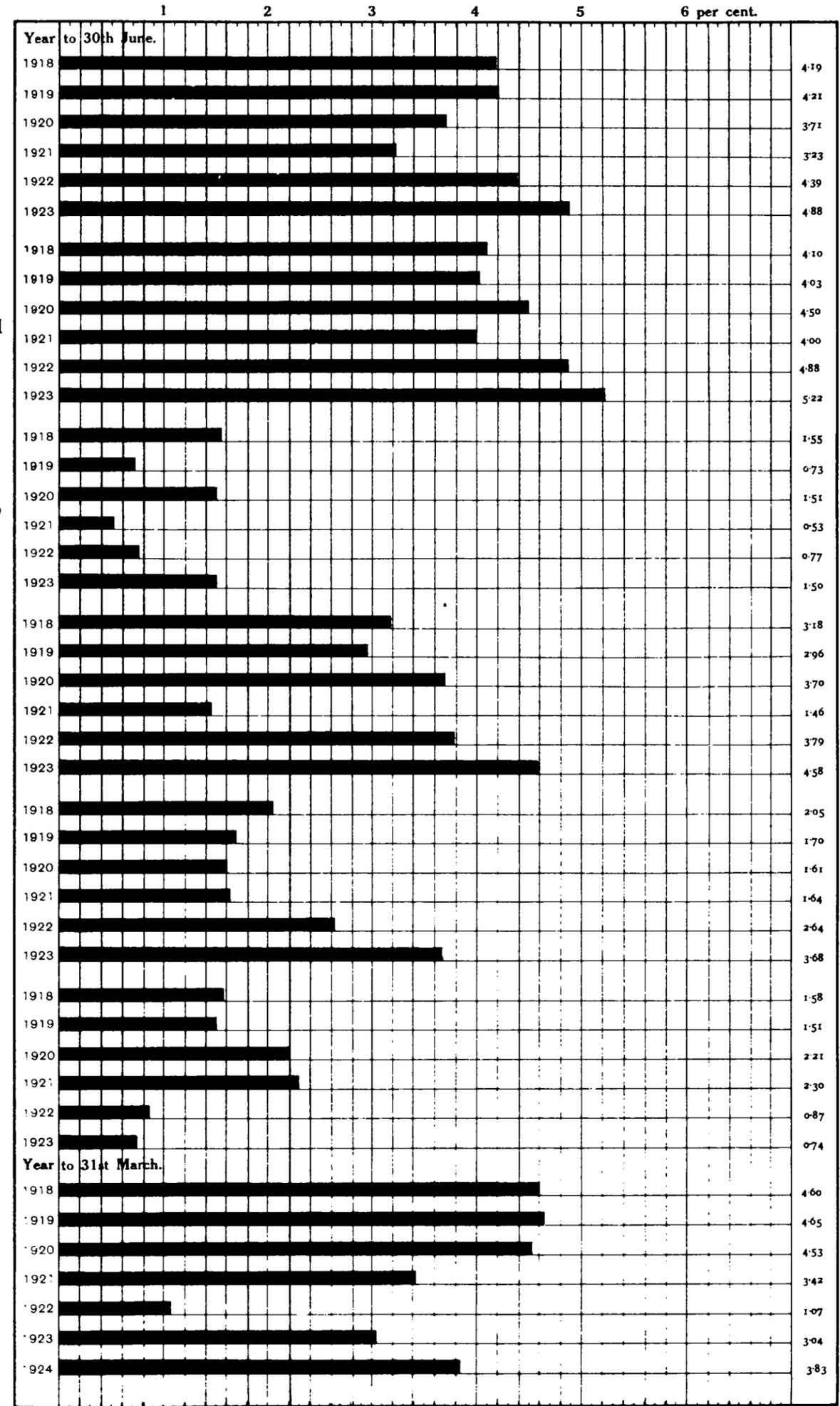
Percentage of Working Expenses to Earnings from 1918 to 1924.



GOVERNMENT RAILWAYS OF AUSTRALASIA.

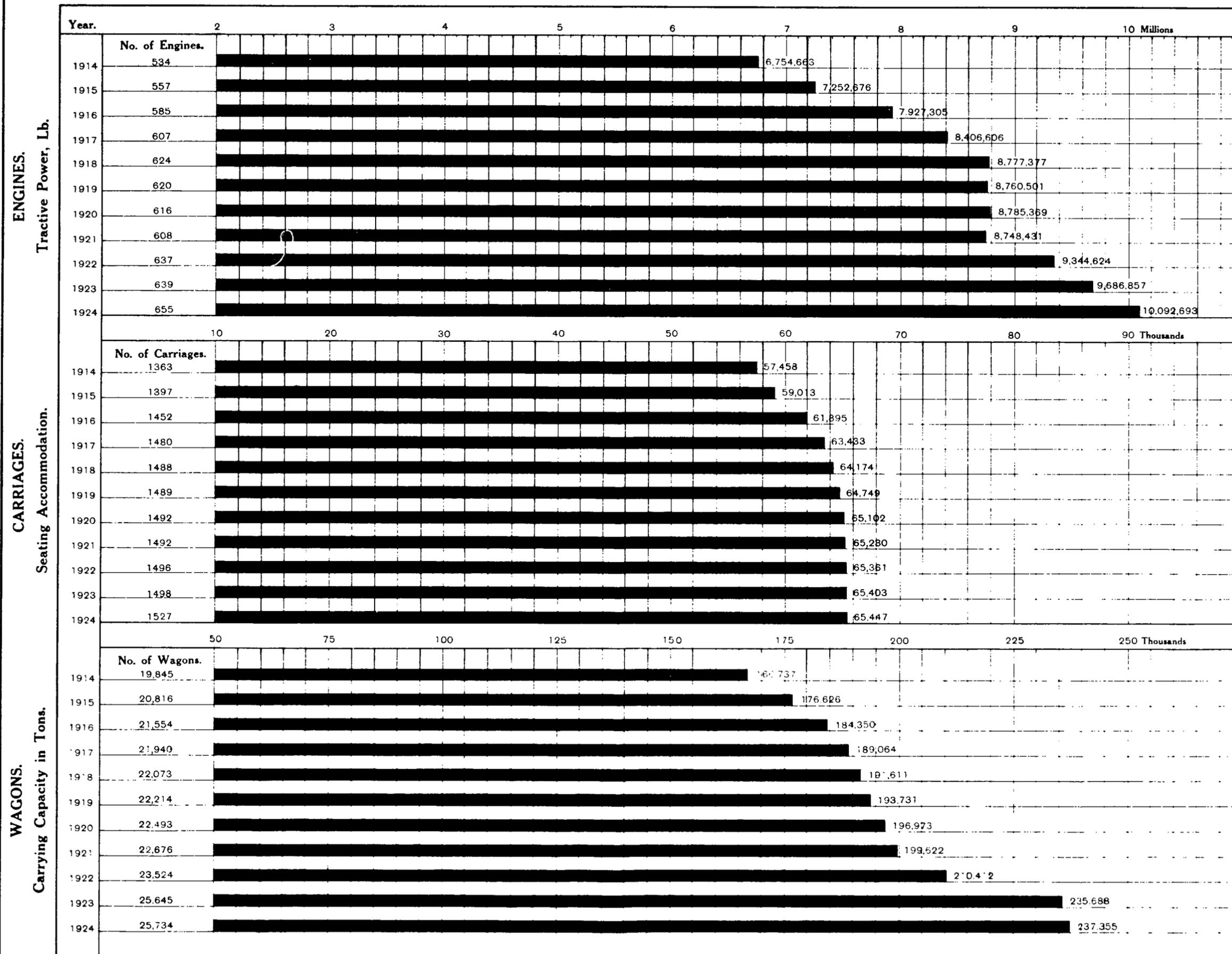
COMPARATIVE STATEMENT.

Percentage of Net Earnings to Capital from 1918 to 1924.



NEW ZEALAND GOVERNMENT RAILWAYS.

Number of Engines, and Tractive Power. Number of Carriages and Seating Accommodation.
Number of Wagons and Carrying Capacity, in use from 1914 to 1924.



Percentage of Increase,
1914-1924

Engines
22.66 per cent.

Tractive Power
49.42 per cent.

Percentage of Increase,
1914-1924

Carriages
12.03 per cent.

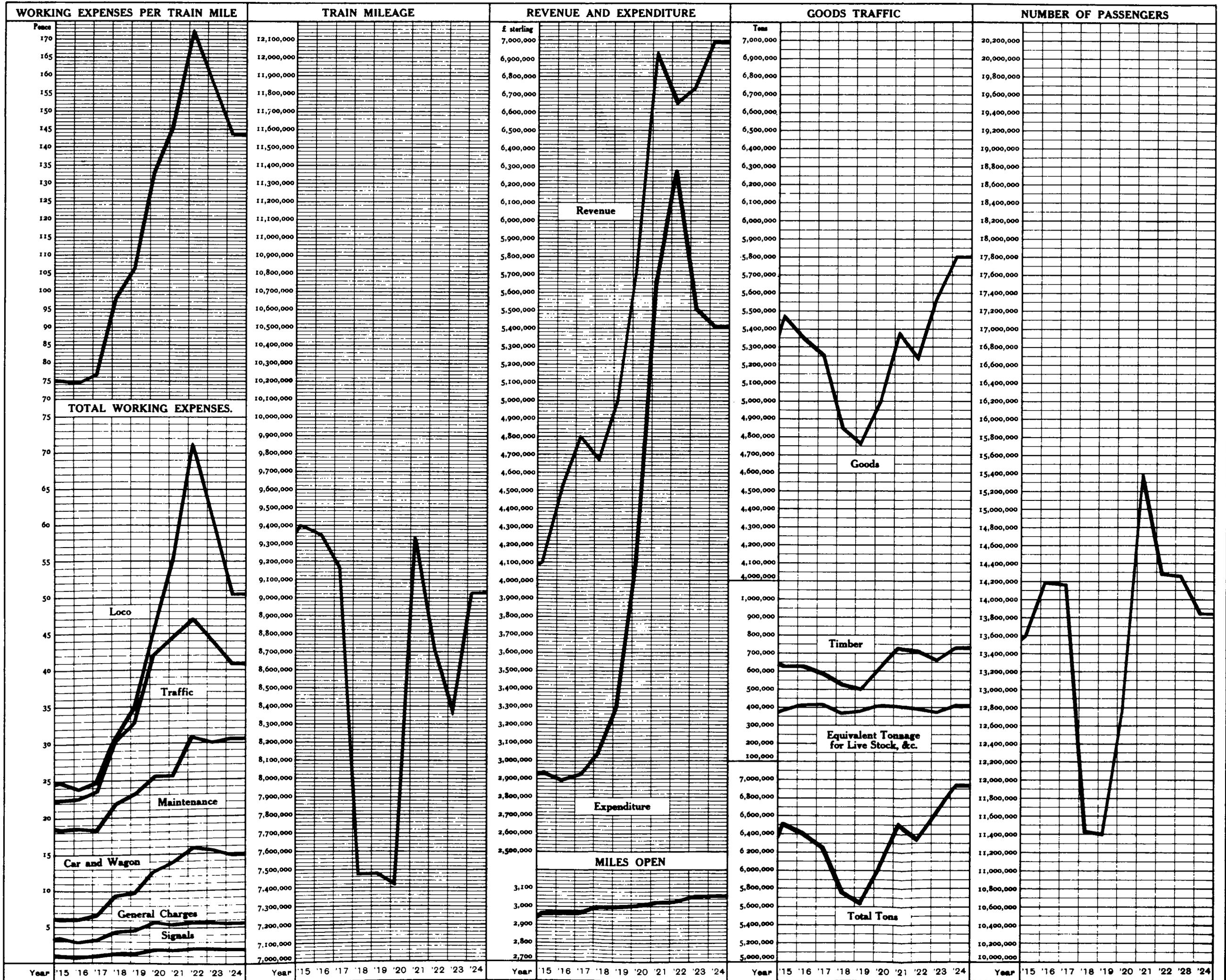
Seating Accommodation
13.90 per cent.

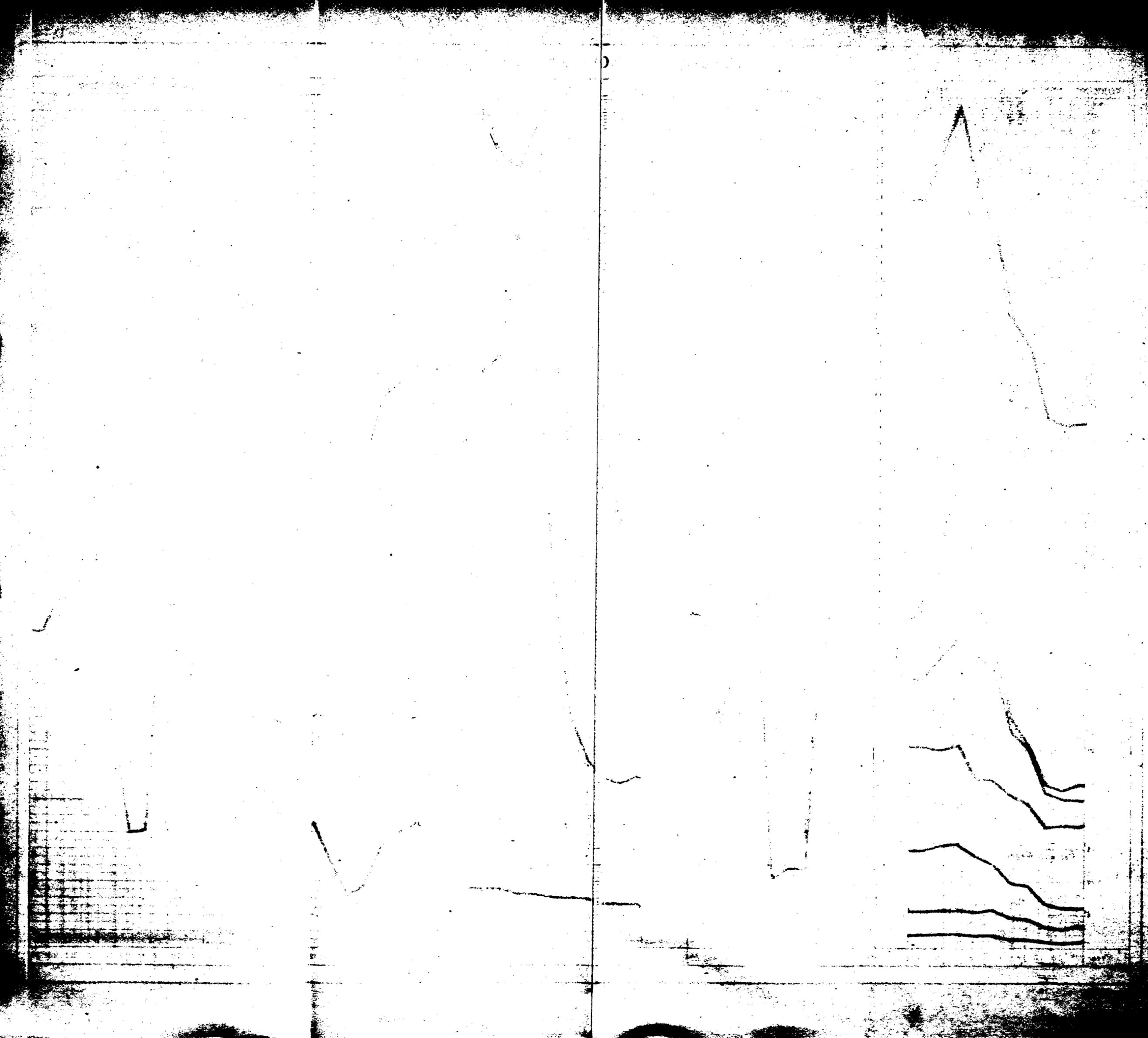
Percentage of Increase,
1914-1924

Wagons
29.67 per cent.

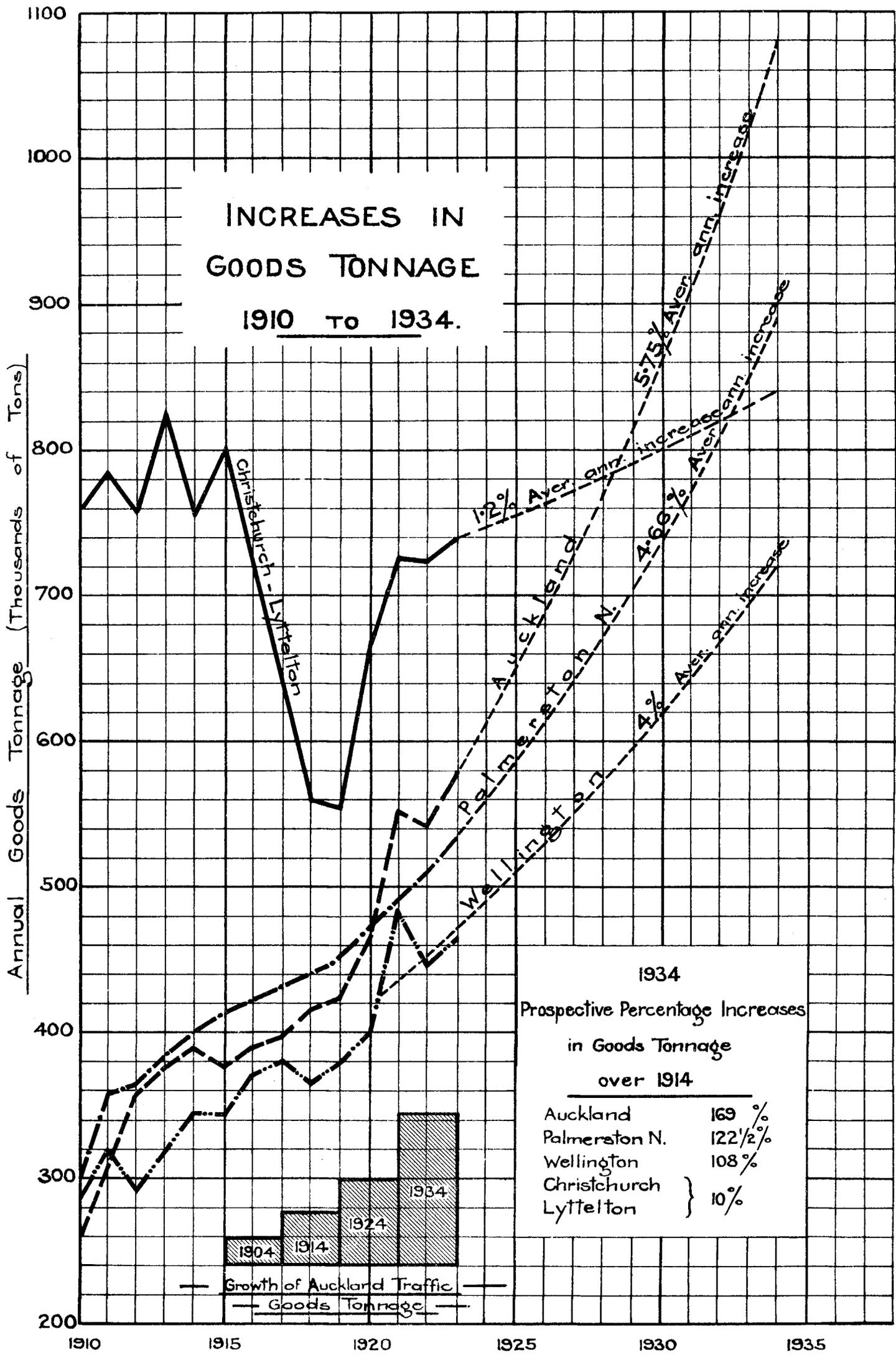
Carrying Capacity
42.35 per cent.

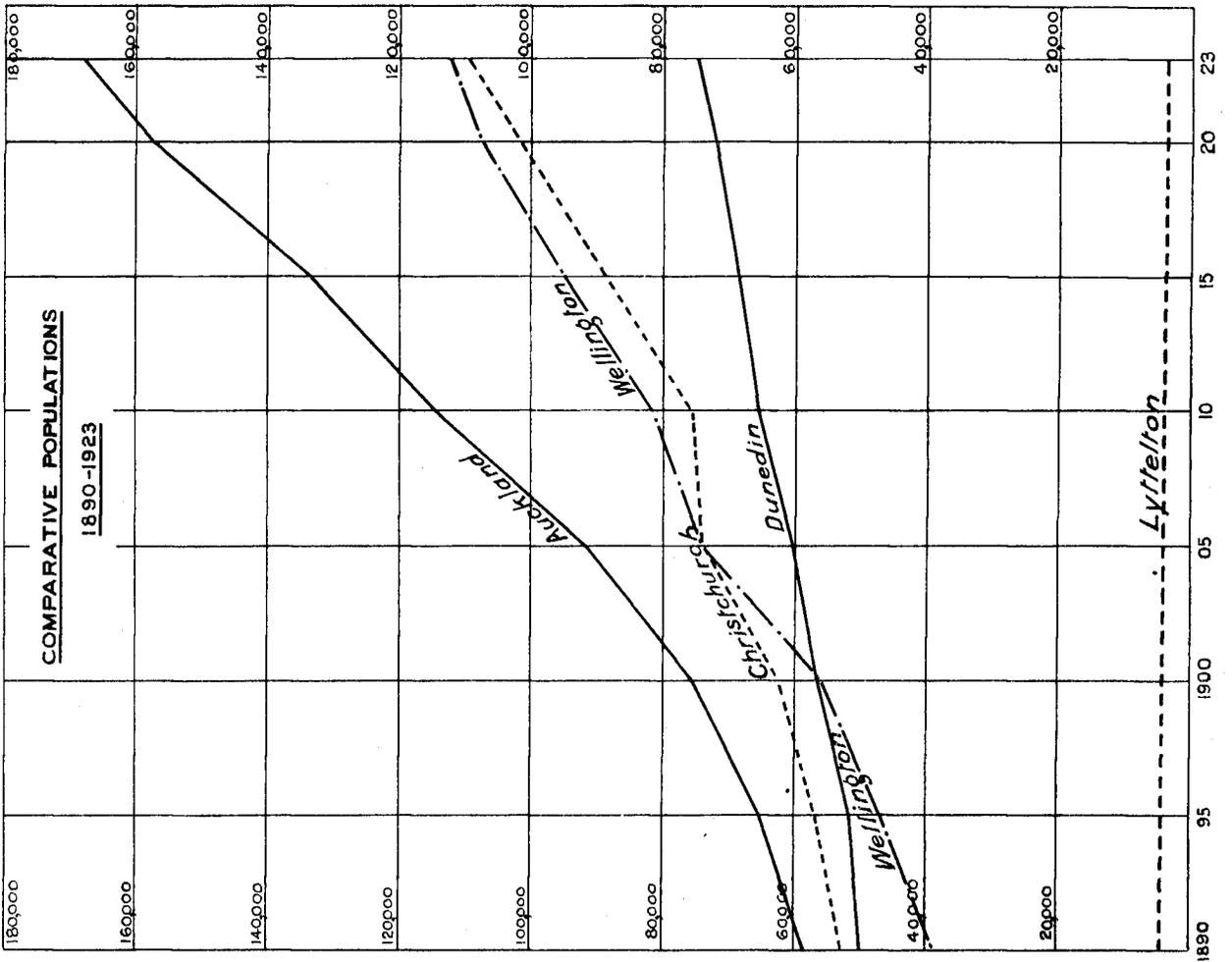
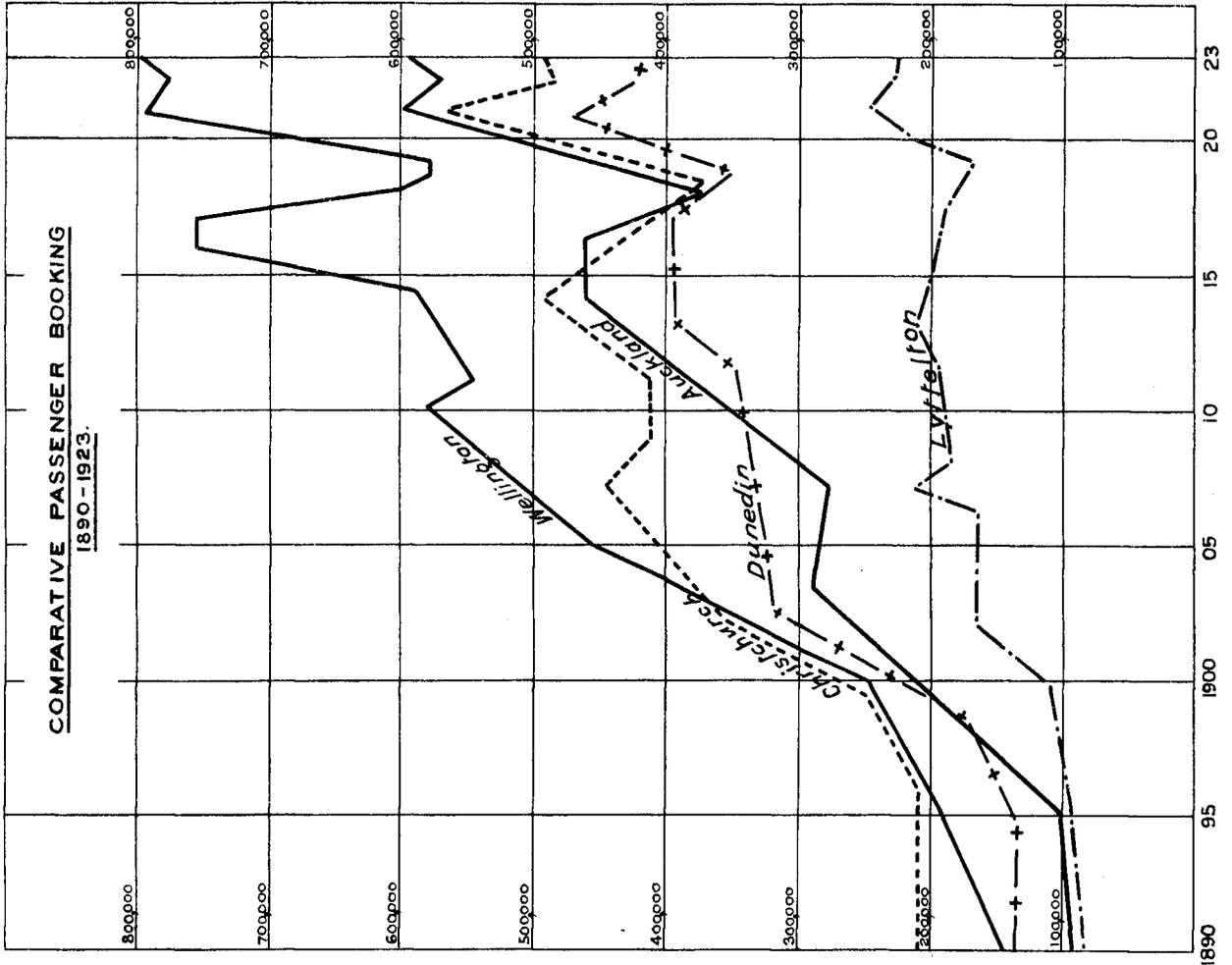
NEW ZEALAND GOVERNMENT RAILWAYS.

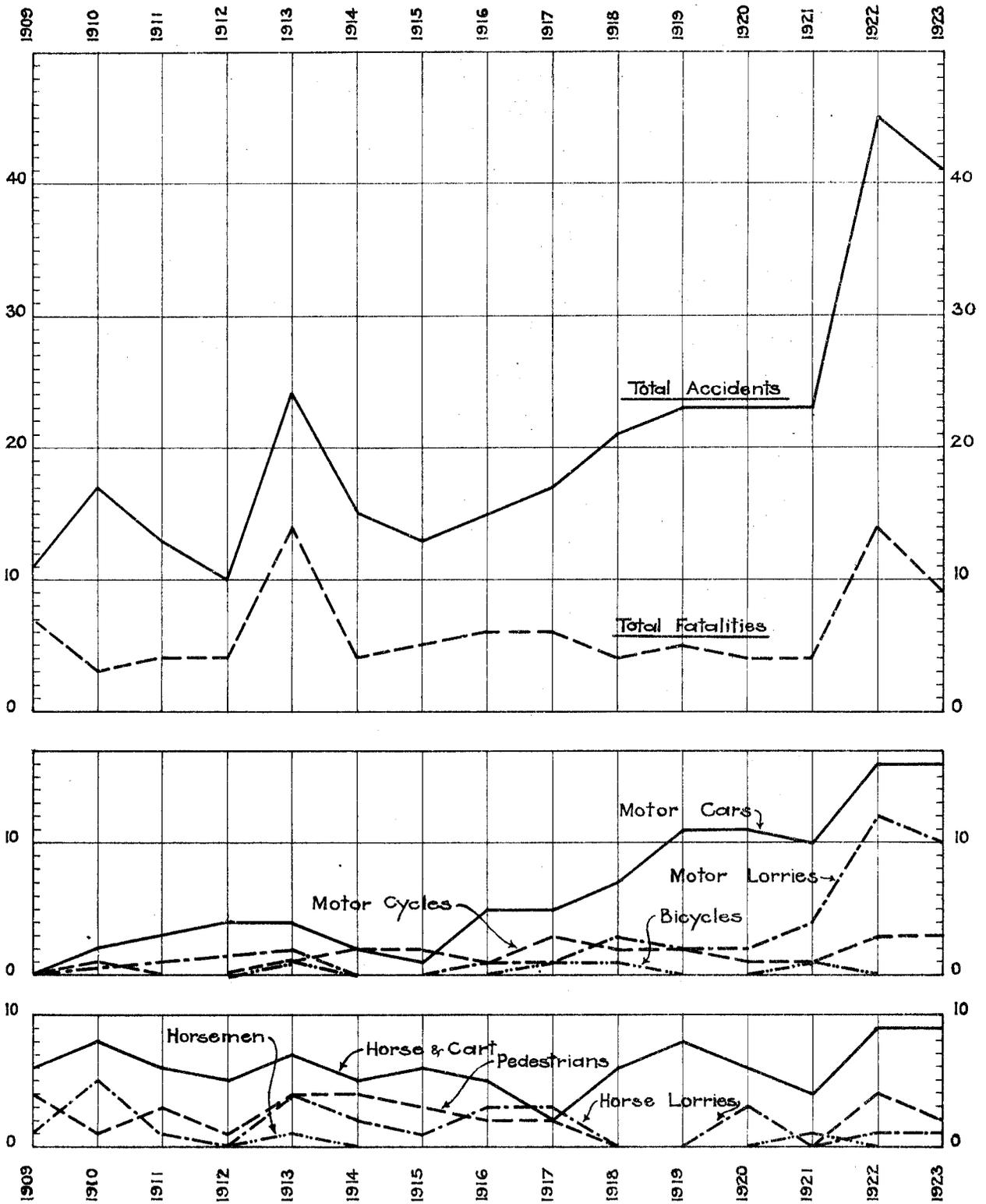




INCREASES IN GOODS TONNAGE 1910 TO 1934.

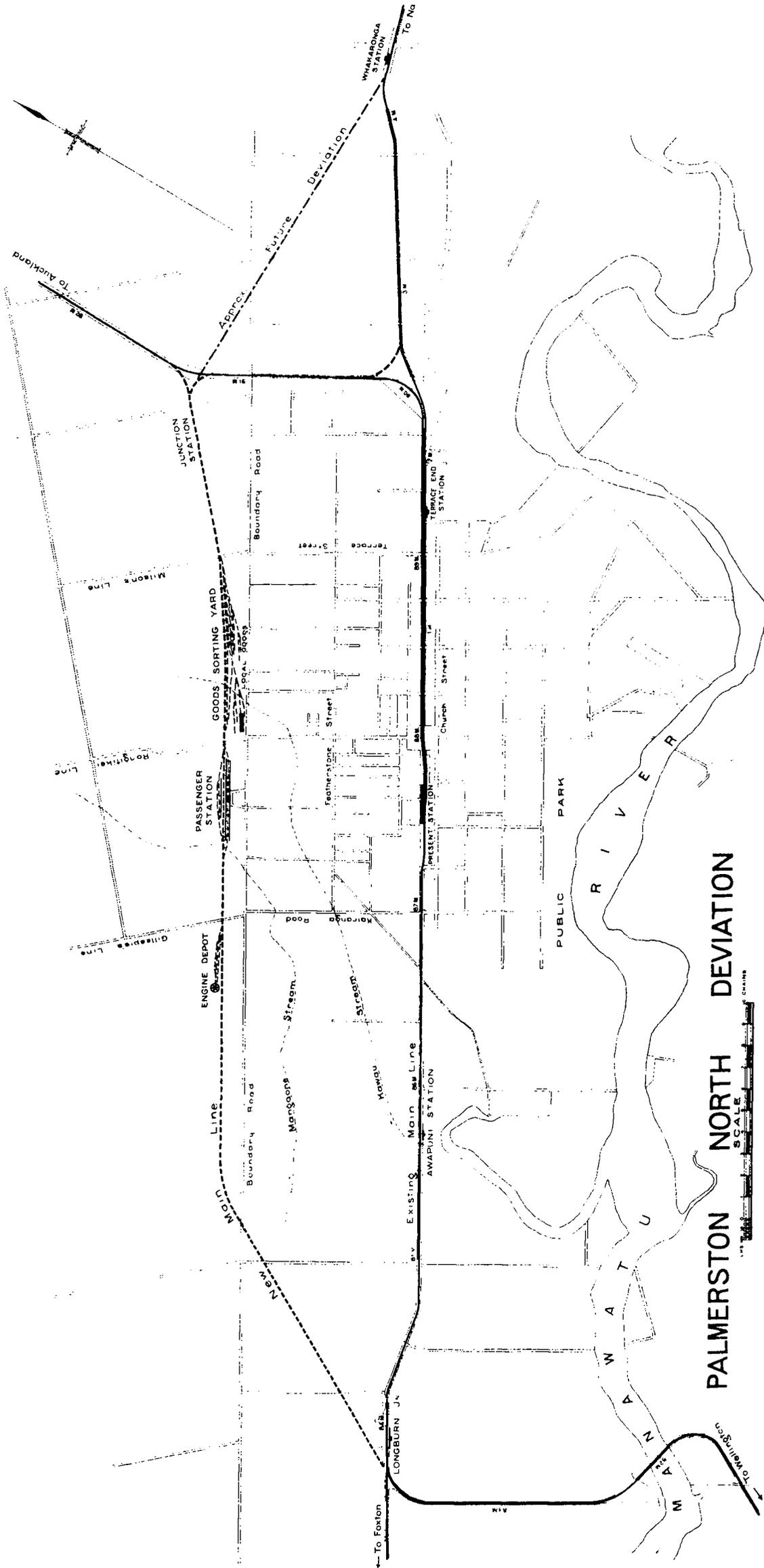






NEW ZEALAND RAILWAYS.

Accidents at level crossings through road traffic colliding with railway trains during period 1909-1923.



PALMERSTON NORTH DEVIATION

SCALE 1" = 100' CHAINS

To Auckland

To Foxton

LONGBURN JN

AWAPUNI STATION

AWAPUNI STATION

WHAREROA STATION

JUNCTION STATION

To Napier

Māori Line

Wilson's Line

Future Deviation

ENGINE DEPOT

GOODS SORTING YARD

PUBLIC PARK

WAIKATO RIVER

Boundary Road

Karanga Road

Church Street

TERACE STREET

Mangonui Stream

Featherstone Street

Local Road

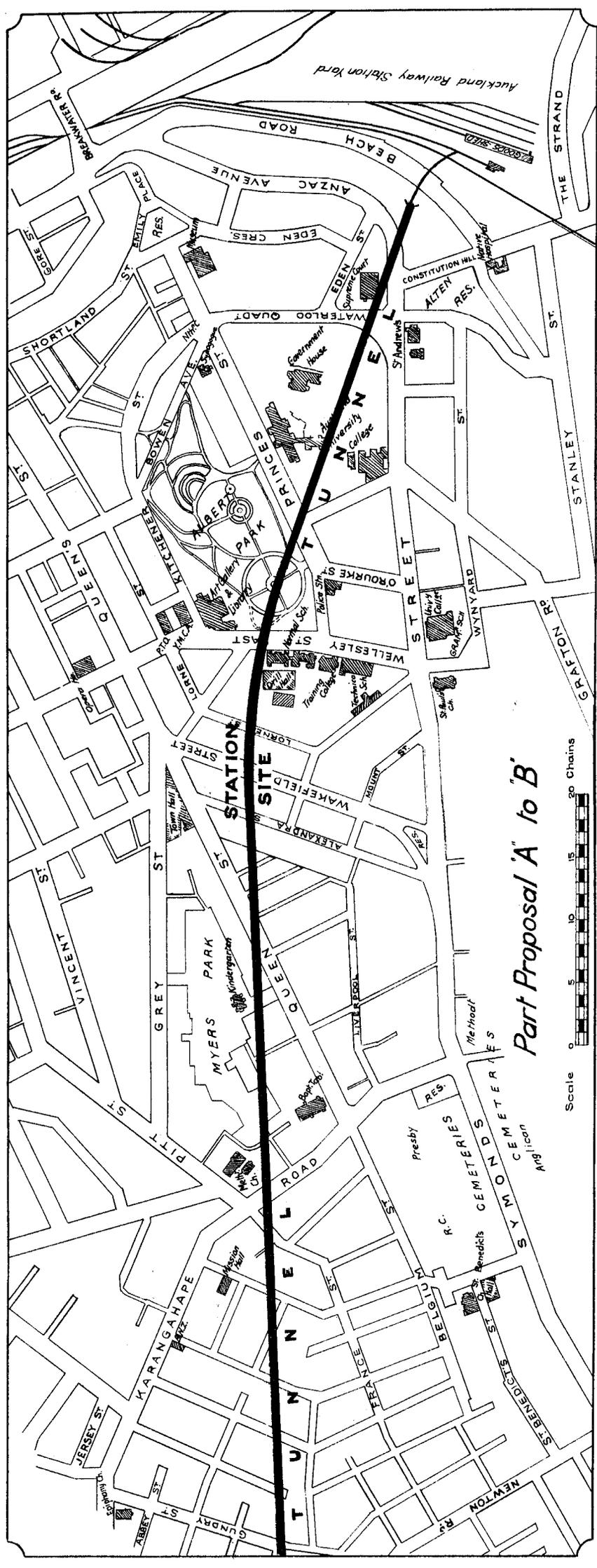
Boundary Road

Boundary Road

Church Street

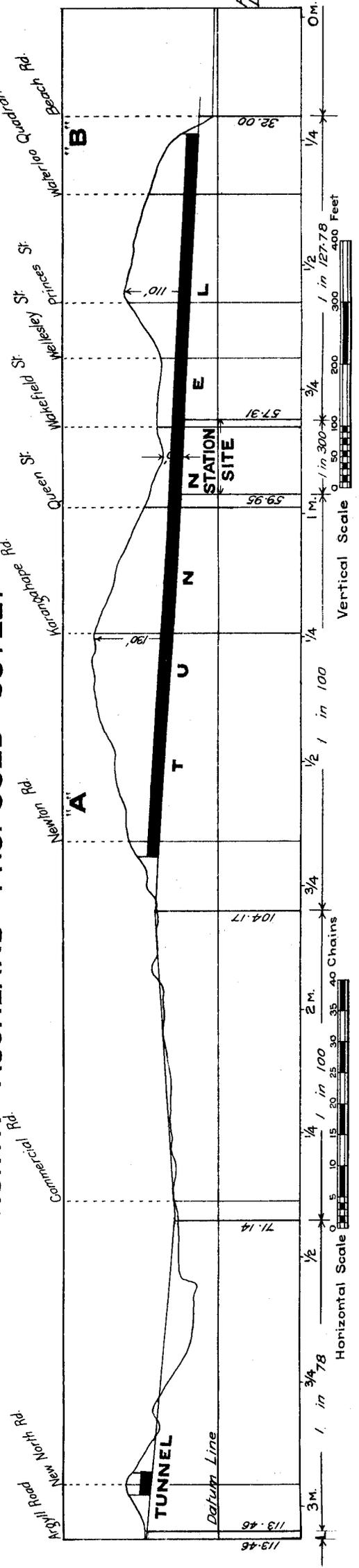
TERACE STREET

Boundary Road



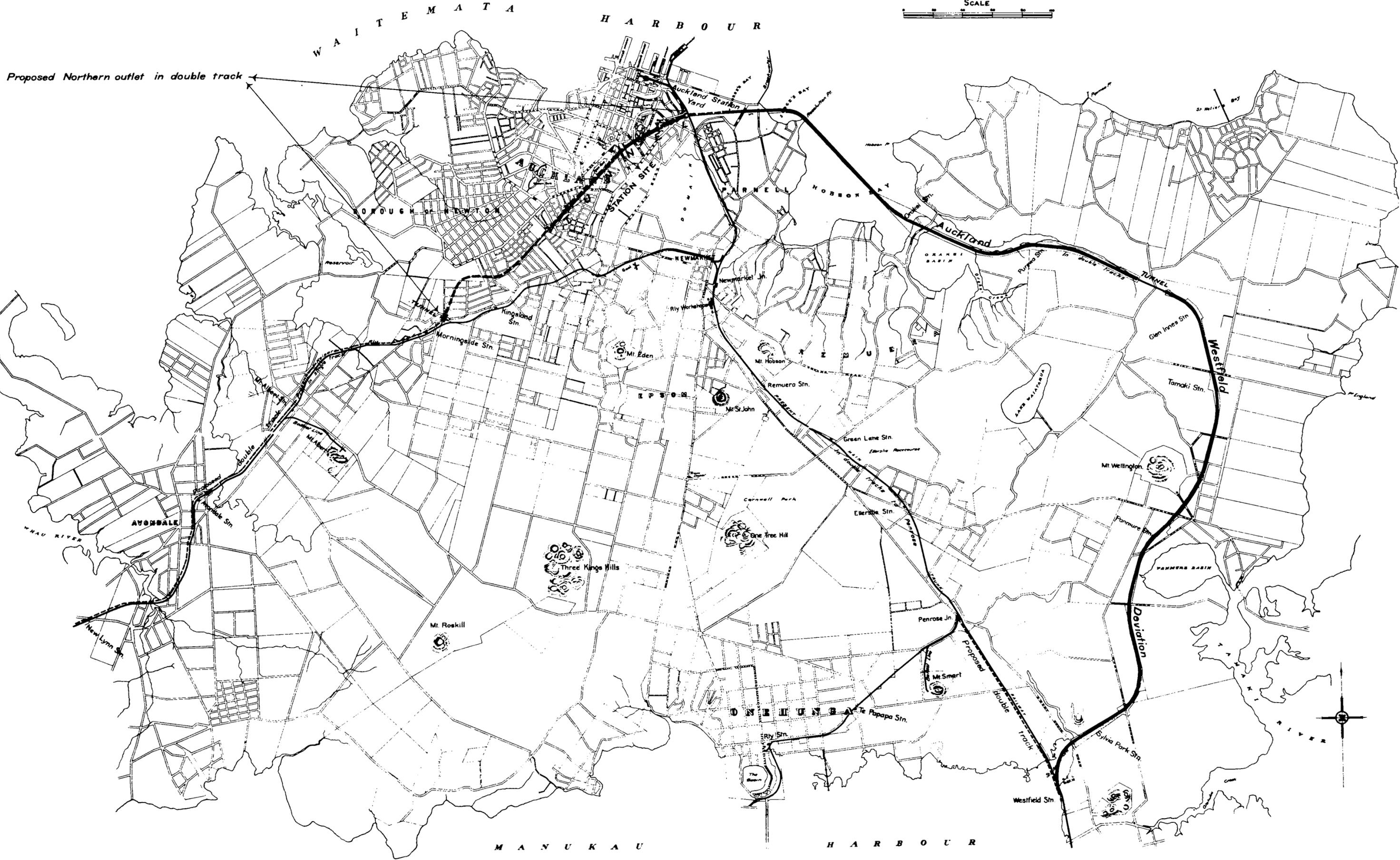
Part Proposal 'A' to 'B'

N.Z.R.
NORTH AUCKLAND PROPOSED OUTLET



AUCKLAND & SUBURBS

SHEWING RAILWAYS, DUPLICATIONS AND MAIN ROADS.



Proposed Northern outlet in double track

W A I T E M A T A H A R B O U R

M A N U K A U

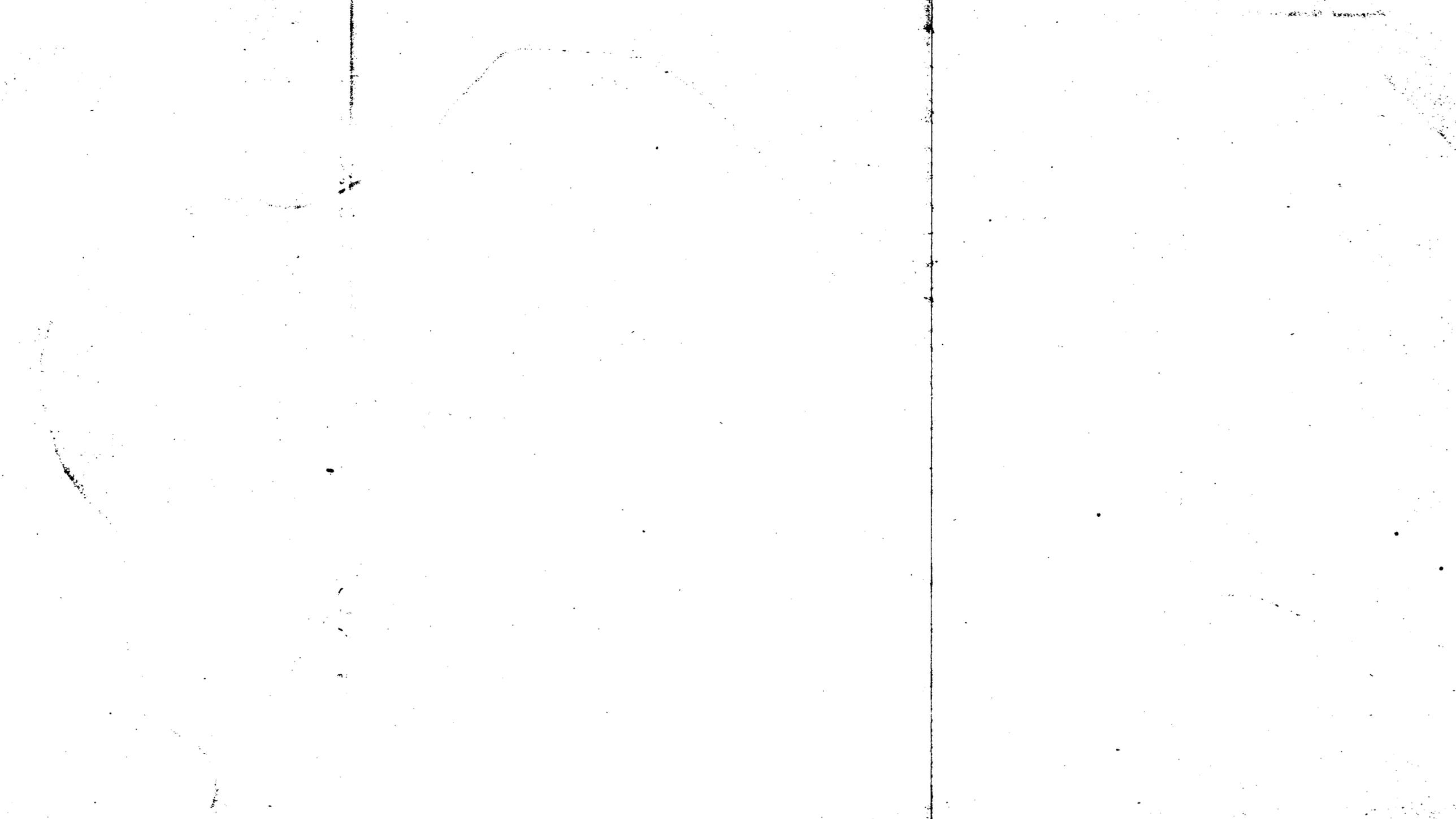
H A R B O U R

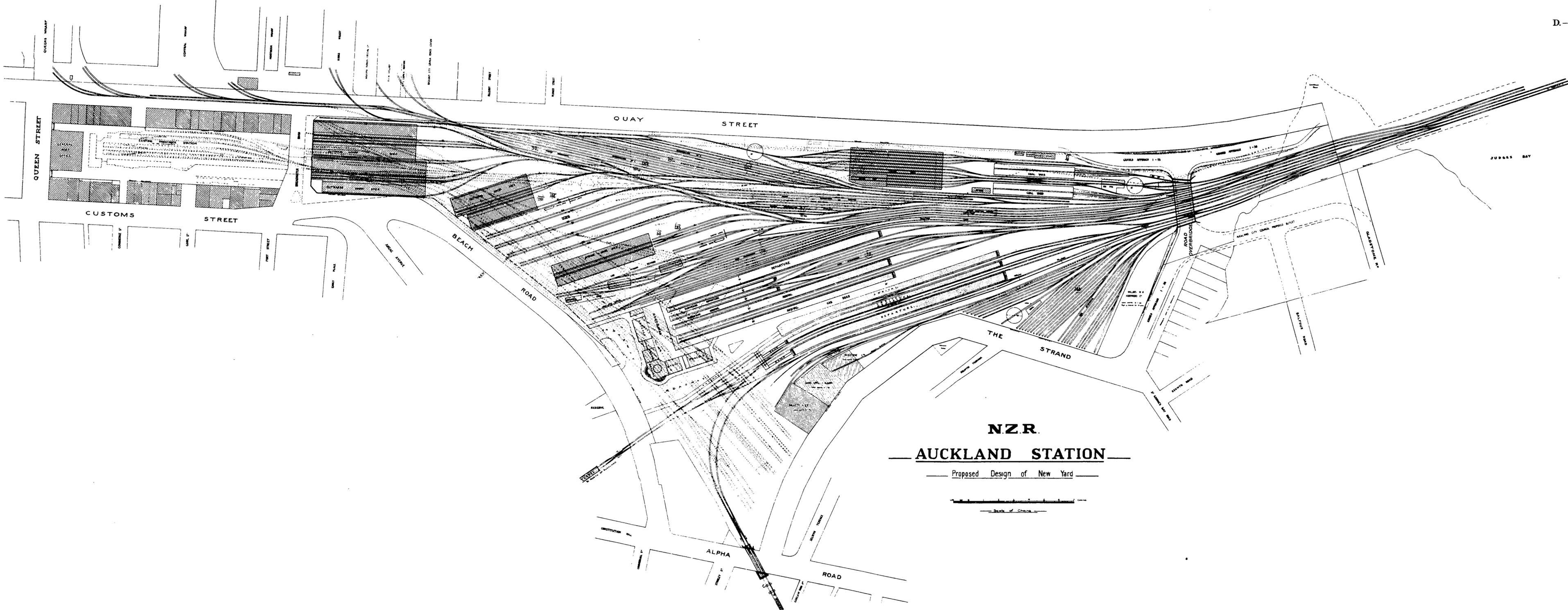


ALPHONSO & SIBILLA

ATTORNI

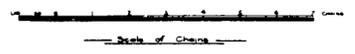
PER

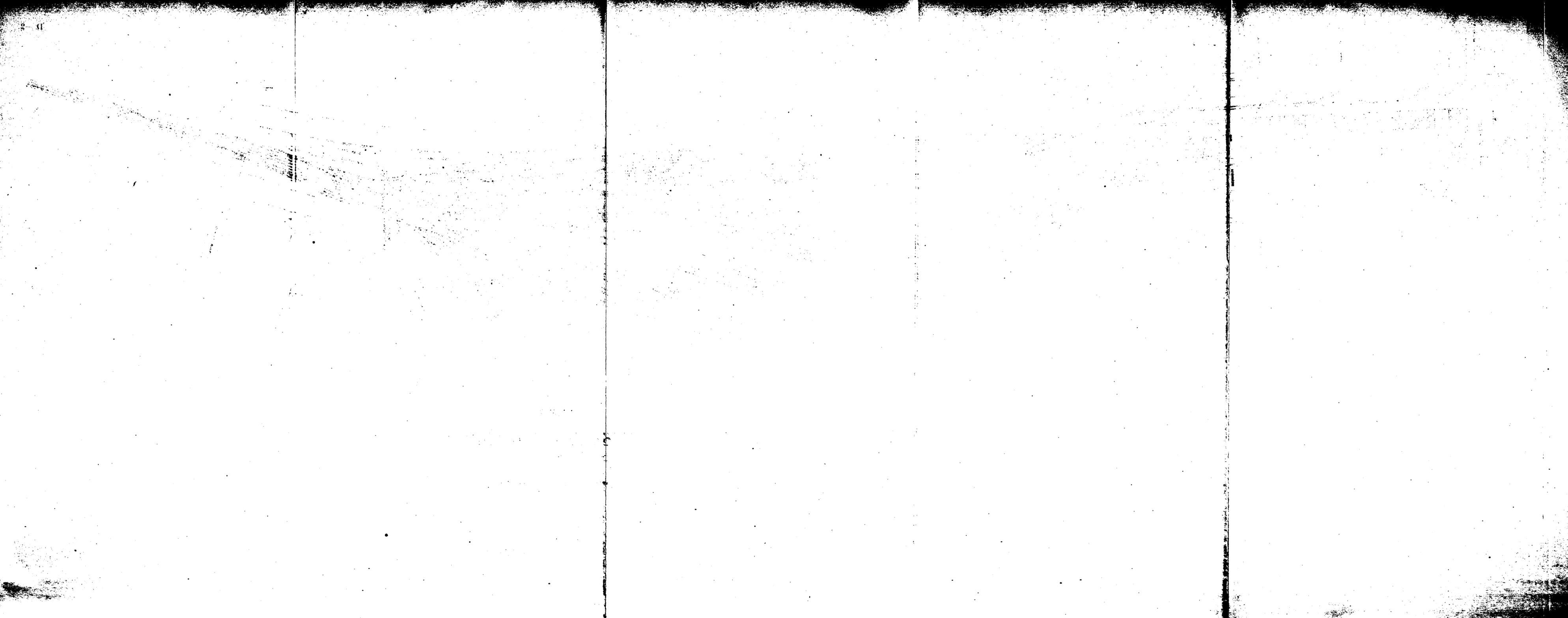




N.Z.R.
— AUCKLAND STATION —

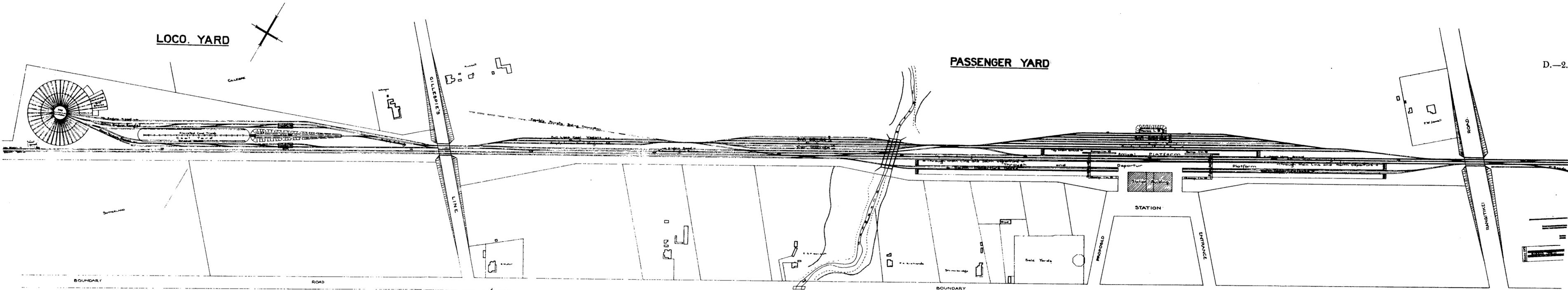
Proposed Design of New Yard





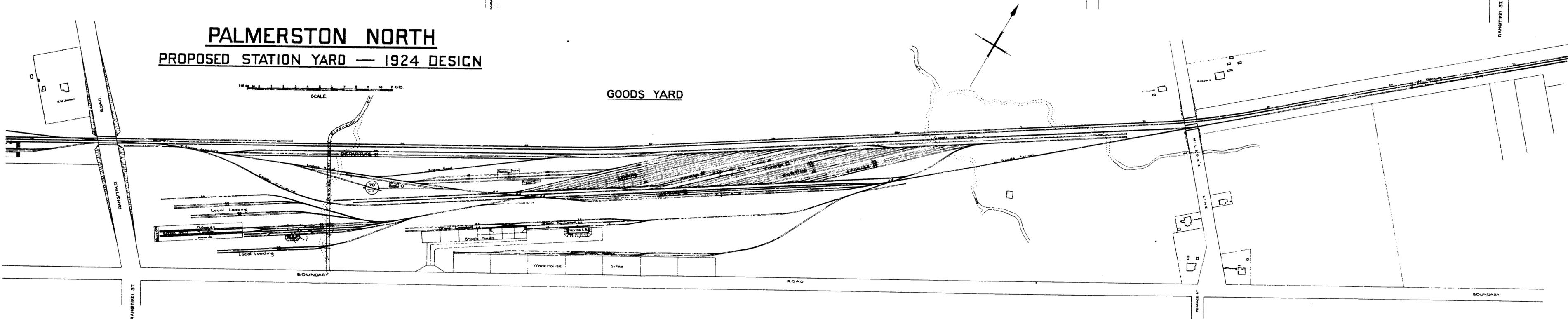
LOCO. YARD

PASSENGER YARD



PALMERSTON NORTH
PROPOSED STATION YARD — 1924 DESIGN

GOODS YARD



1-11

1-11

1-11

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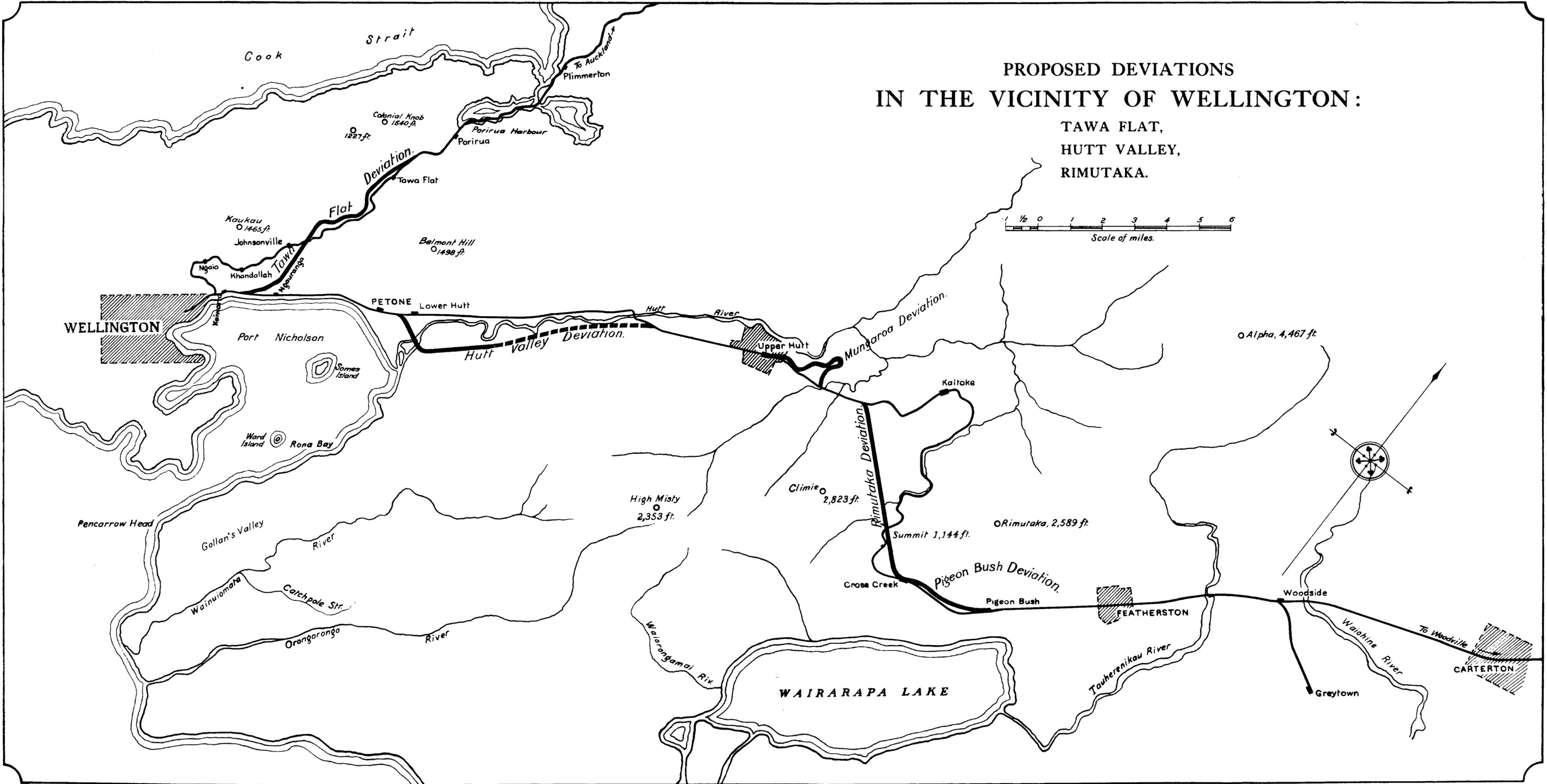
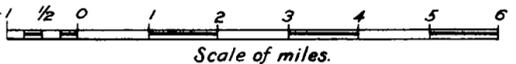
1-11

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PROPOSED DEVIATIONS IN THE VICINITY OF WELLINGTON:

TAWA FLAT,
HUTT VALLEY,
RIMUTAKA.



WELLINGTON

Deviation

Flat

PETONE

Hutt Valley Deviation

Mungaroa Deviation

Rimutaka Deviation

Pigeon Bush Deviation

FEATHERSTON

WAIARAPA LAKE

CARTERTON

Cook Strait

Colonial Knob 1540 ft

1227 ft

Porirua Harbour

Porirua

Tawa Flat

Kaukau 1465 ft

Johnsonville

Belmont Hill 1498 ft

Ngaio

Khandallah

Ngauranga

Lower Hutt

Hutt River

Upper Hutt

Alpha, 4,467 ft

Port Nicholson

Somes Island

Ward Island

Rona Bay

Kaitake

Climie 2,823 ft

High Misty 2,353 ft

Rimutaka, 2,589 ft

Summit 1,144 ft

Cross Creek

Pigeon Bush

Woodside

Waikare River

To Woodville

Pencarrow Head

Gollan's Valley

River

Wainuiomata

Catchpole Str.

Orangorongo

River

Waioangamoi Riv.

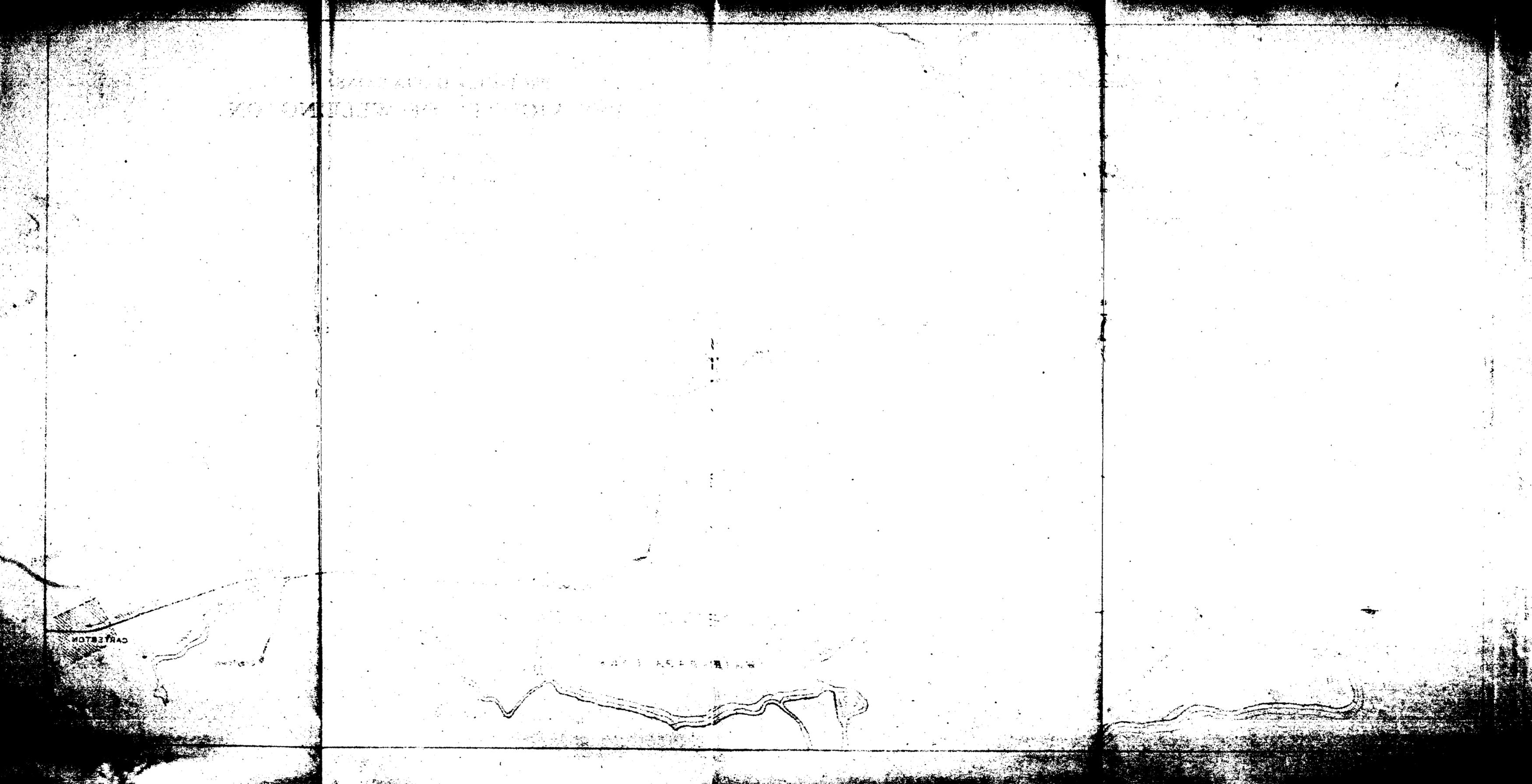
Tauherenikau River

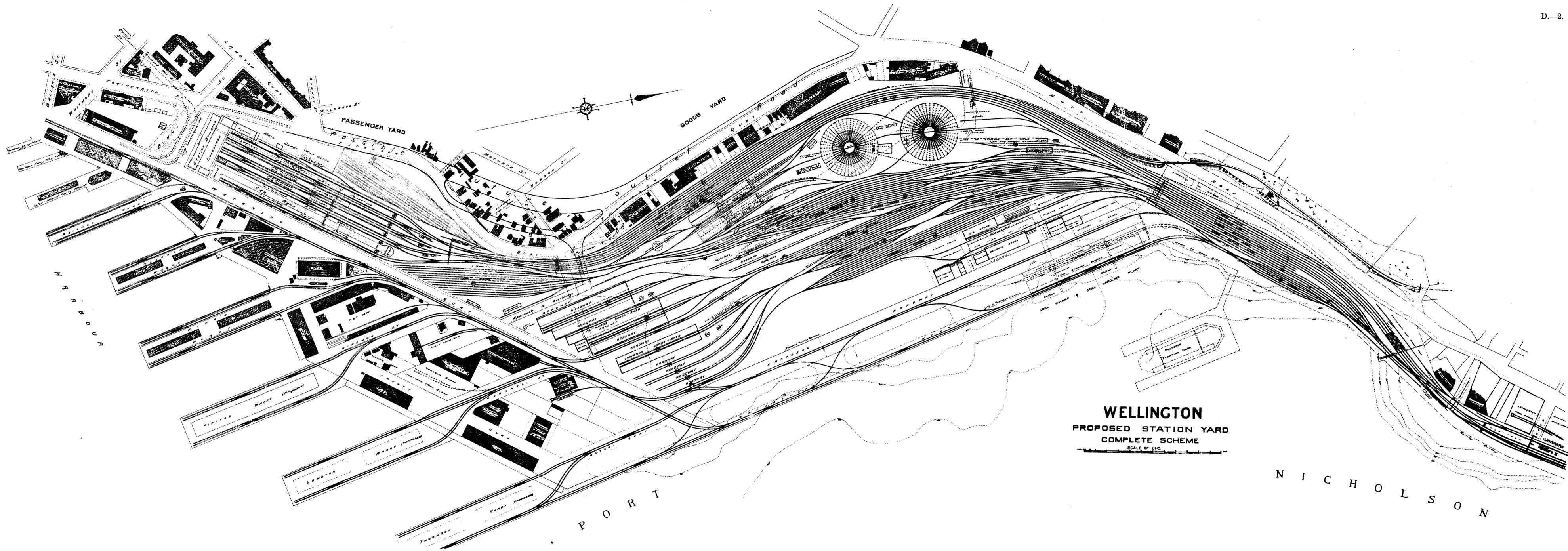
Greytown

1870
1871

CARLETON

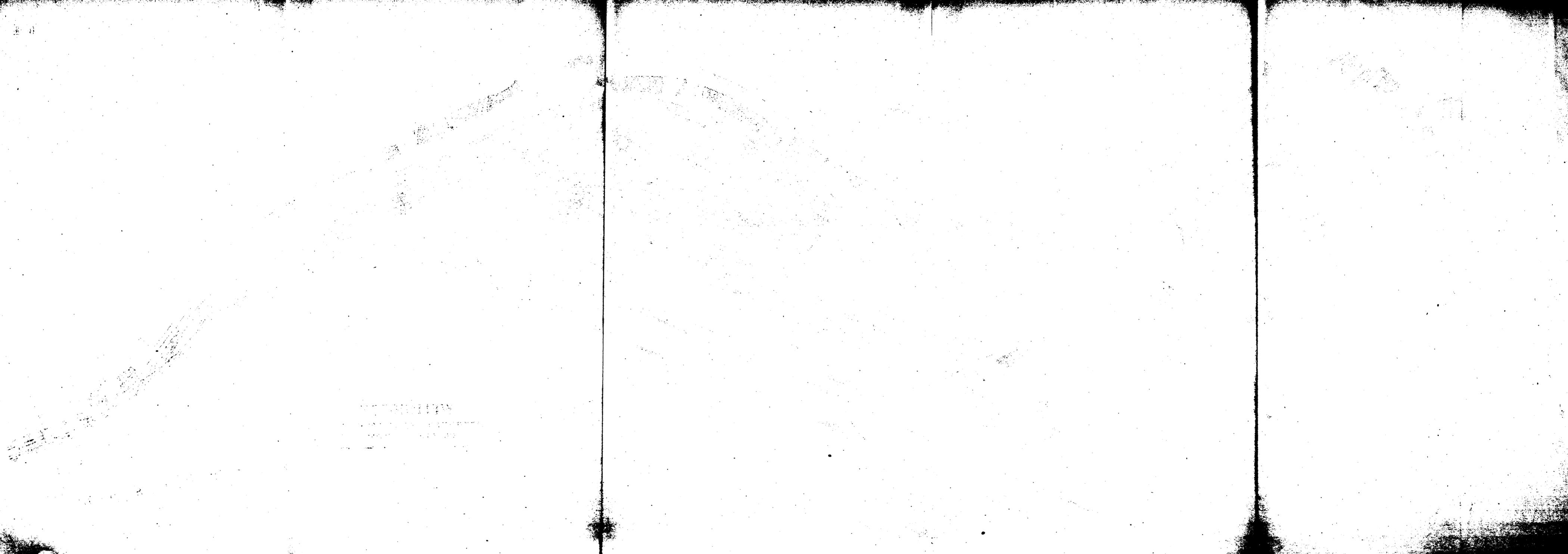
1872

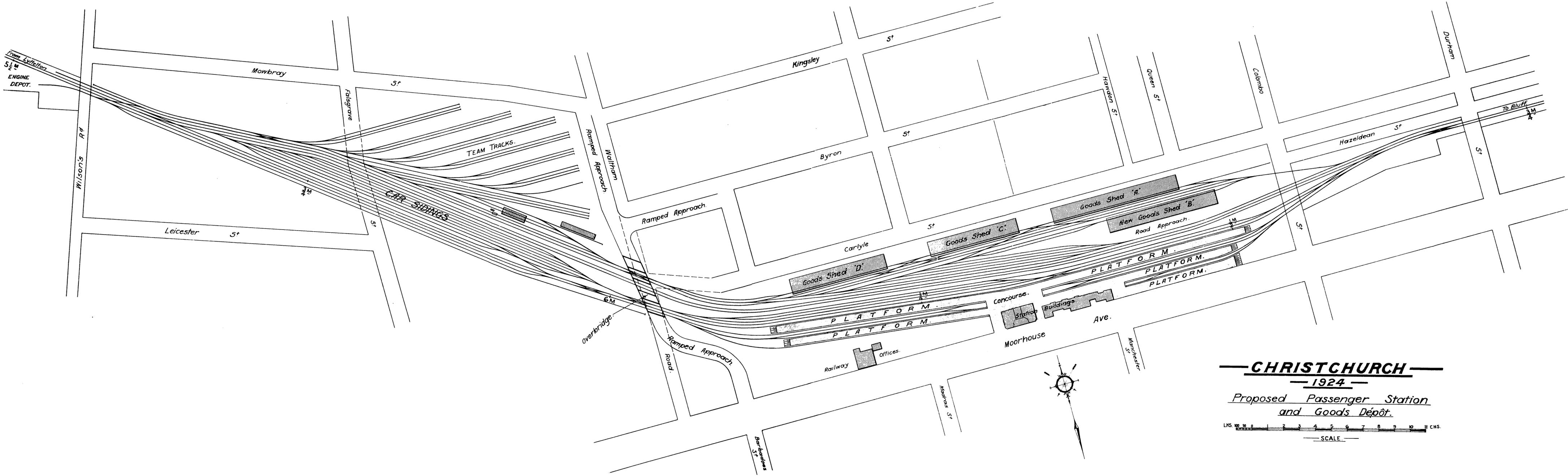




WELLINGTON
PROPOSED STATION YARD
COMPLETE SCHEME
 SCALE OF 6/8"

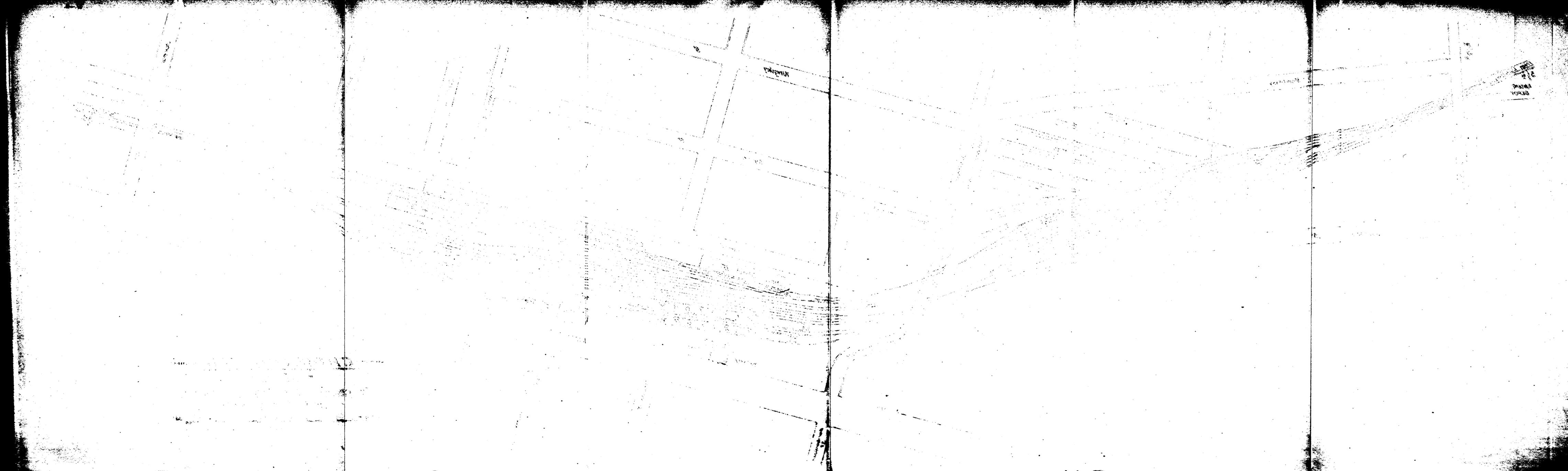
N I C H O L S O N



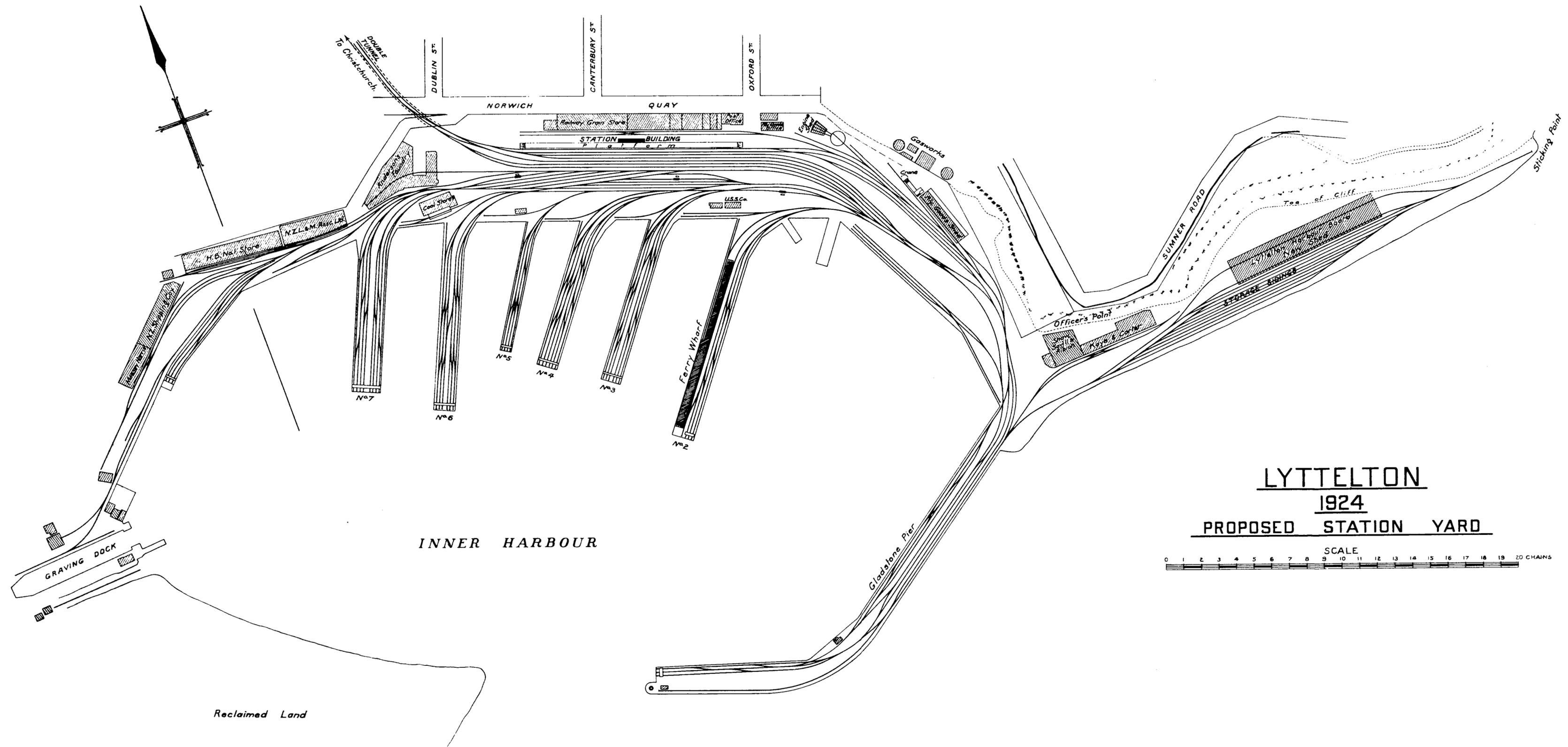


CHRISTCHURCH
 — 1924 —
 Proposed Passenger Station
 and Goods Dépôt.

LKS 100 20 0 2 3 4 5 6 7 8 9 10 11 CHS.
 — SCALE —



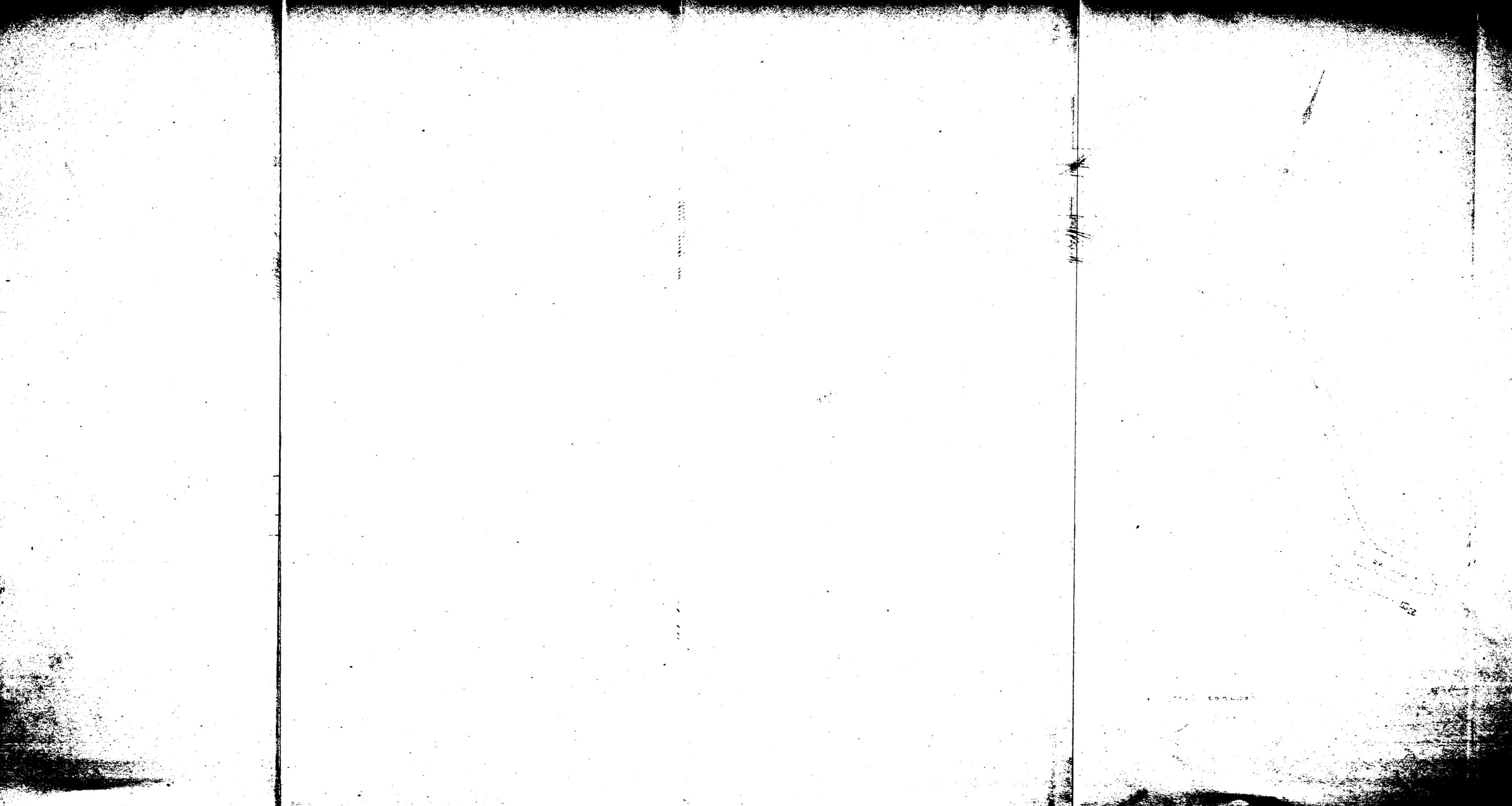
W. H. H. H.
COPY 1000 OF 1000000

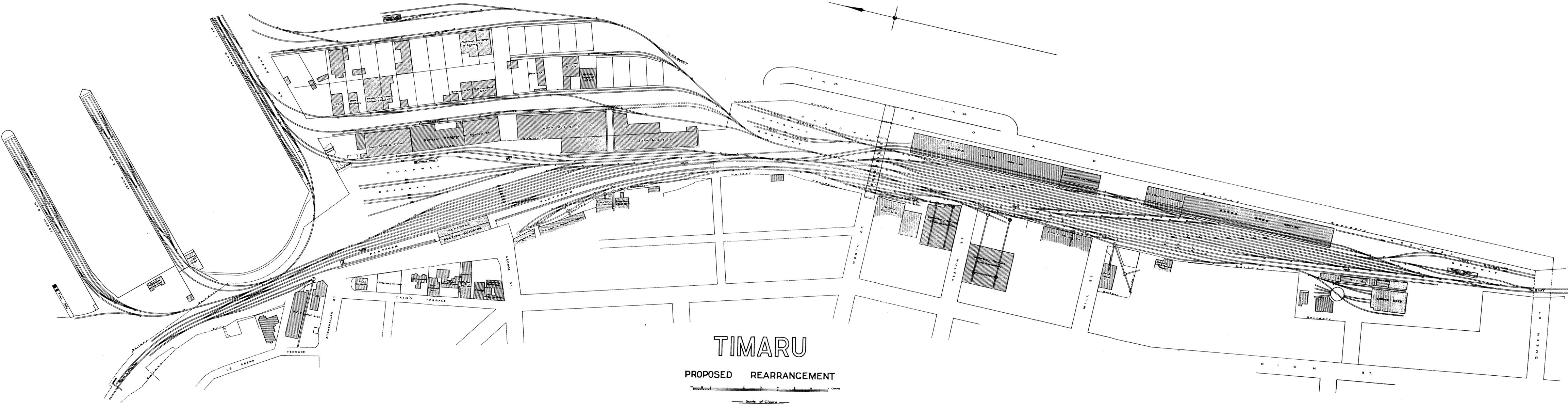


LYTTELTON
1924

PROPOSED STATION YARD

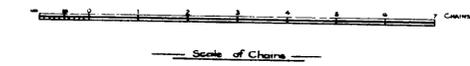


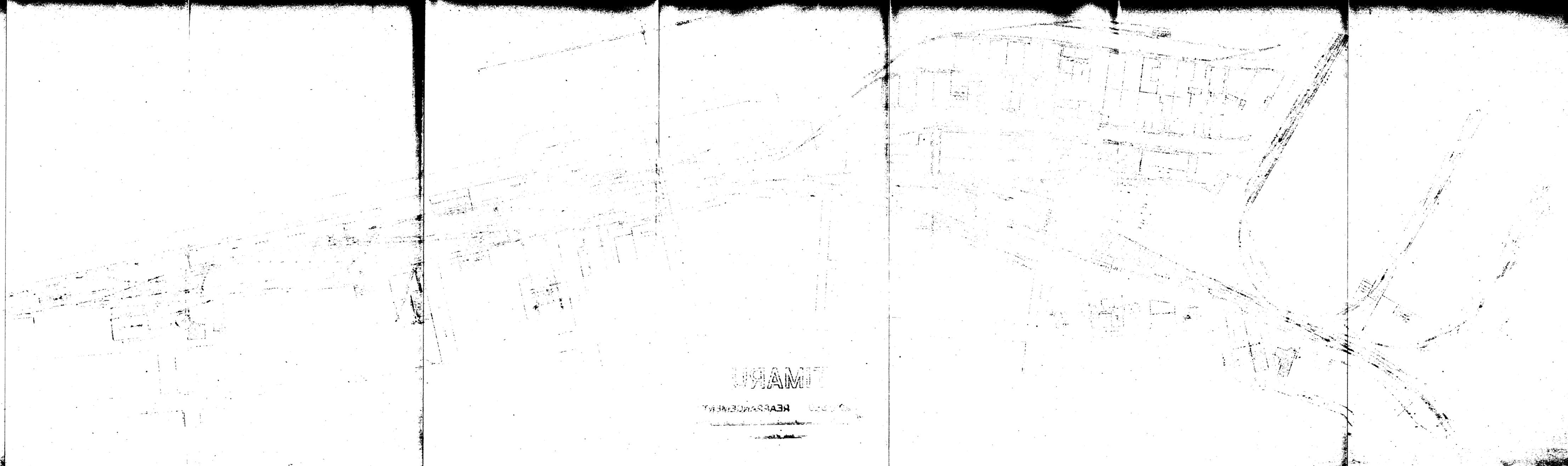




TIMARU

PROPOSED REARRANGEMENT





PLAN

REAR PORCH