

1903.

NEW ZEALAND.

PUBLIC WORKS STATEMENT

BY THE HON W. HALL-JONES, MINISTER FOR PUBLIC WORKS,
16TH NOVEMBER, 1903.

MR. SPEAKER,—

It is with pleasure that I place before honourable members my eighth consecutive Public Works Statement.

The intimation of the Right Hon. the Colonial Treasurer in the Budget that the expenditure upon public works must be curtailed will have led honourable members to anticipate the necessary reduction in the amounts to be voted for works carried on out of the Public Works Fund. At the same time, however, the construction of the North Island Main Trunk and other important railway-lines must proceed expeditiously, and the urgent necessity of providing settlers in the back blocks with road communication must be met. In this respect good work has been done during recent years, and the sum proposed to be voted for the current year will enable a reasonable rate of progress to be maintained.

At the time the appropriations were passed by Parliament last year the public works expenditure was upon a very moderate scale. Advantage was taken of the larger amounts then provided to increase the number of men employed upon the various works, and, although the whole amount available was not expended by the 31st of March, the expenditure during the latter part, and since the close of the year, has proceeded at a fairly high rate.

The expenditure upon the road vote was below the estimate. This was owing to the local bodies not undertaking the work intrusted to them in time to allow the expenditure to come to charge within the financial year.

TOTAL EXPENDITURE.

The expenditure during the last financial year was less than during the previous year. The following table shows, as regards each several class of work, (a) the total expenditure from the inauguration of the public works policy to the 31st December, 1890; (b) the similar expenditure between the 1st January, 1891, and the 31st March, 1903; (c) the gross total expendi-

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ture to the 31st March, 1903; and (d) the expenditure for the late financial year.

Class of Work.	Expenditure.			
	Total to 31st December, 1890.	1st January, 1891, to 31st March, 1903.	Total to 31st March, 1903.	Year ended 31st March, 1903.
	£	£	£	£
Railways—				
New construction	11,975,098	2,935,121	14,910,219	342,623
Additions to open lines	2,092,002	2,259,498	4,351,500	417,130
Roads	3,575,804	2,672,444	6,248,248	282,039
Public buildings	1,776,003	1,076,702	2,852,705	197,455
Immigration	2,144,386	3,614	2,148,000	142
Purchase of Native lands	1,191,137	807,877	1,999,014	15,783
Lighthouses, harbour-works, and harbour defences	880,095	111,258	991,353	13,581
Tourist and health resorts ... ..	...	22,209	22,209	10,949
Telegraph extension	600,849	405,616	1,006,465	68,578
Development of goldfields	561,101	164,791	725,892	24,213
Defence-works (general)	429,720	304,119	733,839	37,003
Departmental	349,789	141,248	491,037	13,949
Minor works and services	300,689	12,604	313,293	2,820
Cost and discount, raising loans, &c. ...	1,021,472	129,583	1,151,055	88,180
Totals	26,898,145	11,046,684	37,944,829	1,514,444

WAYS AND MEANS.

At the 31st March, 1902, the available balance of ways and means for public-works purposes was £454,059, and further funds were received as under :—

	£
Balance of £1,000,000 loan raised under Act of 1901	187,333
Amount raised in the colony under the Act of 1902	750,000
Instalments in respect of £1,000,000 raised in London under Act of 1902	260,000
Transfer from revenue	200,000
Miscellaneous receipts	1,617
Making a gross total of	1,853,009

The expenditure for the year amounted to £1,514,444, so that on the 31st March last there was a credit balance of £338,565 in the Public Works Fund.

For the current year it is proposed to provide additional funds as under :—

	£
Balance of 1902 loan (less cost of raising), say	657,000
New loan of 1903	1,000,000
Transfer from revenue	350,000

This will give a total available ways and means of £2,345,565. The estimates of expenditure on public works for the current year (exclusive of £39,353 for works under the Government Loans to Local Bodies and Land for Settlements Accounts) amount to £1,729,062, thus leaving a balance of £616,503 to be carried forward to next year.

It will be noticed that the amount proposed to be transferred from the Consolidated Fund is £100,000 more than stated by my colleague the Colonial Treasurer.

The increase in the revenue during the first six months of the present financial year and the promising outlook for the latter six months permits of this proposition being made. By thus increasing the amount to be transferred from the Consolidated Fund further provision is made for the repairing and renovating of public buildings, and for the maintenance of main arterial roads.

RAILWAYS UNDER CONSTRUCTION.

The only new railway-work started last year was the Reefton-Inangahua Section of the Midland Railway; but those previously in hand have been steadily proceeded with, and the following sections have been opened for traffic:—

	M.	Ch.
Gisborne-Ormond (26th June, 1902)	10	25
Stratford-Toko (9th August, 1902)	6	26
Blenheim-Awatere (10th October, 1902) ..	13	3
Mangaonoho-Mangaweka (3rd November, 1902)	9	11
Ormond-Kaiteratahi (10th November, 1902)	2	5
Waipara-Scargill (16th December, 1902)	14	59
Tahekeroa-Ahuroa (1st September, 1903)	4	51
Orepuki-Waihoaka (1st October, 1903)	4	40
Total	64	60

At the present rate of progress, the following sections will probably be ready for opening before another Public Works Statement can be presented:—

	M.	Ch.
Kawakawa Southwards... ..	7	57
Paeroa-Karangahake	4	23
Por-o-tarao-Taumarunui	27	36
Taumarunui-Piriaka	6	48
Mangaweka-Taihape	13	18
Toko-Oruru	4	70
Motupiko-Tadmor	10	0
Greymouth-Coal Creek... ..	5	1
Otarama-Staircase	5	3
Ida Valley-Ophir	13	25
Owaka-Catlin's Bridge... ..	3	38
Heriot-Eddie	6	20
Total	107	19

The following is a brief detailed account of what has been done on each of the lines since my last Statement.

KAWAKAWA-GRAHAMTOWN.

The section at the northern end of this line is approaching completion. Some timber has already been carried over a part of it, and the whole section up to the 15-mile peg will be finished and ready for traffic shortly.

At the southern end the construction of the Whangarei Bridge is in hand, also the formation between the bridge and the proposed wharf at Grahamtown, and preliminary work, in the way of surveys and borings, is in hand at the wharf-site.

The total expenditure on this railway last year amounted to £11,372. For the current year a vote of £15,000 is asked for.

HELENSVILLE NORTHWARDS.

The progress of work on this line was considerably retarded by some heavy slips that took place in June last. The section from Tahekeroa to Ahuroa—4 miles 51 chains in length—was completed and opened for regular traffic on the 1st September last. Beyond Ahuroa the Aráparera Bridge has been finished and the rails laid over it, and the formation practically completed for a mile beyond. At this point a 20-chain tunnel is in hand, the excavation of which is about half done.

The expenditure on the line last year amounted to £9,553, and for the current year a vote of £15,000 is proposed.

PAEROA-WAIHI.

The combined railway and road bridge over the Ohinemuri River at Karangahake has been finished, and the section of the railway to Karangahake is just on the point of completion, and will be opened for goods traffic shortly. Beyond Karangahake work has almost been confined to the tunnel, which is now fully half done. Some proposals with the view of expediting the completion of this railway have lately been made by the Waihi Gold-mining Company, and are now under consideration by Parliament.

The expenditure on this line last year amounted to £13,688, and a vote of £10,000 is proposed for the current year. If, however, the proposals above referred to are approved, the further amount required will be provided in accordance therewith.

GISBORNE—KARAKA.

As mentioned in my last year's Statement, the section of this line between Gisborne and Ormond was opened for traffic on the 26th June, 1902, and the further section between Ormond and Kaiteratahi was completed and handed over to the Railway Department for traffic on the 10th November following. This brings the line to the left bank of the Waipaoa River. The bridge over that river is being erected by Messrs. J. McLean and Son, of Auckland, and the contract time expires on the 15th March next. Beyond the bridge the formation-works, including a tunnel 10 chains long, are in hand as far as Karaka, and are making good progress. The survey of the projected extension of the line towards Motu will shortly be put in hand.

Last year's expenditure on this railway amounted to £13,428. For the current year we ask for a vote of £15,000.

STRATFORD—KAWAKAWA.

In my last year's Statement I was able to report the completion and opening of the first section of this line to Toko—6 miles 26 chains in length. The formation of the second section—namely, to Oruru—nearly five miles long, has been in hand during the year, and is now approaching completion, and rail-laying will soon be commenced.

The construction of a branch line to a gravel-deposit on the banks of the Patea River, from which the material for the ballasting of the railway will be obtained, has also lately been started.

Beyond Oruru considerable survey-work has been undertaken to definitely determine the best route for the further extension of the line, and the work is still in progress. I hope after the session to have an opportunity of visiting the district, and so be in a better position to deal with the matter when the question of route is ripe for decision.

Last year's expenditure on this railway amounted to £11,810, and for the current year a vote of £10,000 is proposed.

MOUNT EGMONT BRANCH.

The need of a short branch railway to tap the vast stone deposits on the slopes of Mount Egmont becomes more and more urgent every year. The soil in Taranaki is for the most part a deep rich loam, and stone and gravel are scarce commodities, the result being that both road and railway maintenance become inordinately expensive. The railways are much in need of supplies of good ballast, and the local bodies badly require good metal for the roads. The providing of a ready means of tapping the rock and boulders of the mountain will serve both purposes, and the large amount of traffic that the line will carry from the outset will insure its being a remunerative undertaking, to say nothing of the benefit to the local bodies by reducing the cost of road maintenance in the district. It is therefore proposed to provide for the construction of a branch railway from Waipuku Station on the main line, to the gorge of the Manganui River, on the slopes of the mountain. The section of the line proposed to be constructed at present will be about five miles long, and, exclusive of terminal conveniences and the stone-crushing plant, will probably not cost more than £10,000.

A vote of £5,000 on account is proposed on the current year's estimates.

NORTH ISLAND MAIN TRUNK.

Considerable progress was made on this railway last year. At the northern end of the line regular passenger traffic is now carried on between Auckland and Ongarue, a distance of 160 miles, and the line is also in complete working-order as far as Taumārūnui, fourteen miles further, and it is proposed to open the

railway to this point shortly; and the rails are laid and the line ballasted as far as the Wanganui River, a further distance of rather more than two miles. At this point further progress with rail-laying is, and has for some time past been, checked by the backward state of the works on the large bridge over the Wanganui River. The contract for the erection of this bridge was let to Messrs. Scott Bros. (Limited), of Christchurch, on the 8th May, 1901, and the date fixed for the completion of the work expired in February last, but the bridge is not likely to be available for the passage of locomotives for at least three months. Beyond the bridge the formation of the line is in hand for several miles, and is making good progress. Directly the bridge is available the rails can be laid into Piriaka, and from this point and onwards the valuable timber asset in the Waimarino Forest can be tapped. The question of the manner of dealing with this forest is engaging the consideration of the Government.

By the time the line is opened to Taumarunui it is hoped that arrangements will have been made for taking the tourist traffic down the Wanganui River from this point, so that there may be a through tourist route, without interruption, from Auckland to Wanganui through the interior, and thence to Wellington.

With a road, the construction of which is now being considered, leaving Tokaanu at the south end of Lake Taupo and joining the railway-line at a place called Kakahi, a short distance south of Taumarunui, travellers could make a very pleasant trip from Auckland, passing through Rotorua, Waiotapu, and Wairakei to Taupo Township, crossing the Lake to Tokaanu, then by the contemplated road to the railway-line, on to Taumarunui, and down the Wanganui River to the Town of Wanganui. Or the trip could be varied by leaving the Wanganui River and going up the Tangarakau River to Kouratahi, and thence through Whangamomona to Stratford. By this variation the traveller would see one of the best examples in New Zealand of the development of bush settlement.

The road above referred to would bring Tokaanu within about twenty-eight miles of the railway, and save the inhabitants of that district some thirty miles of road transport and twenty-five miles of steamboat freight.

At the southern end of the line, the section between Mangaonoho and Mangaweka has been opened for regular traffic. The erection of the steel superstructure of the large viaduct over the Mangatewaka Creek was started in November last. This structure is 944 ft. long and 160 ft. high, and is now practically completed. It was tested with three locomotives on the 4th instant, and found to be in every way satisfactory. Some photographic views and a lithographed plan and elevation of the viaduct are appended to this Statement, from which honourable members will be able to judge as to the character of the work and the progress made with it. Beyond the viaduct the formation is ready for rail-laying for several miles; the rails and sleepers are all provided, and the work of rail-laying has now been taken in hand. It is expected that the line will be available for goods, if not passenger, traffic to Taihape by about May, 1904. Beyond Taihape formation is in hand for a considerable distance, and is proceeding satisfactorily. During the ensuing summer materials and stores required for the construction-works in the following winter will be carted on to the ground, so that progress may not be delayed by the condition of the roads during the winter season.

In view of the large appropriation for this line last year, the relative expenditure thereon, at the first glance, appears small. The nature of the work and the late period of the appropriations rendered it impossible to spend more during the financial year. Since the 31st March, however, a much larger number of men has been employed than during the early part of 1902-3, and greater headway will consequently be made, and a vote of £200,000 has therefore been provided on the estimates.

BLenheim—WAIpARA.

The section between Blenheim and Seddon, at the northern end of this railway, was completed and opened for regular traffic on the 10th October, 1902. Nothing further is being done at the northern end of this line at present, as the

Government cannot recommend any further allocation of funds to the work until satisfactory arrangements have been made for the acquisition by the State of one or more of the large estates in the district.

At the southern end the section between Waipara and Scargill—14 miles 59 chains in length—was opened for regular traffic on the 16th December last. The further section between Scargill and the Hurunui River is being proceeded with. The concrete piers and abutments for the Hurunui Bridge, which are being carried out by the Department's own staff, are also in hand and making good progress; and the steel superstructure, which is being manufactured by Messrs. Scott Bros. (Limited), of Christchurch, is well forward. Work is also in hand on a portion of the line on the north side of the Hurunui.

The expenditure on this railway last year amounted to £31,651, and for the current year a vote of £35,000 is proposed.

MIDLAND.

The work in hand at the Nelson end of this line last year has been continued. The formation is now nearly finished to the site of the combined road and railway bridge over the Motueka River, and rail-laying has recently been started. The bridge referred to is under construction, and several spans are completed; the contract time expires on the twenty-third of this month.

Construction-work was recommenced at the Reefton end of the line during the year, earthworks being put in hand on both sides of the Inangahua River, and contracts let for two bridges over that river—namely, one just beyond Reefton Station, and the other at the Landing. The latter bridge will be available for both road and railway traffic. The contract time for the former bridge expires in February next, and for the latter in July following.

A considerable amount of survey-work has been done on the Arthur's Pass Section of the line between Springfield and Brunnerton at the instance of Mr. V. G. Bogue, the consulting engineer, who was called in to advise on the selection of the best route, and full information to enable Mr. Bogue to prepare his final report on the matter was sent to New York about a month ago. It is unlikely that the final report will be received until early in the new year.

A second supplementary report, dated the 27th June last, was received from Mr. Bogue early in August, and is printed as an appendix to this Statement. Some correspondence, more or less of a private character, accompanied this report, which I have not felt at liberty to publish. The report also included some rather elaborate tables and diagrams, the publication of which would have involved expense, and, as they are of a highly technical character, I have deemed it inadvisable to print them. I shall, however, be happy to show the originals to any honourable member who would like to see them.

At the Springfield end of the railway good progress has been made. The Patterson's Creek Viaduct has been completed, and the formation is now finished to Staircase Gully, and the rails have also been laid up to that point. Tenders for the Staircase Viaduct and the Broken River Bridge have recently been accepted. The Staircase Viaduct will consist of one 60 ft. and two 192 ft. steel-girder spans. The abutments and one pier will be of concrete, and the main pier, which is 160 ft. high, will be of braced steel. The formation beyond the viaduct is now in hand and progressing satisfactorily. The tunnels on this section have been commenced, and with one considerable progress has been made—a heading having been driven through, and the excavation completed to full size for three-fourths of the length, and the lining built for one-fourth.

The total expenditure on the Midland Railway last year amounted to £39,253. For the current year a vote of £70,000 is proposed.

NGAHERE—BLACKBALL.

The contract for the erection of the large bridge over the Grey River on this line is now making satisfactory progress. The contract time for the completion of the structure expires in April next, but from present appearances it is hardly likely that it will be completed in time.

A survey is now being made to ascertain the practicability, and if practicable the probable cost, of constructing the railway up to the Blackball Township. On the completion of this survey a decision will be come to as to proceeding with the earthworks on the line.

Very little expenditure came to charge last year—£973 only—as it took the contractor several months to arrange for the supply of the necessary timber and materials. For the current year a vote of £10,000 is proposed.

COAL CREEK.

The work of finishing this railway, which was begun by the Greymouth-Point Elizabeth Coal Company, has proceeded throughout the year, and is now approaching completion.

The expenditure during last year amounted to £6,775.

GREYMOUTH-HOKITIKA : EXTENSION TO ROSS.

The survey of this railway, which was in progress when my last Statement was made, has since been completed, and construction operations continued throughout the year. The contract for the combined road and railway bridge over the Hokitika River is making progress, but is unlikely to be completed within the contract time, which expires on the 12th April next.

The expenditure last year amounted to £7,245, and for the current year a vote of £10,000 is provided.

OTAGO CENTRAL.

The exceptionally severe weather during last winter interfered with the progress of the works on this line. For several weeks almost all work was stopped, and when it could be resumed, progress was further delayed by slips which took place in consequence of the melting of the snow, and by floods in the Manuherikia River due to the same cause. With the return of milder weather work was resumed, and is now actively in progress. The very heavy formation in the Poolburn Gorge, including two tunnels, is now complete, and the rails are laid as far as the Poolburn Viaduct. The masonry piers of this structure are finished, and the erection of the steel superstructure is in hand, and it is expected that locomotives and material trains will be able to cross it by Christmas next, and that within a month afterwards the rails will be laid to the Manuherikia River. The concrete piers and abutments of the Manuherikia Bridge are complete, and the staging for the erection of the steel superstructure is now being built. The formation-works on the section between Manuherikia and Ophir are approaching completion, and similar work is in hand for four or five miles beyond Ophir, on the section towards Chatto Creek.

The expenditure on the railway last year amounted to £40,585, but for the current year a vote of £70,000 is asked for.

HERIOT EXTENSION.

The earthworks on this line are now nearly complete. The construction of the concrete piers for the bridges has been begun, and the timber for the superstructure of same is delivered. Also about one mile of platelaying has been done, and the erection of the necessary station buildings is about to be proceeded with.

Last year's expenditure amounted to £3,018, and for the current year a vote of £6,000 to complete the section is proposed.

CATLIN'S-SEAWARD BUSH.

The earthworks on the extension at the Catlin's end of this line are practically finished, and platelaying has been begun, and the erection of the necessary station buildings has also been authorised. The line should shortly be available for traffic. The survey of a further section will be taken in hand during the year.

At the Seaward Bush end nothing has been done since my last Statement was made, as no surveyor has been available for the work, owing to the unusual amount of survey-work in hand last year. An experienced surveyor will be at liberty shortly, when the necessary work to enable a final decision to be come to as to the route to be adopted will be undertaken.

The expenditure on the railway last year amounted to £5,798, and for the current year a vote of £10,000 is proposed.

RIVERSDALE—SWITZERS.

The contract for the combined road and railway bridge over the Mataura River is proceeding, but the work is not making very good progress. The contract time for the erection of the bridge expired in May last, but it is likely to be several months yet before it is finished. In consequence of the slow progress of the bridge, the expenditure last year amounted to £1,251 only. For the current year a vote of £4,000 is provided.

OREPUKI—WAIATU.

The section to Waihoaka, four miles and a half in length, has been completed, and was handed over to the Railway Department for regular traffic last month.

The expenditure last year amounted to £6,368, and the vote proposed for the current year—to provide for the cost of completing the line to Waihoaka—is £8,000.

TOTAL APPROPRIATIONS FOR RAILWAYS.

In addition to the sums already mentioned, appropriations of £1,000 each are proposed for old land-claims and for surveys of new lines respectively; also £60,000 for permanent-way materials. This brings the total proposed appropriations for railway-construction purposes up to £555,000.

CO-OPERATIVE SYSTEM.

The co-operative system has worked satisfactorily. By this system a good workman can make a good wage, while the inferior workman is paid only the value of the work he performs. It is the latter class who complain that the rates paid are upon too low a scale, and it is difficult to make them realise or admit that they are less competent than their fellow-workers. The instructions to the departmental officers are “that the rate of pay fixed for any work is to be such that a man of average ability, working up to his ability, can earn for his day’s labour the rate of wages ruling in the district for that class of work.” I learn from inquiries recently made of all engineers in charge of works that this instruction has been closely adhered to.

The test of the matter, as applied to railway construction, is shown by the cost of that class of work prior to and since the coming into operation of this system. A return was recently laid upon the table of the House showing (1) that the mileage cost (exclusive of additions to open lines and rolling-stock) of all Government railways opened for traffic up to the 31st March, 1891, was £6,808; and (2) that the mileage cost (also exclusive of additions to open lines and rolling-stock) of all Government railways opened for traffic between the 1st April, 1891, and the 31st March, 1903, was £6,762. The figures in each case are exclusive of provincial and district railways taken over by the Government.

While the cost of construction under the co-operative system is thus shown to be less than under contract, honourable members are aware that we are also now using heavier rails and more sleepers per mile; that our bridges are in most cases now built of steel instead of perishable timber, thus minimising the cost of future renewals; that the cost of all material and labour has increased; and that more extensive station accommodation, especially in the shape of buildings for employees, length of platforms, and sidings, is now provided than during the period first mentioned.

The improved construction and the lessened cost prove conclusively that the colony is obtaining satisfactory results from the co-operative system, and, on the other hand, there are many men who, after working as co-operative labourers for a time, have taken up holdings under our excellent land laws, and are now numbered among our prosperous settlers.

ROADS AND BRIDGES.

The work on roads is distributed over the whole colony, generally in small undertakings, and consists mainly of making roads and bridle-tracks in new country, although a considerable sum is annually spent in the maintenance of roads already partly constructed, but not sufficiently complete to hand over to the local authorities. In addition to these there are the main arterial roads in districts where there is no railway communication, on which a large amount is annually spent by the Government. A considerable proportion of the annual appropriation is absorbed in subsidies and grants to local bodies, who expend the money subject to the control of officers of the Roads Department.

The expenditure by the Roads Department on roads and bridges since 31st March, 1891, totalled to £2,705, 855. For the year 1891-2 it was £99,920, while for 1902-3 it amounted to £227,184.

Nearly the whole of the new roads or tracks are for the purpose of giving or improving access to land recently taken up and held by Crown tenants under the various land-tenures now in force. Much of this land is forest-clad, and in country which is broken by hills and gullies, making the selection of road-lines difficult and their construction costly. The cost of roads in proportion to the value of the land is much larger than it was formerly, when the more level class of country was being dealt with. This is yearly increasing, because most of the new settlement is forced on to rougher and more remote country.

The great number of dairy factories established and being established throughout the whole colony has largely added to the demand not for roads only, but for metalled roads. Experience has taught that the industry as at present conducted cannot be carried on to advantage without metalled roads, and the necessary provision for such is a heavy tax on the powers and resources of the local authorities. A considerable amount of assistance has been given towards this class of work, but it is a question for consideration whether such assistance can be continued, in view of the very heavy demands arising for money to road newly settled lands and lands which are in process of being settled.

The net expenditure last year, exclusive of roads on goldfields and Government loans to local bodies, amounted to £208,605: with which sum 275 miles of engineering survey was made, 310 miles of dray-road, 157 miles of bridle-track, and ninety-nine bridges over 30 ft. span, of a total length of 7,344 ft., were constructed; 750 miles of dray-road and 197 miles of bridle-road were improved; and 2,471 miles of dray-road and 926 miles of bridle-road were maintained.

The total amount authorised under the Government Loans to Local Bodies Account was £49,900, and the sum voted for expenditure was £45,000. The net expenditure amounted to £18,579, for which 166 miles of engineering survey was made, and 22 miles of dray-road, 42 miles of bridle-road, and three bridges over 30 ft. span, of a total length of 100 ft., were constructed. There were also 76 miles of dray-road and 136 miles of bridle-road improved or maintained.

From various causes many of the local bodies who had been authorised to carry out work did not put the same in hand in time to bring the expenditure within the financial year.

The expenditure has mostly been upon a very large number of small scattered works, the items on the appropriations representing 2,408 different works.

For the current year the proposed votes for the same classes of works are as follows:—

	£
Roads, departmental	18,120
Roads generally	300,000
Maintenance of main roads	30,209
Tourist roads	19,748
Government Loans to Local Bodies Account	30,000
Land for Settlements Account	9,353
Total	<u>£407,430</u>

ROADS ON GOLDFIELDS (MINES DEPARTMENT).

The vote last year under this head amounted to £84,460, the expenditure being £51,690, with contingent liabilities at the end of the year amounting to £49,575.

The sum proposed to be authorised for the current year is £78,425, on account of which a vote £30,000 is asked for.

DEVELOPMENT OF GOLDFIELDS AND MINING.

The gold-mining industry continues to steadily advance. The output of gold for the year was greater than during the preceding twelve months, and was the highest for any corresponding period since 1873.

The value of gold entered for export during 1902 was £1,951,433, being an increase on the previous year of £197,650.

The quantity of gold entered for export during 1902 was 508,045 oz., valued at £1,951,433, and of silver 674,196 oz., valued at £71,975; as compared with 455,561 oz. of gold, valued at £1,753,783, and of silver 571,134 oz., valued at £65,258 for 1901; being an increase of 52,484 oz. of gold, valued at £197,650, and 103,062 oz. of silver, valued at £6,717.

As already announced by my colleague the Hon. the Minister of Mines in his Statement submitted to Parliament this session, the Government has acquired the extensive pumping plant and machinery erected by the Thames Hauraki (Limited) at the Lower Thames and recently sold by order of the Court. The Government has also agreed to subsidise local contributions towards putting down bores to prospect for gold at deeper levels than heretofore worked, and it is hoped that before long the question of whether it will pay to mine for gold at deep levels at the Thames will be determined.

The amount expended last financial year on works for the development of the goldfields was £24,213, while the liabilities at the close of the year amounted to £5,002. It is proposed to take a vote of £20,000 for the current year.

TELEGRAPH EXTENSION.

The expenditure under the head of telegraph extension during the past financial year totalled to £68,578. The greater proportion of this was expended on Telephone Exchanges, an item governed by the requirements of the public and the rapid expansion of this branch of the service. The number of new subscribers during the year was 1,373.

The most important telegraph and telephone lines constructed were: To Doubtless Bay, connecting with the Pacific cable; Horeke; Tuakau-Onewhero; Limestone Island; Warkworth-Whangarei; Raupo-Rehia; Auckland-Waiheke Island; Waerenga; Peria-Fairburn's; Gisborne-Tokomaru Bay; Weber-Waione; Leeston Trunk; Geraldine-Hilton; Waimate Trunk; and Gore-Otama.

The vote this year is limited to £50,000, which includes liabilities on the 31st March last amounting to £27,409, leaving £22,591 for works put in hand since the commencement of the financial year and further extensions authorised.

PUBLIC BUILDINGS.

The total expenditure on public buildings last year amounted to £249,303—namely, £51,848 under the Consolidated Fund, and £197,455 under the Public Works Fund. For the current year a total appropriation of £282,995 is proposed—namely, £47,055 under the Consolidated Fund, and £235,940 under the Public Works Fund.

GENERAL.

Under this head the expenditure amounted to £10,534, of which rather more than half was for the acquisition of additional land adjoining the site of the general departmental offices in Auckland to provide for an urgently necessary enlargement of the building. For the current year a vote of £15,670 is proposed, which provides for going on with the enlargement of the building just referred to; for the new offices and laboratory for the Mines Department, Wellington; for continuing work on the reconstruction of the departmental offices, Napier, &c.

JUDICIAL.

Courthouses.—New Courthouses were erected last year, or are now in hand, at Wellington, Dunedin, and Orepuki; and additions, or fairly extensive renova-

tions, have been made at Napier, New Plymouth, Patea, Carterton, Christchurch, Waimate, and Invercargill.

The principal works provided for in the vote for the current year are: New Courthouses at Hamilton, Tauranga, Levin, and Campbelltown; the completion of the new building at Wellington; and additions at Hastings, Manaia, and Westport.

Gaols.—The expenditure under this head last year amounted to £4,964. The construction of the new gaol at Mount Eden, Auckland, was proceeded with, and also the new wing at the Wellington Gaol; and the Gaoler's residence at Wellington and some warders' cottages at Lyttelton were completed; and a site acquired for the proposed new gaol at Invercargill. In the current year's vote provision is made for continuing work at Auckland and Wellington, and for going on with the proposed building at Invercargill; as well as for a Gaolers' residence at Auckland, and warders' cottages at Dunedin; also for some miscellaneous works at Napier, Wellington, and Dunedin.

Police-stations.—The works carried out under this head were numerous, the expenditure having amounted to £11,633. None of them, however, were on a large scale—the principal were as follows: New stations at Onehunga, Ongarue, Ormondville, Patea, Taihape, and Invercargill; new quarters at New Plymouth, Denniston, Timaru, and Oamaru; new site at Akaroa; extensive additions at Auckland and Dunedin (King Street); new lock-up, office, &c., at Kawhia; and minor additions and renovations at Port Awanui, Napier, Waipawa, Hawera, Wanganui, Foxton, Wellington, Greymouth, Christchurch, Geraldine, Temuka, Waimate, and St. Bathans.

POST AND TELEGRAPH.

Under this head the expenditure amounted to £74,686. The principal item was in connection with the acquisition of the additional land for the enlargement of the General Post Office, in connection with which £34,060 was spent. Additional land was also acquired at the Lower Hutt, Rongotea, and for a telegraph store at Christchurch. The following works were in hand during the year: New cable-station, Doubtless Bay; new post-offices, Dargaville, Paparoa, Onehunga, Mercer, Te Puke, Gisborne, Napier (Spit), Norsewood, Weber, Inglewood, Opunake, Pongaroa, Wanganui, Hunterville, Levin, Carterton, Motueka, Temuka, and Gore; extensive additions and alterations at both the telegraph and post offices at Dunedin; new quarters at Tapanui; additions or alterations at Auckland, Waihi, Waipukurau, Manaia, Hawera, Wellington, and Westport; and minor additions or repairs at Te Kopuru, Waiuku, Port Awanui, Wairoa, Hastings, Collingwood, Cheviot, Waiau, Christchurch (Lichfield Street), and Oamaru.

CUSTOMHOUSES.

The only expenditure last year under the head of Customhouses was in connection with the new building now in course of erection at Wellington, and for the completion of the new building at Timaru. For the current year provision is made for carrying on the work at the Wellington Customhouse, and for some small additions at Wanganui.

HOSPITALS FOR MENTAL DISEASES.

The expenditure on mental hospital buildings totalled to £10,167, being principally in connection with the institutions at Wellington, Porirua, and Seacliff. During the current year a larger expenditure is anticipated, and provision is made on the estimates for the new auxiliary buildings at Porirua and Sunnyside, and for alterations or additional accommodation at Auckland and Seacliff. Provision is also made for new buildings and sites for the accommodation of a class of patients who will be better provided for in separate buildings. The exact location of these buildings has not yet been fixed.

SCHOOLS.

The amount voted for school buildings last year totalled to £100,750—namely, £27,750 under the Consolidated Fund, and £73,000 under the Public

Works Fund. The expenditure amounted to £85,644—namely, £27,854 under the former, and £57,790 under the latter fund.

The bulk of this money was granted to Education Boards for expenditure, practically the only school-building works controlled by the Government being the buildings for Native and industrial schools. Native schools were erected, or are now in course of erection, at Whangara, Tongoio, Puniho, Te Teko, Torere, Omaio, and Te Kaha; the Ahipara School was removed and re-erected; additions were made at Tikitiki, Tuparoa, Waiomatatini, Te Araroa, and Parapara; and teachers' residences erected at Peria, Paeroa, and Kaiapoi.

For the current year a total appropriation of £110,950 is asked for—namely, £24,950 under the Consolidated Fund, and £86,000 under the Public Works Fund. In addition to the ordinary grants to Education Boards, provision is made for a grant of £5,756 to the Victoria College, and £2,124 (balance of grant for £3,000) to the Waitaki High School. Substantial provision is also made for the new industrial-school buildings at Levin, and for the Deaf-mute Institute at Sumner. Votes are also provided for additions to Mount Albert (Auckland) Industrial School, additions to the similar schools at Burnham and Te Oranga (Christchurch), and for the purchase of a building to be used as a receiving home in Christchurch, also for a home for weak-minded and epileptic children.

OTHER BUILDING WORKS.

In addition to the classes of buildings already mentioned, a sum of £3,540 was expended last year in grants for hospitals and other charitable institutions, the chief items being in connection with the Whangarei, Napier, and Greymouth Hospitals. Some expenditure also took place in connection with the new Sanatorium for Consumptives at Maungakawa, Cambridge. An amount of £884 was also expended on buildings for the Agricultural Department.

For the current year provision is made as under:—

Agriculture.—Bone-sterilising buildings and plant at Auckland and Bluff; purchase of land at Te Mata; new offices and laboratory, Wallaceville; new offices at Carterton and Balclutha; dairy-produce grading store at Dunedin; poultry depot at Christchurch; and for alterations and additions to existing accommodation at Hawera and Rotherham.

Hospitals and Charitable Institutions.—For grants for new hospitals at Northern Wairoa, Waihi, Wairoa (Hawke's Bay), and Reefton; for a nurses' home at Wanganui; for additions at Greymouth; and for one or two smaller items. Provision is also made for wards for cases requiring special treatment at Auckland, Wellington, Christchurch, and Dunedin; and for additions and improvements at the Inebriates' Home, Waitati.

Public Health.—Under this head substantial provision is made for completing the Cambridge Sanatorium, and for making a commencement with the Infectious Diseases Hospital at Auckland; also for a new wharf at the Motuihi (Auckland) Quarantine-station, and for alterations to the wharf at the similar station at Somes Island (Wellington), and for some small necessary buildings.

LIGHTHOUSES, HARBOUR-WORKS, AND HARBOUR DEFENCES.

The only lighthouse on which any expenditure worthy of mention took place last year was the new building now in course of erection at Kahuranga Point, but the connection of lighthouses with the telegraph system entailed an expenditure of over £1,600. On the current year's estimates provision is made for continuing this latter work, and for completing the Kahuranga building; also for new buildings at Cape Campbell and Jack's Point, and for a new dwelling at Cape Maria.

The expenditure on harbour-works was small, the item responsible for the bulk of the expenditure being the protection of the Spit at Napier against encroachment by the sea. For the current year provision is made for improving the channel to the wharf at Onehunga; for wharves at Waiwera, Mercury Bay, Opotiki, Mokau, and Bruce Bay; for some improvements in the harbour at

Collingwood; for protecting the Ocean Beach at St. Clair; and for sundry minor works.

Under the head of "Harbour Defences," last year's expenditure amounted to £6,126, and for the current year a vote of £10,000 is provided.

TOURIST AND HEALTH RESORTS.

The amount expended under this heading was £10,949, of which £6,495 was spent in and around Rotorua.

The other principal items of expenditure were: Accommodation-house, Waikaremoana, and improvements at Te Aroha and Queenstown.

Provision is made this year for some important works, such as new bath buildings, drainage, electrical and water-works at Rotorua, and a new bath and additional buildings at Hanmer.

The gross authorisation asked for is £26,535, on account of which a vote of £20,000 is proposed.

UTILISATION OF WATER-POWER FOR GENERATING ELECTRICITY.

New Zealand, being favoured with a good rainfall, distributed fairly evenly throughout the year, possesses numerous rivers and streams having, as a rule, a steady and abundant flow of water. When, in addition to this, we consider that many of our rivers and streams have their sources in high altitudes, their beds having a good, and, in many cases, a rapid fall, the conditions appear generally favourable for obtaining in a number of places a large and constant supply of water for motive power.

The Government, having been asked to provide expert advice as to the best means of utilising the water-power in certain rivers, has determined to ascertain the sources from which such power can most readily be obtained at reasonable cost.

Reliable data as to the flow of our rivers based on continuous records extending over a number of years are not at present available, but steps are being taken to obtain satisfactory information on this point. In rivers where no natural reservoirs, such as large lakes, exist, or where no artificial storage can be easily provided, it is essential to know accurately the low-water flow before undertaking the construction of costly works to utilise the power available.

Our rainfall statistics for the most part are the results of observations taken in settled districts, while the rivers and lakes that are apparently most likely to be utilised for power have their sources in mountainous districts where no regular observations have been taken. It thus happens that, while the rainfall records may be of service (in the absence of reliable measurements of low-water flow) for many of the smaller schemes suggested, for the larger schemes they give little or no information or help.

In the North Island over eighty streams and rivers have been suggested as affording suitable facilities for the supply of water for power-stations. Of these, the Wairua River Falls, north of Auckland, are conveniently situated in the centre of an isolated district. The Huka Falls, on the Waikato River, are centrally situated, and, from the very favourable conditions they present, a large supply of power can be got from them at a comparatively small cost, and, in addition to the falls themselves, much greater supplies of power by utilising the rapids below the falls. From these falls electrical energy can be distributed to various parts of the North Island between Auckland and Wellington at reasonable cost.

There is also a possibility of obtaining considerable power from the falls near Lake Waikaremoana and from the Rangitikei, Manawatu, and other rivers. In the cases of the rivers, however, the cost for the hydraulic part of any scheme would require investigation.

In the South Island over ninety rivers, streams, and lakes have been suggested as presenting conditions favourable for the generation of electrical energy from water-power. The streams and rivers of Marlborough, Nelson, and Westland could in some cases be utilised for electrical-generating stations of

more or less capacity were there any large demand in those districts for power. Proposals have been made to utilise the waters of the Waimakariri and also of the Rakaia for electrical power for Christchurch. The country between Lakes Tekapo and Pukaki is being examined to ascertain if the large flow of water from Tekapo, and the great fall of 730 ft. between Lakes Tekapo and Pukaki, can be utilised at reasonable cost. Information is also being obtained regarding a possible scheme for cutting a tunnel or tunnels between Lakes Hawea and Wanaka to utilise the fall of 134 ft. which exists between those lakes. Considerably over 100,000 brake horse-power for eight hours every day could be obtained in this way by damming the lake-outlet. The possibility of obtaining power at a reasonable cost from the Kawarau River just below Frankton is being considered; also the possibility of utilising the fall of nearly 100 ft. between Lakes Te Anau and Manapouri in a distance of about four miles. About 300,000 to 400,000 brake horse-power, it is thought, may be available if the waters of Te Anau Lake were utilised. Between Lakes Hauroto and Pōteriteri a difference of level of about 515 ft. exists. If the outlet of Lake Hauroto were dammed, and a tunnel (probably less than two miles and a half long) cut through the narrowest part of the ridge between the lakes, a large supply of power could be obtained—probably, in view of the very heavy rainfall on the lake drainage area, about 150,000 brake horse-power in eight hours each day. Further information is being obtained about these larger schemes. Other lakes and streams will no doubt be found to present favourable conditions for power-generating stations. It is evident that there are immense possibilities as to the development of hydraulic power for industrial purposes.

After inquiry respecting a suitable expert, the Government determined to invite Mr. L. M. Hancock, of San Francisco, to visit the colony, and, after inspecting the more likely sources of power, to advise generally upon the matter. Mr. Hancock is the engineer of the Bay Counties scheme in California—one of the largest and most successful power schemes in the United States, and one in connection with which energy is transmitted over very great distances. Mr. Hancock has recently arrived in the colony, and is now engaged in examining sources from which it is thought considerable power can be obtained at a reasonable cost.

CONCLUSION:

In conclusion, I think honourable members must admit that the opening-up of our Crown lands and the extension of our railways and roads has materially assisted to bring about the prosperity which this colony has so long enjoyed. We must continue to open up land for settlement by means of money spent on roads and bridges, and we must still continue—slowly, it may be—to take our railways forward to those points where they will serve the purpose of tapping districts of high producing capacity. That has been our policy in the past, and will continue to be our policy in the future, and I trust that the careful consideration given to the allocation of the amounts proposed for appropriation for the several works will meet with the approval of honourable members.

PUBLIC WORKS STATEMENT, 1903.

INDEX.

TABLES.

	Page
No. 1.—TOTAL EXPENDITURE:—Summary showing the Total Expenditure and Liabilities on Public Works and other Services out of the Public Works Fund to 31st March, 1903	2
No. 2.—YEARLY EXPENDITURE OUT OF THE PUBLIC WORKS FUND up to 1902-1903	3
No. 3.—RAILWAYS:—Statement showing Expenditure and Liabilities on Railways, including Valuation of Provincial Lines, to 31st March, 1903	4
No. 4.—ROADS:—Statement showing Expenditure on Roads to 31st March, 1903	5
Nos. 5 and 5A.—DEVELOPMENT OF GOLDFIELDS:—Statement showing Expenditure and Liabilities on Development of Goldfields to 31st March, 1903	27
No. 6.—TELEGRAPHS:—Statement showing Expenditure and Liabilities on Telegraphs to 31st March, 1903	29
No. 7.—PUBLIC BUILDINGS:—Statement showing Expenditure and Liabilities on Public Buildings to 31st March, 1903	32
No. 8.—LIGHTHOUSES AND HARBOUR-WORKS:—Statement showing Expenditure and Liabilities on Lighthouses and Harbour-works and Harbour Defences to 31st March, 1903	32

APPENDICES.

Appendix A.—EXPENDITURE FOR THE YEAR:—Audited Statement of Expenditure out of the Public Works Fund for the Year 1902-1903	34
" B.—TOTAL LIABILITIES:—Statement of all Liabilities of the Public Works Department outstanding on 31st March, 1903	36
" C.—RAILWAYS AND PUBLIC BUILDINGS CONTRACTS:—Schedule of Contracts current on 1st April, 1902, and further Contracts entered into by the Public Works Department during the Year ended 31st March, 1903	37
" D.—SLEEPER CONTRACTS:—Schedule of Sleeper Contracts current on 1st April, 1902, and further Contracts entered into by the Public Works Department during the Year ended 31st March, 1903	43
" E.—ANNUAL REPORT ON PUBLIC WORKS, by the Engineer-in-Chief	46
" F.—SUPPLEMENTARY REPORT, MIDLAND RAILWAY—V. G. Bogue	58

TABLE NO. 1.

SUMMARY showing the TOTAL EXPENDITURE ON PUBLIC WORKS AND OTHER SERVICES out of PUBLIC WORKS FUND to 31st March, 1903, and the LIABILITIES on that Date.

Number of Table containing Details.	Works.	Total Net Expenditure to 31st March, 1902.	Expenditure during 12 Months ended 31st March, 1903.	Total Expenditure to 31st March, 1903.	Liabilities on Authorities, Con- tracts, &c., 31st March, 1903.	Total Expenditure and Liabilities.	Works.
3	Railways ...	£ s. d. 18,501,966 11 10	£ s. d. 759,752 12 3	£ s. d. 19,261,719 4 1	£ s. d. 217,089 10 5	£ s. d. 19,478,808 14 6	Railways.
4*	Roads ...	£ s. d. 15,066,209 6 7	£ s. d. 128,203 14 5	£ s. d. 6,248,248 1 0	£ s. d. 244,279 9 5	£ s. d. 6,492,527 10 5	Roads.
5 and 5A	Development of goldfields ...	£ s. d. 651,678 14 7	£ s. d. 24,212 15 4	£ s. d. 675,891 9 11	£ s. d. 5,001 12 4	£ s. d. 680,893 2 3	Development of goldfields.
6	Telegraphs ...	£ s. d. 937,887 2 3	£ s. d. 68,578 7 8	£ s. d. 1,006,465 9 11	£ s. d. 27,409 0 0	£ s. d. 1,033,874 9 11	Telegraphs.
7	Public buildings ...	£ s. d. 2,655,249 9 6	£ s. d. 197,455 2 3	£ s. d. 2,852,704 11 9	£ s. d. 84,596 9 0	£ s. d. 2,937,301 0 9	Public buildings.
8	Lighthouses, harbour works, and harbour defences	£ s. d. 977,771 18 11	£ s. d. 13,581 3 4	£ s. d. 991,353 2 3	£ s. d. 1,760 7 11	£ s. d. 993,113 10 2	Lighthouses, harbour works, and harbour defences.
18 of 1878	Departmental ...	£ s. d. 477,087 7 11	£ s. d. 13,949 4 8	£ s. d. 491,036 12 7	£ s. d. 491,036 12 7	£ s. d. 491,036 12 7	Departmental.
11 of 1877	Coal-exploration and mine-development	£ s. d. 10,835 8 0	£ s. d. ...	£ s. d. 10,835 8 0	£ s. d. ...	£ s. d. 10,835 8 0	Coal-exploration and mine-development.
...	Aiding works on Thames goldfields	£ s. d. 50,000 0 0	£ s. d. ...	£ s. d. 50,000 0 0	£ s. d. ...	£ s. d. 50,000 0 0	Aiding works on Thames goldfields.
...	Immigration	£ s. d. 2,147,858 10 6	£ s. d. 141 15 5	£ s. d. 2,148,000 5 11	£ s. d. ...	£ s. d. 2,148,000 5 11	Immigration.
...	Purchase of Native lands	£ s. d. 11,983,230 18 10	£ s. d. 15,782 13 5	£ s. d. 1,999,013 12 3	£ s. d. 4,566 0 0	£ s. d. 2,003,579 12 3	Purchase of Native lands.
...	Defence	£ s. d. 606,835 17 0	£ s. d. 37,003 11 4	£ s. d. 733,839 8 4	£ s. d. 72 0 0	£ s. d. 733,911 8 4	Defence.
...	Charges and expenses of raising loans	£ s. d. 11,062,875 14 5	£ s. d. 88,179 12 10	£ s. d. 1,151,055 7 3	£ s. d. ...	£ s. d. 1,151,055 7 3	Charges and expenses of raising loans.
...	Interest and sinking fund	£ s. d. 218,500 0 0	£ s. d. ...	£ s. d. 218,500 0 0	£ s. d. ...	£ s. d. 218,500 0 0	Interest and sinking fund.
...	Rates on Native lands	£ s. d. 64,796 13 6	£ s. d. 471 8 9	£ s. d. 65,268 2 3	£ s. d. 355 2 2	£ s. d. 65,623 4 5	Rates on Native lands.
...	Thermal springs	£ s. d. 14,599 13 2	£ s. d. ...	£ s. d. 14,599 13 2	£ s. d. ...	£ s. d. 14,599 13 2	Thermal springs.
...	Tourist and health resorts	£ s. d. 11,260 0 10	£ s. d. 10,948 14 5	£ s. d. 22,208 15 3	£ s. d. 1,136 8 0	£ s. d. 23,345 3 3	Tourist and health resorts.
...	Lands improvement	£ s. d. 1,741 7 10	£ s. d. 2,348 9 7	£ s. d. 4,089 17 5	£ s. d. 300 0 0	£ s. d. 4,389 17 5	Lands improvement.
Totals	Totals	£ s. d. 36,430,384 15 8	£ s. d. 1,514,444 5 8	£ s. d. 37,944,829 1 4	£ s. d. 586,565 19 3	£ s. d. 38,531,395 0 7	Totals.

* Table 4 also contains details of expenditure and liabilities under Government Loans to Local Bodies Account. † Includes expenditure under Lands Improvement Account, £300,929 12s. 5d., and £30,000 transferred from Consolidated Fund, previously applied in reduction of "Roads" Expenditure. ‡ Includes £650 charged to "Unauthorised." § Includes £1,130 6s. 3d. charged to "Unauthorised." || Includes expenditure under Native Lands Purchase Account, £491,980 1s. 1d. ¶ Expenditure reduced by premium on loans raised previously.

TABLE No. 2.
GENERAL SUMMARY.
Showing NET YEARLY EXPENDITURE out of PUBLIC WORKS FUND, 1881-82 to 1902-03.

Description of Services.	Total Net Expenditure to 31st March, 1881.	Expenditure.																					Total Net Expenditure to 31st March, 1903.	
		1881-82.	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.	1899-1900.	1900-1.	1901-2.		1902-3.
Immigration	£ 1,921,420	£ 6,797 <i>Cr. 2,462</i>	£ 3,999	£ 107,041	£ 57,148	£ 11,675	£ 12,454	£ 15,598	£ 8,791	£ 867	£ 1,823	£ 817	£ 242	£ 343	£ 101	£ Cr. 10	£ 301	£ 70	£ 105	£ 385	£ 214	£ 139	£ 142	£ 2,148,000
Public Works Departmental	157,871	13,321 <i>Cr. 89</i>	12,871	13,465	30,157	29,632	25,835	25,090	21,458	12,294	10,264	7,796	7,790	8,406	8,680	14,300	14,892	9,689	10,090	12,572	12,933	17,771	*13,949	491,037
Railways	9,504,339	454,333 <i>Cr. 21,809</i>	354,781	662,046	663,063	725,496	616,447	403,727	272,077	289,601 <i>Cr. 29</i>	180,021	154,417 <i>Cr. 681</i>	220,894	176,304	247,545	197,105	207,231 <i>Cr. 334</i>	351,600	374,192	417,937	717,723	1,333,941	759,752	19,261,719
Roads:—																								
Roads North of Auckland	85,014	17,022	7,929	17,566	34,574	33,163	30,738	3,138	264	267	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Main Roads	802,076	92,520	111,603	31,809	30,380	26,833	22,294	13,756	10,968	12,799	9,905	11,739	12,588	22,235	22,731	27,959	4,289	241,209	248,934	237,351	267,374	354,687	†230,349	..
Miscellaneous Roads and Bridges .. .. .	..	..	..	61,635	37,165	37,615	39,748	25,989	26,748	19,998	12,489	6,843	10,443	58,042	9,972	17,075	11,195	..	..	..	..	..	..	..
Roads to open up Lands	96,407	35,936	81,634	84,631	49,314	61,794	57,157	61,488	21,954	28,160	24,285	27,993	21,989	..	..	..	..	..	..	..	..	..	..	..
Grants-in-Aid	225,000	..	..	106,399	149,982	138,045	81,264	57,632	26,913	2,172	1,586	10,757	7,144	8,951	..	..	..	..	..	..	..	..	..	..
Village Settlements .. .. .	..	..	..	..	..	..	1,891	12,053	10,770	7,345	4,884	3,829	4,412	2,898	..	..	..	..	..	..	..	..	..	..
Local Bodies .. .. .	..	..	..	..	..	..	..	..	..	315	470	..	..	390	..	227	207	..	..	..	..	..	..	..
Roads on Goldfields .. .. .	..	..	9,439	26,602	15,631	31,622	32,625	25,053	7,015	13,290	12,687	9,795	19,490	20,387	17,577	21,513	32,578	49,569	46,550	48,039	48,417	47,573	51,690	..
Miscellaneous	318,646	237 <i>Cr. 109</i>	471	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Development of Thermal Springs and Natural Scenery .. .. .	..	..	..	..	..	6,832	12,900	20,410	1,898	248	5,532	30,289	29,440	34,765	17,841	..	16,023	..	..	..	..	..	..	..
Roads to give access to North Island Trunk Railway .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	89,207	108,168	103,555	..	..	..	..	..	..	..
Lands Improvement Account .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total, Roads	1,527,143	145,606	211,076	328,642	317,043	335,904	278,617	219,519	106,439	83,009	45,164	36,761	103,893	146,638	150,278	174,369	167,482	290,413	295,119	285,043	315,791	402,260	282,039	6,248,248
Development of Goldfields	497,507	13,272	6,824	16,596	8,029	9,032	7,665	1,016	55	284	821	2,257	3,811	5,272	5,865	9,345	10,508	33,117	17,355	21,815	15,907	15,326	24,213	725,892
Purchase of Native Lands	829,456	40,573 <i>Cr. 2,661</i>	29,844	24,480	70,572	34,545	88,836	25,643	9,072	28,194	17,925	52,397	57,187 <i>Cr. 10,438</i>	4,320 <i>Cr. 2,428</i>	349 <i>Cr. 12</i>	..	Cr. 37	61,503	53,182 <i>Cr. 225</i>	32,025	28,688	18,261	15,783	..
Native Lands Purchase Account .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	19,575	78,985	101,009	163,411	129,000	..	..	..	..	..	..
Total, Land Purchases	829,456	37,912	29,844	24,480	70,572	34,545	88,836	25,643	9,072	28,194	17,925	52,397	66,324	80,877	101,346	163,411	128,963	61,503	52,957	32,025	28,688	18,261	15,783	1,999,014
Telegraph Extension	412,547	7,517 <i>Cr. 32</i>	18,654	19,532	25,799	36,010	18,952	22,984	12,047	16,346	16,292	27,773	29,245	16,127	19,229	35,538	36,791	29,384	28,551	26,771	50,101	31,729	68,578	1,006,465
Public Buildings:—																								
General (including Miscellaneous)	154,733	..	..	34	..	..	947	12,742	14,588	7,256	2,880	454	1,588	621	2,523	3,724	8,178	14,797	8,764	3,957	5,594	12,513	9,031	..
Parliamentary .. .. .	..	..	5,331	8,416	183	..	8	24	..	..	..	..	..	209	6,822	..	9	466	20,636	9,883	3,039	4,424	1,503	..
Judicial	133,901	16,259	16,743	22,652	12,227	11,106	15,875	8,273	8,228	11,246	9,892	8,901	2,779	5,262	11,487	27,341	14,806	12,727	11,109	19,682	29,630	28,728	33,224	..
Post and Telegraph	88,280	1,752	9,939	22,616	8,955	4,880	2,772	2,227	82	1,376	709	1,009	6,843	3,154	3,542	6,194	7,504	5,888	5,168	13,483	20,954	40,361	74,686	..
Customs	1,969	..	193	1,659	830	99	..	..	..	18	409	13	5	666	12	647	16	385	..	107	875	2,066	6,630	..
Survey .. .. .	..	..	20	34	..	..	461	..	..	..	..	..	..	..	28	..	..	..	..	..	..	..	..	..
Quarantine Stations .. .. .	..	971	996	848	313	123	274	..	..	..	..	..	..	3	306	..	..	..	..	..	2,607	424	..	..
Lunatic Asylums	84,656	26,699 <i>Cr. 4</i>	31,652	58,047	24,992	4,007	13,694	23,107	10,242	15,717	8,930	16,914	11,887	18,957	13,633	10,935	16,404	14,130	17,667	17,712	18,872	16,743	10,167	..
Hospitals and Charitable Institutions	16,523	140	64	256	3,792	3,299	4,421	4,156	673	Cr. 140	..	..	7,999	..	6,561	700	..	..	..	899	5,141	1,200	3,540	..
School-buildings	377,692	82,535	88,134	49,814	66,069	62,884	51,607	40,000	779	..	..	7,500	..	15,000	15,000	20,000	22,143	23,864	43,403	49,256				

TABLE No. 3.
EXPENDITURE on RAILWAYS to 31st March, 1903, and LIABILITIES on that Date.

LINES OF RAILWAY.	Total Expenditure by General Government to 31st March, 1902.	EXPENDITURE DURING YEAR 1902-3 (INCLUDING £13,065 2s. 5d. DISTRIBUTED FROM STOCK OF PERMANENT-WAY).							Total Expenditure by General Government to 31st March, 1903.	Liabilities.	Total Expenditure by General Government, and Liabilities, 31st March, 1903.	Valuation of Works constructed by Provinces.	Total Expenditure and Liabilities, 31st March, 1903.	LINES OF RAILWAY.
		New Works.			Works on Open Lines.	Land-claims and other Old Liabilities.	Surveys.	Rolling-stock.						
		Construction.	Permanent- way.	Total New Works.										
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Kaihu Valley	55,043 10 7					1 6 6			55,044 17 1		55,044 17 1		55,044 17 1	Kaihu Valley.
Kawakawa	101,770 17 0	7,190 16 11	3,147 16 8	10,338 13 7					112,109 10 7		112,109 10 7		112,109 10 7	Kawakawa.
Whangarei to Kamo Extension	147,397 7 10	4,180 18 1		4,180 18 1	405 6 5				151,983 12 4	5,777 3 3	157,760 15 7		157,760 15 7	Whangarei to Kamo Extension.
Helensville Northwards	131,367 5 8	9,553 7 8	2,050 19 0	11,604 6 8					142,971 12 4	10 5 10	142,981 18 2		142,981 18 2	Helensville Northwards.
Kaipara to Waikato	1,193,470 18 4				7,831 17 6				1,201,302 15 10		1,201,302 15 10		1,201,302 15 10	Kaipara to Waikato.
Cambridge Branch	51,110 9 9								51,110 9 9		51,110 9 9		51,110 9 9	Cambridge Branch.
Waikato to Thames— Hamilton to Te Aroha	139,414 0 11				420 19 6				139,835 0 5		139,835 0 5		139,835 0 5	Waikato to Thames— Hamilton to Te Aroha.
Te Aroha to Thames	184,198 4 0				567 6 7	14 0 10			184,779 11 5		184,779 11 5		184,779 11 5	Te Aroha to Thames.
Paeroa to Waihi	37,650 17 5	13,687 10 7	198 11 0	13,886 1 7					51,536 19 0	5,498 18 2	57,035 17 2		57,035 17 2	Paeroa to Waihi.
Thames Valley to Rotorua— Morrinsville to Lichfield	161,552 5 2								161,552 5 2		161,552 5 2		161,552 5 2	Thames Valley to Rotorua— Morrinsville to Lichfield.
Putaruru to Rotorua	192,761 10 3				51 14 1				192,813 4 4		192,813 4 4		192,813 4 4	Putaruru to Rotorua.
Marton to Te Awamutu— North End	491,887 14 9	44,270 17 2	16,441 9 7	60,712 6 9					552,600 1 6	11,508 1 10	564,108 3 4		564,108 3 4	Marton to Te Awamutu— North End.
South End	501,877 5 10	67,891 8 8	5,575 14 4	73,467 3 0					575,344 8 10	3,198 8 4	578,542 17 2		578,542 17 2	South End.
Gisborne to Ormond Tramway	4,975 1 7								4,975 1 7		4,975 1 7		4,975 1 7	Gisborne to Ormond Tramway.
Gisborne to Karaka	59,950 10 1	13,428 2 3	53 7 0	13,481 9 3					73,431 19 4	6,982 6 11	80,414 6 3		80,414 6 3	Gisborne to Karaka.
Wellington to Napier— Napier to Woodville and Palmerston North	813,571 9 6				11,804 10 10				825,376 0 4		825,376 0 4		825,376 0 4	Wellington to Napier— Napier to Woodville and Palmerston North.
Wellington to Woodville, including Te Aro Extension	1,201,345 17 8				32,265 1 11	5 0 0			1,233,615 19 7		1,233,615 19 7		1,233,615 19 7	Wellington to Woodville, including Te Aro Extension.
Wellington to Foxton	42,116 3 4								42,116 3 4		42,116 3 4		42,116 3 4	Wellington to Foxton.
Foxton to Waitara	1,383,637 1 3				20,802 3 5				1,404,439 4 8		1,404,439 4 8		1,404,439 4 8	Foxton to Waitara.
Stratford-Kawakawa	20,941 7 6	11,809 13 0	138 1 0	11,947 14 0					32,889 1 6	801 3 10	33,690 5 4		33,690 5 4	Stratford-Kawakawa.
Nelson to Roundell	164,146 10 1				1,337 19 11	38 0 0			165,522 10 0		165,522 10 0		165,522 10 0	Nelson to Roundell.
Midland Railway— Reefton-Inangahua	1,294 9 9	2,388 10 6		2,388 10 6		23 1 3			3,706 1 6	13,267 16 8	16,973 18 2		16,973 18 2	Midland Railway— Reefton-Inangahua.
Nelson End	22,247 15 11	5,238 13 8		5,238 13 8		300 0 0			27,786 9 7	8,354 18 0	36,141 7 7		36,141 7 7	Nelson End.
Otira End	96,967 4 5	1,932 5 10		1,932 5 10	1,729 14 1	38 16 4			100,668 0 8	8 11 6	100,676 12 2		100,676 12 2	Otira End.
Springfield End	125,554 18 3	29,693 15 6	11 0 0	29,704 15 6		14 3 3			155,273 17 0	1,787 19 2	157,061 16 2		157,061 16 2	Springfield End.
Greymouth to Nelson Creek	166,471 11 11								166,471 11 11		166,471 11 11		166,471 11 11	Greymouth to Nelson Creek.
Greymouth to Hokitika and Ross	191,229 17 2	7,244 10 1		7,244 10 1	1,539 11 2				200,013 18 5	24,406 7 7	224,420 6 0		224,420 6 0	Greymouth to Hokitika and Ross.
Westport to Ngakawau	187,512 15 7								187,512 15 7		187,512 15 7		187,512 15 7	Westport to Ngakawau.
Ngahere-Blackball	116 12 11	973 2 9		973 2 9					1,089 15 8	22,497 5 11	23,587 1 7		23,587 1 7	Ngahere-Blackball.
Picton to Waipara— Picton to Cheviot	322,231 4 1	5,037 12 0		5,037 12 0	150 18 0	Cr. 20 0 0			327,399 14 1		327,399 14 1		327,399 14 1	Picton to Waipara— Picton to Cheviot.
Waipara to Cheviot	61,664 2 1	26,613 6 3	5,681 2 8	32,294 8 11					93,958 11 0	6,166 7 10	100,124 18 10		100,124 18 10	Waipara to Cheviot.
Hurunui to Waitaki— Main Line	1,522,783 15 1				17,740 4 8				1,540,523 19 9		1,540,523 19 9	316,135 0 0	1,856,658 19 9	Hurunui to Waitaki— Main Line.
Oxford Branch	51,467 7 11								51,467 7 11		51,467 7 11		51,467 7 11	Oxford Branch.
Eyreton Branch	44,276 12 10								44,276 12 10		44,276 12 10		44,276 12 10	Eyreton Branch.
Lytelton Branch	72,237 10 3				3,986 9 1				76,223 19 4		76,223 19 4	340,500 0 0	416,723 19 4	Lytelton Branch.
Southbridge Branch	87,815 18 0				22 10 3	10 0 0			87,848 8 3		87,848 8 3		87,848 8 3	Southbridge Branch.
Springfield and Whitecliffs Branches	93,791 12 3				44 19 4				93,836 11 7		93,836 11 7		93,836 11 7	Springfield and Whitecliffs Branches.
Fairlie Creek Branch	66,872 12 5								66,872 12 5		66,872 12 5	75,124 0 0	141,996 12 5	Fairlie Creek Branch.
Waimate Branch	47,953 11 8								47,953 11 8		47,953 11 8		47,953 11 8	Waimate Branch.
Ashburton Forks Branch	*74,214 6 2								*74,214 6 2		74,214 6 2		74,214 6 2	Ashburton Forks Branch.
Upper Ashburton Branch	61,582 16 9								61,582 16 9		61,582 16 9		61,582 16 9	Upper Ashburton Branch.
Little River Branch	107,491 10 2				32 5 10				107,523 16 0		107,523 16 0		107,523 16 0	Little River Branch.
Canterbury Interior Main Line— Oxford to Malvern	53,649 0 4								53,649 0 4		53,649 0 4		53,649 0 4	Canterbury Interior Main Line— Oxford to Malvern.
Whitecliffs to Rakaia	542 6 2								542 6 2		542 6 2		542 6 2	Whitecliffs to Rakaia.
Temuka to Rangitata	5,152 2 8								5,152 2 8		5,152 2 8		5,152 2 8	Temuka to Rangitata.
Waitaki to Bluff— Main Line, including Port Chalmers Branch	2,496,433 11 10				47,220 4 2				2,543,653 16 0		2,543,653 16 0	82,258 17 3	2,625,912 13 3	Waitaki to Bluff— Main Line, including Port Chal- mers Branch.
Duntroon Branch	95,826 8 7				505 12 0				96,332 0 7		96,332 0 7	37,500 0 0	133,832 0 7	Duntroon Branch.
Ngapara Branch	24,986 15 9				730 14 6				25,717 10 3		25,717 10 3	58,009 0 0	83,726 10 3	Ngapara Branch.
Fernhill Railway Purchase	1,277 8 10					120 0 0			1,397 8 10		1,397 8 10		1,397 8 10	Fernhill Railway Purchase.
Brighton Road Branch	6,473 14 9													

*

TABLE No. 4.

STATEMENT showing the NET EXPENDITURE ON ROADS, BRIDGES, &c., out of the Public Works Fund, and Government Loans to Local Bodies, Lands Improvement, and Native Land Purchase Accounts to 31st March, 1903.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.			£ s. d.
101	1	AUCKLAND— Ahipara Bridge	Mongonui	Bay of Islands	75 0 0
	2	Ahipara-Herekino	"	"	136 10 9
	3	Awanui-Taipa-Maunganui Parish	"	"	16 8 9
	7	Fairburn's Road	"	"	165 16 6
	9	Kaitaia-Awanui-West Coast	"	"	200 0 0
	12	Mangonui Beach Road to Junction	"	"	100 0 0
	13	Mangonui-Awanui	"	"	186 7 6
	16	Maungataniwha	"	"	11 18 0
	17	Oruru-Hikurangi	"	"	11 11 0
	18	Oruru-Peria	"	"	190 0 0
	20	Peria-Victoria Valley	"	"	12 0 8
	21	Peria-Block V., Maungataniwha	"	"	49 15 6
	22	Peria-Mangonui	"	"	100 0 0
	23	Takahue-Herekino	"	"	80 13 0
	24	Takahue Village-Victoria Valley	"	"	100 13 0
	25	Victoria Valley-Main Road	"	"	331 11 10
	27	Kaeo-Waimate	Whangaroa and Bay of Islands	"	142 2 3
	29	Kaeo-Waiari	Whangaroa	"	13 6 0
	30	Matawherohia-Kaeo	"	"	16 16 0
	31	Mangonui Parish-Kaeo Parish	"	"	507 3 1
	32	Pupuke-Kaeo	"	"	137 0 9
	33	Totara Foreshore roads	"	"	50 0 0
	34	Whangaroa County roads	"	"	400 0 0
	35	Whangaroa Harbour-Kaeo	"	"	275 0 0
	36	Hukerenui-Kaeo Parish	Bay of Islands	"	116 11 1
	37	Hukerenui South-Waiotu Valley	"	"	7 11 3
	40	Kaikohe-Maungakahia-Dargaville	Bay of Islands, Hobson, and Hokianga	Bay of Islands, Marsden, and Kaipara	215 7 3
	41	Kaikohe-Ngapipito-Kawakawa	Bay of Islands	Bay of Islands	36 11 0
	48	Ngapipito	"	"	81 12 0
	59	Ramarama Valley	"	"	70 7 2
	60	Ruapekapeka East Schoolhouse	"	"	39 15 10
	65	Towai-Ramarama	"	"	4 16 6
	66	Utakura boundary (slip)	Bay of Islands and Hokianga	"	235 2 1
	67	Utakura Road (deviation)	Bay of Islands	"	378 5 9
	68	Waikerikeri Bridge	"	"	6 6 0
	69	Waimate-Hukerenui	"	"	232 19 2
	71	Waipapa-Kaipiro Stream	"	"	2 5 0
	72	Waitangi Bridge	"	"	2 14 0
	74	Auckland Special Settlement	Hokianga	"	129 6 4
	75	Auckland Special Settlement-Mangakahia	"	"	19 6 6
	76	Broadwood-Herekino	"	"	68 0 11
	77	Herd's Point-Takahue	"	"	57 2 0
	78	Herekino	"	"	128 18 9
	81	Kaikohu-Rawene	Hokianga and Bay of Islands	"	183 14 9
	83	Kohukohu-Otane	Hokianga	"	133 9 3
	84	Kohukohu-Motukaraka (Rimu Valley)	"	"	36 4 6
	85	Kohukohu-Rakautapu	"	"	242 16 11
	86	Mangamuka-Oruru-Mangonui	Hokianga and Mongonui	"	34 0 0
	87	Mangamuka-Victoria Valley	Hokianga	"	8 15 0
	91	Motukaraka Village Settlement-Kohukohu-Rakautapu	"	"	6 18 0
	92	Okaihau-Horeke	"	"	83 9 10
	93	Okaihau-Victoria Valley	Hokianga, Mongonui, and Bay of Islands	"	96 9 0
	97	Opanaki-Waipiria Bridge	Hokianga	Kaipara	66 12 6
	100	Punakitere Settlement Bridge over Otatau River	"	Bay of Islands	19 4 11
	101	Punakitere Settlement roads	"	"	10 0 0
	104	Taheke Bridge	"	"	12 12 0
	105	Te Awaroa North	"	"	69 11 0
	107	Waihou-Mangamuka-Oruru	"	"	108 7 9
	108	Waihou-Umawhero	"	"	106 1 6
	111	Waimamaku	"	"	54 4 0
	112	Waimamaku-Pakanae	"	"	101 9 3
	113	Waimamaku-Punakitere	"	"	122 15 3
	114	Waimamaku River Bridge	"	"	275 4 0
	116	Waimamaku Settlement	"	"	166 9 3
	117	Waimatanui Roads	"	"	0 10 0
	118	Waiotemarama	"	"	72 17 3
	119	Waipoua Survey District (part Block VII.)	"	Kaipara	27 8 0
	120	Wairere Creek Bridge (Horeke Settlement)	"	Bay of Islands	187 15 8
	125	Bull's Road, Waikiekie	Whangarei	Marsden	114 11 0

TABLE No. 4—*continued*.
STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—*continued*.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.— <i>continued</i> .			£ s. d.
101	128	AUCKLAND— <i>continued</i> . Grahamtown-Parua Bay	Whangarei ..	Marsden ..	50 19 6
	131	Hikurangi Swamp	" ..	" ..	200 0 0
	132	Hikurangi Wellsford (70 miles)	Whangarei, Otamatea, and Rodney ..	" ..	17 15 10
	134	Hukerenui-Waipu Gorge	Whangarei ..	Bay of Islands ..	171 14 8
	136	Jordan-Waiotu Railway-station	" ..	" ..	100 0 0
	139	Kaimamaku-Helena Bay	" ..	" ..	150 0 0
	140	Kaimamaku-Railway-station	" ..	" ..	100 0 0
	143	Mangakahia Bridge-Mangakahia Church	" ..	Marsden ..	101 0 9
	144	Mangakahia No. 2 (Blocks XI. and XII.)	" ..	" ..	21 2 10
	145	Mangakahia (Blocks XI., XII., XV., and XVI.) (credit of Government Loans to Local Bodies Account)	" ..	" ..	1,166 10 11
	146	Mangapai-Waikiekie	" ..	" ..	263 12 6
	148	Marua-Hikurangi	" ..	" ..	196 6 9
	149	Marua-Whananaki	" ..	" ..	150 0 0
	151	Maungakamea	" ..	" ..	165 0 0
	153	Maungatapere-Tangiteroria	" ..	Marsden & Kaipara ..	4 7 6
	154	Maunu-Maungatapere-Mangakahia	" ..	" ..	199 12 0
	156	Ngunguru-Khipaka	" ..	" ..	100 0 0
	157	Opuawhanga No. 1	" ..	Bay of Islands ..	82 19 11
	161	Parua-Patua (Whangarei Heads-coast)	" ..	Marsden ..	35 5 0
	162	Parua-Ruatangata-Mangakahia	" ..	" ..	100 0 0
	163	Poroti-Wairua Bridge	" ..	" ..	31 8 6
	164	Ruatangata-Kamo	" ..	" ..	149 0 0
	165	Ruatangata-Railway-station	" ..	" ..	200 0 0
	166	Tangihua-Maungatapere-Maungakamea	" ..	" ..	25 0 0
	168	Tokatoka-Mangapai	Whangarei & Hobson ..	Marsden & Kaipara ..	154 15 8
	170	Waiotama Bridge (Maungatapere-Tangiteroria)	Whangarei ..	Marsden ..	35 0 6
	171	Waipu Gorge-Topini	Whangarei and Otamatea ..	" ..	271 6 5
	173	Waipu-Mareretu	Whangarei ..	" ..	214 19 5
	175	Waipu River improvement (£44, £1 for £1)	" ..	" ..	219 10 2
	176	Waipu Wharf	" ..	" ..	50 0 0
	177	Wairua Bridge to head of navigation	" ..	" ..	200 0 0
	178	Whangarei-Whangarei Heads	" ..	" ..	300 0 0
	185	Aratapu-West Coast	Hobson ..	Kaipara ..	75 0 0
	187	Avoca Special Settlement	" ..	" ..	73 17 8
	189	Beasley's Corner	" ..	" ..	100 0 0
	201	Mangatu Special Settlement, <i>via</i> Maunganui Bluff-West Coast	" ..	" ..	34 18 6
	204	Maunganui Bluff-West Coast	" ..	" ..	100 0 0
	208	Maungaru Settlement	" ..	" ..	2 2 6
	211	Okahu	" ..	" ..	150 0 0
	212	Opanaki-Hokianga	Hobson & Hokianga ..	Kaipara and Bay of Islands ..	276 1 7
	215	Tangihua	Hobson & Whangarei ..	Marsden ..	8 12 0
	220	Tangowahine-Avoca	Hobson ..	Kaipara ..	16 0 0
	225	Burch's land (road through)	Otamatea ..	" ..	4 16 0
	226	Hardie's Road-Paparua	" ..	" ..	23 13 8
	227	Hukatere	" ..	" ..	52 12 10
	228	Kaiwaka-Mangawai	" ..	Marsden ..	140 19 0
	229	Kaiwaka-Maungaturoto	" ..	" ..	132 8 0
	232	Mareretu Central	" ..	" ..	46 19 11
	233	Matakohe	" ..	Kaipara ..	30 0 0
	234	Matakohe-Hukatere	" ..	" ..	48 10 11
	235	Matakohe-Mangonui	" ..	" ..	109 18 8
	238	Matakohe Wharf-Post-office	" ..	" ..	97 6 7
	240	Maungaturoto-Bridge	" ..	Marsden ..	100 0 0
	242	Maungaturoto-Waikiekie	" ..	" ..	48 4 4
	243	Maungaturoto Wharf and Road	" ..	" ..	71 18 0
	245	Pahi-Paparua	" ..	Kaipara ..	43 13 1
	248	Paparua-Maungaturoto	" ..	Kaipara & Marsden ..	25 4 0
	249	Paparua Valley	" ..	" ..	100 11 3
	250	Paparua Village bridges	" ..	" ..	198 18 1
	253	Raupo Settlement-Tokatoka Post-office Road	" ..	Kaipara ..	41 18 3
	255	Tokatoka-Post-office	" ..	" ..	100 0 0
	257	Tokatoka Swamp	" ..	" ..	831 17 9
	258	Village Road-Paparua	" ..	" ..	30 17 6
	259	Whakapirau	" ..	" ..	100 0 0
	262	Dibble Bridge	Rodney ..	Marsden ..	4 17 0
	264	Hellensville-Port Albert	Rodney & Waitemata ..	Kaipara ..	122 10 9
	265	Hoteo Bridge	Rodney ..	" ..	63 7 6
	266	Hoteo Parish, Sections 90 and 74a (road between)	" ..	Marsden ..	4 17 0
	268	Hoteo Valley-Te Arai	" ..	" ..	81 10 0
	269	Hoteo Valley-Whangaripo	" ..	" ..	0 7 0
	270	Hoteo-Waihiu	" ..	" ..	71 10 6
	271	Kaipara (east of) to Crown tenants in Blocks XI. and XII.	" ..	Kaipara ..	7 15 0
	272	Kaipara Flat-Tauhoa	" ..	" ..	6 12 10
	273	Kaukapakapa-Port Albert	Rodney & Waitemata ..	" ..	92 4 11
	274	Kaukapakapa-Warkworth	Rodney ..	Kaipara & Marsden ..	70 3 4
	275	Mahurangi Bridge (Warkworth)	" ..	Marsden ..	50 0 6

TABLE No. 4 *continued.*
STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.— <i>continued.</i>			£ s. d.
101	277	AUCKLAND— <i>continued.</i> Makarau Bridge—West Coast	Rodney	Kaipara	15 7 7
	278	Makarau Railway-station—West Coast Road	Rodney & Waitemata	"	42 4 10
	280	Matakana Ranges	Rodney	Marsden	4 5 4
	281	Matakana Ranges—Te Arai	"	"	16 11 11
	282	Matakana—Tauwharaunui	"	"	98 11 6
	287	Port Albert—Wellsford Valley	"	Kaipara	150 0 0
	288	Puhoi District—Tahekeroa Railway-station	"	Waitemata	115 3 1
	290	Puhoi—Komokoriki	"	"	50 0 0
	291	Puhoi—Makarau	"	Waitemata and Kaipara	14 19 0
	294	Puhoi—Warkworth	"	Waitemata & Marsden	41 5 3
	295	Tauhoa, Blocks X. and XI.	"	Kaipara	56 9 0
	296	Te Arai—Mangawai	"	Marsden	4 0 0
	298	Topini—Waiwera	"	Marsden and Waitemata	344 8 2
	300	Waihiu Valley	"	Marsden	6 9 8
	301	Warkworth—Ahuroa (Bear's Deviation)	"	"	100 0 0
	305	Whangaripo—Pakiri Valley	"	"	25 0 0
	306	Whangaripo Range Road	"	"	6 17 0
	307	Whangaripo Valley	"	"	20 0 0
	309	Wharehine Bridge	"	Kaipara	161 1 11
	310	Birkenhead Main Road (from wharf)	Waitemata	Waitemata	250 0 0
	315	Makarau Railway-station—Kaukapakapa	"	Kaipara	88 16 8
	319	Seddon Road (Helensville—Waiwera Hot Springs)	"	Waitemata	194 19 1
	323	Wade Village—Orewa	"	"	1 12 4
	325	Waiwera—North Shore	"	"	177 2 4
	327	Waiwera Springs	"	"	54 8 0
	328	Whangaparua Wharf	"	"	25 0 0
	332	Kingsland—Asylum	Eden	Eden	17 3 0
	335	Orakei Block—St. Heliers (£1 for £1)	"	"	Cr. 50 0 0
	342	Whau Bridge (£1 for £1)	"	"	200 0 0
	343	Whau Bridge—Asylum	"	"	17 11 0
	344	Akaaka Swamp (£1 for £1) (eastern drain)	Manukau	Franklin	9 5 0
	345	Akaaka Swamp Road—Pukekohe Railway-station (£4 for £1)	"	"	76 16 0
	346	Ararimu	"	Manukau	81 6 2
	350	Bombay—Paparata	"	Franklin	150 0 0
	353	Clevedon—Orere	"	Manukau	19 11 10
	354	Drury—Waiuku, through Karaka	"	"	41 13 4
	355	East Pukekohe (Maungatawhiri—Tuakau)	"	Franklin	Cr. 100 0 0
	356	Great South Road (£1 for £1)	"	"	50 0 0
	361	Hunua	"	Manukau	2 8 2
	362	Hunua—Ararimu	"	"	2 12 3
	363	Hunua—Main Road	"	"	220 17 10
	364	Hunua—Railway-station	"	"	170 3 9
	370	Mataitai—Clevedon	"	"	24 17 0
	371	Mauku Bridge and culverts	"	Franklin	100 0 0
	374	Miranda Bridge	"	Manukau	18 16 0
	376	Opakeke Highway District	"	"	3 7 11
	378	Otahuhu—Mercer (Great South Road)	"	Manukau & Franklin	109 3 2
	380	Otau	"	Manukau	161 0 3
	381	Otau Block—Ness Valley	"	"	29 6 6
	382	Otau—Hunua	"	"	88 1 4
	389	Pollok—Wharf	"	Franklin	103 18 9
	391	Turanga and Mungomungoroa Creek bridges	"	Manukau	2 11 0
	392	Turanga Creek Bridge (approaches)	"	"	7 2 0
	395	Wairoa River—Otau	"	"	34 7 5
	396	Waiuku—Awhitu	"	Franklin	25 0 0
	398	Waiuku—Pukekohe	"	"	80 7 11
	401	Awaroa (Block XI.)	Raglan	"	14 5 3
	402	Awaroa Survey District (Block VI.)	"	"	50 0 0
	403	Bothwell to Section 11, Block VI., Awaroa	"	"	2 9 0
	405	Huntly—Kahuruhuru	"	"	113 16 11
	406	Kesley's—Port Waikato	"	"	49 19 7
	408	Main Road—West Coast (through Block VI., Awaroa)	"	"	144 11 0
	409	Ngaruawahia—Huntly West	"	"	20 18 0
	411	Otorohaia Trig. Road	"	"	20 5 11
	412	Opuatia No. 1 Block (district roads)	"	"	21 13 6
	413	Opuatia No. 2 Block (district roads)	"	"	74 1 6
	414	Pepepe (road to Section 20) (£1 for £1 10s.)	"	"	95 10 0
	416	Tuakau Bridge (balance)	Raglan & Manukau	"	2,898 6 0
	418	Tuakau—Raglan (to Turner's Junction)	Raglan	"	94 14 9
	419	Waimai—Wai-garo—Ngaruawahia (£3,000, £1 for £1)	"	"	685 7 6
	421	Wairamarama—Onewhero	"	"	131 12 5
	422	Wairamarama—Tuakau	"	"	24 14 0
	424	Mercer—Rangiriri	Waikato and Manukau	"	21 2 6
	425	Rangiriri—Cambridge	Waikato	"	73 4 4
	427	Te Aroha—Rotorua	Piako	Ohinemuri	34 4 7
	430	Coromandel—Thames	Coromandel and Thames	Thames	102 9 4

TABLE No. 4—*continued*.
STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—*continued*.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.— <i>continued</i> .			
101		AUCKLAND— <i>continued</i> .			£ s. d.
438	438	Manaiia-Waikawau	Coromandel ..	Thames ..	300 0 0
437	437	Matatoki	Thames ..	Ohinemuri ..	49 13 6
439	439	Thames-Waikawau	Thames and Coromandel ..	Thames ..	100 4 8
441	441	Turua-Netherton	Thames ..	Ohinemuri ..	52 6 3
449	449	Paeroa-Waitoa	Ohinemuri ..	" ..	96 17 0
452	452	Great Barrier Island roads	" ..	Waitemata ..	134 16 9
455	455	Contingencies and engineering	" ..	" ..	305 9 5
		Total—Auckland			£26,084 2 11
		TE KUITI—			
456	456	Aotea-Raglan (£1,000, £1 for £1)	Kawhia and Raglan ..	Waikato ..	7 13 6
459	459	Awaroa-Mahoe	Kawhia ..	" ..	569 2 9
461	461	Caves Road	" ..	" ..	70 10 3
463	463	Hauturu-Otorohanga	" ..	" ..	99 0 3
468	468	Kawhia-Aotea	" ..	" ..	48 0 0
470	470	Kihi	" ..	" ..	70 1 6
471	471	Kihikihi-Otorohanga	Kawhia, West Taupo, and Waipa ..	" ..	16 5 4
474	474	Mahoenui-Kawhia South	Kawhia ..	Egmont and Waikato ..	1,235 1 8
475	475	Mairoa	" ..	Ditto ..	44 18 2
476	476	Manganui	" ..	Egmont ..	398 8 8
478	478	Mangaotaki Bridge	" ..	" ..	261 10 5
481	481	Mangapohue	" ..	Waikato ..	91 6 5
482	482	Mangauika A 1A	" ..	" ..	7 10 0
485	485	Ngapaenga	" ..	Egmont ..	214 10 10
486	486	Okupata	" ..	Waikato ..	100 0 4
488	488	Paemako-Ohura	Kawhia and Clifton ..	Egmont ..	49 0 7
490	490	Pirongia-Kawhia	Kawhia ..	Waikato ..	1,301 18 5
491	491	Pirongia West Road	" ..	" ..	39 0 4
492	492	Pungarehu	" ..	Egmont ..	89 2 7
493	493	Rohe-Potae tracks	Kawhia, Clifton, and West Taupo ..	Waikato and Egmont ..	47 18 6
494	494	Shea's Road	Kawhia ..	Waikato ..	78 4 10
498	498	Te Kuiti-Awakino	" ..	Egmont ..	1,583 11 2
500	500	Te Kuiti-Poro-o-tarao	Kawhia and Clifton ..	" ..	1 2 0
503	503	Upper Awakino Valley	Kawhia ..	" ..	158 1 10
504	504	Waitetuna-Aotea	Kawhia and Raglan ..	Waikato ..	125 9 7
510	510	Karioi, Blocks VII. and IX.	Raglan ..	" ..	65 12 3
512	512	Kauroa-Pakoka	Raglan and Kawhia ..	" ..	66 9 10
514	514	Raglan-Ruapuke	Raglan ..	" ..	125 3 1
517	517	Ruapuke-Aotea	" ..	" ..	86 15 0
519	519	Waingaro Block-Raglan-Waipa Road	" ..	" ..	22 2 3
520	520	Waitetuna-Kauri	" ..	" ..	10 1 3
522	522	Mokau River Bridle-track	Clifton ..	Egmont ..	9 5 6
523	523	Ohura (north of Paora Stream)	" ..	" ..	187 2 2
524	524	Tunnel-Taumaranui	Clifton and West Taupo ..	" ..	97 10 6
528	528	Komakorau Parish (road to Section 232)	Waikato ..	Franklin ..	49 19 0
534	534	Whatawhata Swamp Road	Waipa ..	Waikato ..	100 0 0
535	535	Contingencies and engineering	" ..	" ..	35 4 10
		Total—Te Kuiti			£7,562 15 7
		ROTORUA—			
536	536	Nukuhou-Maraetotara	Opotiki ..	Bay of Plenty ..	573 11 10
538	538	Opotiki-Ormond	" ..	" ..	479 6 4
539	539	Opotiki-Wairu Bay	" ..	" ..	50 0 0
540	540	Otara River-Papamoa	" ..	" ..	53 11 11
541	541	Tirohanga Bridge (£1 for £1)	" ..	" ..	21 9 2
543	543	Waioeka Valley	" ..	" ..	268 19 9
545	545	Waiotahi Block	" ..	" ..	349 15 11
546	546	Waiotahi Valley	" ..	" ..	25 5 6
548	548	Lichfield-Atiamuri	Piako, West Taupo, and East Taupo ..	" ..	67 3 0
551	551	Taupo-Pohue	East Taupo, Hawk's Bay, and Wairoa ..	Bay of Plenty and Hawke's Bay ..	168 2 6
552	552	Bay of Plenty roads	Whakatane, Tau-ranga, and Opotiki ..	Bay of Plenty ..	28 18 0
553	553	Galatea-Ruatoki	Whakatane ..	" ..	40 4 4
554	554	Galatea-Te Teko	" ..	" ..	11 13 9
558	558	Rangitaiki-Ruatoki-Waiotahi	" ..	" ..	76 1 5
560	560	Tarawera River Embankment	" ..	" ..	65 3 3
561	561	Te Teko-Whakatane	" ..	" ..	5 13 6
562	562	Waimana Block	" ..	" ..	164 12 0
563	563	Waimana Gorge	" ..	" ..	173 18 11
565	565	Whakatane-Maraetotara	" ..	" ..	79 15 5
566	566	Whakatane River protective works	" ..	" ..	273 9 10

TABLE No. 4—*continued*.
STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—*continued*.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.— <i>continued</i> .			£ s. d.
101	568	ROTORUA— <i>continued</i> . Arabiwi and Mamaku Railway-station	Rotorua and Piako	Bay of Plenty ..	189 7 4
	570	Kakamea Ford Bridge	Rotorua ..	" ..	60 0 0
	571	Kaikopuka-Rotorua	" ..	" ..	19 11 8
	572	Maketu-Rotorua	Tauranga and Rotorua ..	" ..	329 5 4
	574	Mamaku-Rotorua-Tirau	Rotorua ..	" ..	12 16 0
	575	Mamaku Village	" ..	" ..	124 10 6
	576	Maraeroa-Oturoa	Rotorua and Piako ..	" ..	55 15 10
	577	Mourea Bridge	Rotorua ..	" ..	30 11 0
	578	Okoheriki 1b	" ..	" ..	5 15 0
	579	Pongakawa-Rotorua	" ..	" ..	78 10 6
	580	Rangiorua-Rotorua, <i>via</i> Ngatipahiko	Rotorua & Tauranga ..	" ..	332 18 6
	581	Rotorua Survey District, Blocks III., IV., VIII.; Rotoiti Survey District, Blocks I., V.	Rotorua ..	" ..	62 12 6
	582	Rotorua-Te Teko	Rotorua and Whakatane ..	" ..	772 11 2
	583	Taumata Block	Rotorua ..	" ..	150 0 0
	584	Taumata—Nos. 1A, 2A, 3B East; 3B West No. 1; 3C East; 3C West No. 1	" ..	" ..	31 12 1
	585	Tauranga-Runanga	Rotorua, East Taupo, Wairoa, and Hawke's Bay ..	" ..	941 9 6
	586	Tirau-Rotorua	Rotorua and Piako ..	" ..	215 5 7
	587	Umurua Block	" ..	" ..	66 7 8
	588	Aongatete Bridge (Tauranga-Waihi Road) (£1 for £1)	Tauranga ..	" ..	94 6 0
	592	Kaimai	Tauranga and Piako ..	" ..	136 4 4
	593	Kaituna Stream Bridge	Tauranga ..	" ..	350 0 0
	594	Maketu Survey District, Blocks II. and IV. (drains)	" ..	" ..	5 16 8
	595	Maketu Wharf (subsidy)	" ..	" ..	17 12 0
	596	Oropi Settlement	" ..	" ..	2 8 4
	597	Otawa Nos. 1A and 1B	" ..	" ..	2 12 0
	598	Papamo Settlements, Nos. 1 and 2	" ..	" ..	189 13 1
	599	Ruahiri Bridge (Tauranga-Cambridge)	" ..	" ..	72 18 0
	601	Tauranga-Rotorua, <i>via</i> Oropi	" ..	" ..	249 19 10
	608	Contingencies and engineering	" ..	" ..	29 12 1
		Total—Rotorua .. ..	..	..	£7,606 18 10
		HAWKE'S BAY—			
	614	Waipatu inland	Waipatu and Cook ..	Waipatu ..	1,084 3 1
	616	Waipiro Hot Springs, Tokomaru	Waipatu ..	" ..	8 19 0
	617	Waipiro Hot Springs, Tolaga Bay	" ..	" ..	8 7 0
	624	Berry's Road (Hangaroa Survey District)	Cook ..	" ..	145 16 5
	625	Berry's Road (Hangaroa, Section 41)	" ..	" ..	22 13 6
	627	Gisborne-Opotiki	Cook and Opotiki ..	Bay of Plenty ..	448 16 1
	628	Gisborne-Rotorua (stock)	Cook and Whakatane ..	Waipatu and Bay of Plenty ..	112 17 0
	629	Gisborne-Waikaremoana	Cook and Wairoa ..	Hawke's Bay and Waipatu ..	158 15 4
	632	Gisborne-Waimata (£1 for £1)	Cook ..	Waipatu ..	200 0 0
	634	Karaka-Mangatu	" ..	" ..	58 11 8
	636	Mangaone	" ..	Hawke's Bay ..	160 2 0
	637	Maraetaha	" ..	Waipatu ..	9 10 0
	638	Motu	" ..	" ..	9 13 11
	639	Motu District	" ..	" ..	3 15 0
	642	Neill Road	" ..	" ..	40 0 2
	643	Ngatapa-Motu	" ..	" ..	200 0 0
	644	Nuhaka-Gisborne	" ..	Hawke's Bay and Waipatu ..	1 10 0
	645	Oliver-Motu	" ..	Waipatu ..	10 2 6
	646	Pouparae Settlement	" ..	" ..	7 5 0
	647	Tapuae Point	" ..	" ..	200 0 0
	654	Waikohu-Motu	" ..	" ..	135 6 11
	658	Willows Estate	" ..	" ..	2 10 8
	665	Rotokakaranga	Wairoa ..	Hawke's Bay ..	71 4 4
	667	Ruakituri Valley-Gisborne	Wairoa and Cook ..	" ..	24 17 5
	668	Runanga-Pohue	Wairoa and Hawke's Bay ..	" ..	700 9 11
	670	Tunanui-Mahia	Wairoa ..	" ..	37 4 10
	671	Upper and Lower Mohaka (£1 for £1)	" ..	" ..	15 0 0
	676	Napier-Wairoa	Hawke's Bay and Wairoa ..	" ..	981 16 1
	683	Dannevirke-Weber (£1 for £1)	Waipawa and Pata-ngata ..	Pahiatua and Waipawa ..	477 6 7
	684	Dannevirke-Tiratu	Waipawa ..	Waipawa ..	164 9 3
	685	Dannevirke-Weber-Wimbledon-Porangahau	Waipawa and Pata-ngata ..	Pahiatua ..	65 6 0
	686	Makaretu Bridge (on account of £500)	Waipawa ..	Waipawa ..	500 0 0
	688	Mangahe Road (from Dannevirke-Weber to Mangatoto	" ..	Pahiatua ..	11 1 3

TABLE No. 4—*continued*.
STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—*continued*.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure for Year ended 31st March, 1903.
ROADS, ETC.— <i>continued</i> .					
101	689	HAWKE'S BAY— <i>continued</i> .			£ s. d.
	689	Mangatewai-iti Bridge (£1 for £1) ..	Waipawa	Waipawa	258 13 2
	690	Mangatoro bridges ..	"	"	60 16 10
	693	Maunga Road, Waikopiro (£1 for £1) ..	"	"	500 0 0
	694	Ngapaeruru roads ..	"	"	1,425 18 3
	696	Ormondville-Waikopiro ..	"	"	6 8 0
	697	Paeroa ..	"	"	109 3 3
	698	Price's Road, Norsewood (£1 for £1) ..	"	"	60 0 0
	700	Ruahine ..	"	"	244 8 6
	701	Ruanui Road, Waikopiro ..	"	"	43 6 0
	702	Ruhia ..	"	"	48 19 0
	706	Waikopiro ..	"	"	454 1 0
	707	Waikopiro Improved-farm Settlement ..	"	"	44 5 0
	709	Oporae ..	Patangata	Pahiatua	131 2 3
	710	Porangahau-Wimbledon ..	"	Waipawa and Pahiatua	172 10 0
	714	Weber-Tea-tree Point (£1 for £1) ..	"	Pahiatua	190 18 0
	717	Contingencies and engineering ..	"	"	1 19 7
		Total—Hawke's Bay ..	"	"	£9,829 19 9
TARANAKI—					
	719	Derwent Improved-farm Settlement ..	Clifton	Egmont	21 18 1
	720	Greenlands Improved-farm Settlement ..	"	"	193 7 3
	722	Kaka ..	"	"	91 16 7
	723	Maikai ..	"	"	76 15 10
	724	Makino ..	"	"	15 4 0
	725	Mangaopa-Purangi ..	"	Egmont and Patea	108 9 6
	726	Mangatawa ..	"	Egmont	112 17 11
	727	Mataro ..	"	"	45 12 6
	728	Matau Road North ..	"	"	137 1 10
	730	Mimi-Mokau (£1,517, £1 for £1) ..	"	"	1,703 5 8
	731	Mokau Ferry Service ..	"	"	18 11 2
	733	Moki Junction, Block II., Upper Waitara ..	"	"	50 10 6
	734	Moki ..	"	Egmont and Patea	1,003 18 9
	736	Okau Improved-farm Settlement ..	"	Egmont	163 16 6
	737	Okoke (£764, £1 for £1) ..	"	"	211 18 10
	739	Piko ..	"	"	174 14 5
	740	Pukemahoe ..	"	"	136 6 8
	742	Putiki ..	"	"	16 5 0
	743	Tikorangi ..	Clifton and Taranaki	"	2 18 0
	744	Tongaporutu Bridge ..	Clifton	"	2,082 16 1
	746	Uruti ..	"	"	298 12 3
	748	Waitara River Bridge (£1 for £1) ..	Clifton and Taranaki	"	248 12 1
	751	Junction Road, Purangi-Matau (£1 for £1) ..	"	"	390 0 0
	753	Junction Road ..	Taranaki, Stratford, and Clifton	Patea	465 0 1
	756	Manutahi ..	Taranaki	Taranaki	24 2 0
	757	Maude ..	"	"	16 14 0
	758	Moa Road District Tariki-Ratapiko and Kaimata (£500, £1 for £2) ..	"	Egmont	750 0 0
	759	New Plymouth-Breakwater ..	"	Taranaki	100 0 0
	760	Patua roads ..	"	"	30 0 0
	761	Pitone ..	"	"	55 10 0
	762	Plymouth (£1 for £1) ..	"	"	43 15 0
	763	Te Arei ..	"	Egmont	100 0 0
	764	Upper Carrington (through Patua Block) ..	"	Taranaki	168 17 1
	765	Upper Frankley (£1 for £1) ..	"	"	80 0 0
	766	Waitara District roads ..	"	Egmont	233 0 0
	767	Akama ..	Stratford	Patea	76 0 0
	768	Arnold ..	"	"	14 9 0
	769	Brewer-Murcott (£1 for £1) ..	"	"	350 0 0
	770	Brewer-Taihore ..	"	"	187 0 6
	771	Douglas Road South (£1 for £1) ..	"	"	150 0 0
	772	Douglas-Tunupo, Makuri and Mohakau (£300, £1 for £1) ..	"	"	484 15 0
	773	Hurimoana ..	"	"	94 3 2
	775	Kohuratahi-Tangarakau ..	"	"	667 0 4
	776	Mangaehu and Llewellyn Special Settlements ..	"	"	78 19 2
	778	Mangaehu Road North (£1 for £1) ..	"	"	550 0 0
	781	Mangaowata ..	"	"	232 6 0
	783	Mangere ..	"	"	148 19 9
	784	Mangere Improved-farm Settlement ..	"	"	78 14 1
	785	Mangere Stream Dray-bridge ..	"	"	119 6 0
	786	Marco ..	"	"	74 4 0
	787	Matirangi (Ross Block) ..	"	"	25 16 0
	790	Ohura (south of Paora Stream) ..	Clifton and Stratford	Patea and Egmont	1,410 14 3
	792	Prospect ..	Stratford	Patea	49 19 6
	793	Puni, Taurakawa, and Murcott ..	"	"	31 7 9
	794	Puniwhakau (£100, £1 for £1) ..	"	"	400 0 0
	796	Putikituna ..	"	"	8 6 0
	797	Raekohua ..	"	"	22 13 0
	798	Rimaputa ..	"	Egmont	150 0 0

TABLE No. 4—continued.
STATEMENT showing the NET EXPENDITURE on ROADS, &c.—continued.

Vote No.	Item No.	Name of Work.	County.	Electorate	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.—continued.			
101		TARANAKI—continued.			£ s. d.
801		Taihore (£1 for £1)	Stratford	Patea	44 3 6
802		Tapuni (£1 for £1)	"	"	50 0 0
803		Tawhiwhi	"	"	37 14 6
804		Terrace End	"	"	119 9 4
806		Vera	"	"	235 19 7
807		Whangamomona Valley	"	"	498 7 0
808		Whitianga	"	"	210 5 2
809		Okahu-Carrington	Egmont	Taranaki	67 11 4
810		Eltham-Waitotara	Hawera and Patea	Patea	599 2 7
815		Tangahoe	Hawera	Hawera	477 19 7
816		Ball Road	Patea	Patea	0 15 8
817		Maben	"	"	146 6 5
818		Moturoa	"	"	45 0 0
820		Okahutiria-Mataimoana	"	"	151 3 0
821		Okotuku	"	"	80 0 0
825		Taumatatahi Improved-farm Settlement	"	"	29 0 0
826		Upper Waitotara Valley	"	"	3 12 6
827		Whenuakura Valley	"	"	49 14 0
828		Contingencies and engineering	"	"	134 9 7
		Total—Taranaki			£17,757 14 10
		WANGANUI—			
830		Clifton Block	Wanganui	Rangitikei	174 18 5
832		Hautapu Improved-farm Settlement	"	"	126 11 6
834		Huikumu	"	"	176 2 2
835		Makotuku Valley	"	"	330 4 3
838		Mangawhero-Murimotu	"	"	68 4 1
840		Marton No. 3	"	"	2 0 0
841		Matakiwi-Mangaetorea	"	"	76 11 6
842		Motete Road (Section 21, Block XV., Manganui)	"	"	5 12 0
843		Otaranoho	"	"	271 4 7
844		Paengaroa-Turangarere	"	"	257 12 6
845		Pipiriki-Waiouru	"	"	2,060 5 5
846		Raetihi-Ohura	"	"	135 14 4
847		Raetihi-Parapara	"	"	77 2 0
848		Raetihi Township roads	"	"	26 5 10
849		Rangiwaia	"	"	141 12 0
851		Rongoiti Improved-farm Settlement	"	"	286 17 9
852		Ruanui 2A and 3A	"	"	16 2 0
853		Ruanui-Turangarere	"	"	1 4 0
854		Tauakira	"	"	31 0 0
855		Turakina Valley (extension)	"	"	252 13 5
857		Waimarino	"	"	214 14 5
859		Wanganui Block (east and west)	"	"	199 7 11
861		Wanganui River Trust	Wanganui, Waitotara, and Stratford	Rangitikei and Patea	1,450 0 0
862		Rotoaira-Waimarino	East Taupo, West Taupo, and Wanganui	Rangitikei, Egmont, and Bay of Plenty	44 15 6
863		Tokaanu-Pipiriki	East Taupo and Wanganui	Rangitikei and Bay of Plenty	78 15 6
864		Taumaranui-Ohakune	West Taupo and Wanganui	Rangitikei and Egmont	248 9 3
865		Moawhango-Te Horo	Hawke's Bay and Wanganui	Rangitikei	133 14 10
866		Tangarakau River	Stratford	Patea	200 0 0
867		Makakaho (Upper Waitotara)	Patea	"	118 12 10
868		Puao (£1 for £1)	"	"	398 14 9
869		Waitotara River Suspension Bridge	"	"	233 10 0
871		Awarua	Rangitikei	Rangitikei	16 18 8
872		Gorge-Ohutu Improved-farm Settlement (£1 for £1)	"	"	20 19 0
874		Hiwera	"	"	122 1 9
876		Huntermville I., II., III.	"	"	33 5 0
877		Kaiangaroa and Moawhango Valley	"	"	50 8 6
881		Makohine (Upper)	"	"	94 16 6
882		Makohine Bridge (Upper)	"	"	11 9 6
883		Makohine Valley	"	"	229 2 2
884		Mangamahoe Bridge	"	"	465 10 1
885		Mangamahoe-Mataroa	"	"	9 16 0
886		Mangaone-Mataroa (£782, £1 for £1)	"	"	72 6 0
888		Mangaweka-Te Kapua	"	"	169 16 8
889		Mangawharariki (see also in Wellington District)	"	"	16 10 7
890		Masterton-Tenui Improved-farm Settlement	"	"	37 5 0
891		Mataroa-Mangaweka	"	"	242 12 7
892		Mataroa-Paengaroa	"	"	49 8 3
893		Maowhango Bridge, Horouta	"	"	11 12 4
895		Ohingaiti-Waiouru	Rangitikei and Wanganui	"	467 10 6
896		Ohutu Improved farm Settlement	Rangitikei	"	352 15 1
897		Oraukura Improved-farm Settlement	"	"	158 6 0

TABLE No. 4—*continued*.
STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—*continued*.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure for Year ended 31st March, 1903.
ROADS, ETC.— <i>continued</i> .					
WANGANUI— <i>continued</i> .					
101	898	Otara Bridge approaches	Rangitikei and Kiwitea	Rangitikei and Oroua	£ s. d. 500 0 0
	899	Otuarei Improved-farm Settlement	Rangitikei	Rangitikei	13 7 6
	900	Pohouiatane Block (£518, £1 for £1)	"	"	260 1 1
	901	Rangitikei Bridge, Bull's	Rangitikei and Manawatu	Manawatu	6,998 4 0
	902	Rangitikei Bridge, Mangaweka (on account of £2,787)	Rangitikei and Kiwitea	Rangitikei and Oroua	651 0 10
	904	Rangitikei Bridge, Vinegar Hill (£1 for £1)	Ditto	"	736 10 0
	905	Sommerville Improved-farm Settlement	Rangitikei	Rangitikei	171 1 6
	907	Taihape Improved-farm Settlement (£208, £1 for £1)	"	"	108 7 3
	908	Taihape—Otuarei	Rangitikei and Hawke's Bay	"	9 10 0
	909	Taihape—Paengaroa	Rangitikei and Wanganui	"	648 3 0
	910	Taihape Township roads (£292, £1 for £1)	Rangitikei	"	26 12 10
	911	Te Kapua	"	"	217 14 10
	913	Torere	"	"	10 0 0
	914	Torere—Pukeokahu (£1 for £1)	Rangitikei and Hawke's Bay	"	53 2 8
	915	Torere—Wairano	Rangitikei	"	8 4 0
	917	Turakina Bridge, Upper (above Hunterville), (£1 for £1)	"	"	455 1 7
	918	Turakina Valley (£350, £1 for £1)	"	"	204 4 4
	919	Weston	"	"	151 0 11
	920	Village settlements	"	"	134 14 5
	921	Contingencies and engineering	"	"	105 13 2
		Total—Wanganui	"	"	£21,933 16 10
WELLINGTON—					
	927	Auputa Road and Bridge	Kiwitea	Oroua	53 8 2
	928	Conspicuous Road	"	"	293 1 7
	929	Hautapu (Block XI., Section 20)	"	"	7 0 9
	930	Hautapu No. 2	"	"	3 3 0
	931	Hautapu—Ruahine	Kiwitea and Rangitikei	"	55 8 6
	934	Kawatau Improved-farm Settlement	Kiwitea	"	8 10 9
	935	Kawatau North	"	Rangitikei	32 10 8
	936	Kawatau Valley (£100, £1 for £1)	"	Oroua	225 12 8
	937	Kelpie (£140, £1 for £1)	"	"	16 17 10
	938	Kew	"	"	17 1 3
	939	Kimbolton	"	"	15 12 6
	940	Lagoon Road (£400, £1 for £1)	"	"	15 9 3
	941	McBeth's—Birmingham	"	"	4 8 9
	942	Makopua	"	Rangitikei	17 16 0
	943	Mangamako (£1 for £1)	"	Oroua	200 0 0
	945	Mangamako—Otara (£1 for £1)	"	"	44 13 2
	948	Mangarere (Hautapu Block)	"	"	19 3 5
	950	Mangawharariki (£250, £1 for £1) (see also Wanganui District)	"	"	289 3 0
	951	Marton, 1 and 2	"	"	185 17 8
	954	Onslow	"	"	5 8 6
	955	Pemberton Improved-farm Settlement	"	"	19 4 0
	956	Potaka	"	Rangitikei	1,884 7 1
	957	Potaka Low-level Bridge	"	Rangitikei and Oroua	30 8 6
	963	Umutoi Survey District	"	Oroua	18 19 10
	964	Ohakea Terrace	Manawatu	Manawatu	150 0 0
	966	Apiti (Section 24, Block XII.)	Pohangina	Oroua	59 1 0
	967	Apiti—Rangiwahia	Pohangina and Kiwitea	"	30 16 6
	968	Apiti—Norsewood (see also Hawke's Bay District)	Pohangina and Waipawa	Oroua and Waipawa	4 11 6
	969	Coal Creek Bridge and Road (Pohangina Valley—Makiekie) (£1 for £1)	Pohangina	Oroua	160 10 4
	972	Pohangina	"	"	17 9 5
	974	Pohangina Valley Forest Reserve	"	"	208 18 7
	979	Fitzherbert—Tokomaru	Kairanga and Horowhenua	Palmerston & Manawatu	40 13 4
	984	Palmerston—Foxton (Ngawakarau)	Kairanga	Palmerston	461 10 0
	987	Castlepoint Landing-shed	Castlepoint	Masterston	150 0 0
	990	Ballance—Manawatu Gorge	Pahiatua	Pahiatua	338 5 7
	991	Central Road—Hall Farm—homestead Settlement	"	"	54 8 4
	994	Eglinton	"	"	61 4 6
	996	Hall Special Settlement	"	"	18 11 9
	1000	Kaitawa Ridge	"	"	372 7 10
	1001	Makairo—Coonoor	"	"	648 15 10
	1002	Makairo—Kumeroa	Pahiatua and Woodville	"	87 6 8
	1004	Makuri—Pongaroa	Pahiatua and Akitio	"	1,841 3 9
	1005	Makuri Township	Pahiatua	"	79 14 6

TABLE No. 4—*continued*.
STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued*.

Vote No.	Item No.	Name of Work.	County.	Electorate	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.— <i>continued</i> .			
		WELLINGTON— <i>continued</i> .			
101	1006	Makuri Valley (Upper)	Pahiatua	Pahiatua	£ s. d. 24 6 6
	1007	Manawatu-Upper Gorge Bridge	Pahiatua and Woodville	"	1,022 12 11
	1009	Mangahao-Tutaekara	Pahiatua	"	9 12 4
	1011	Mangatainoka River Bridge, Hamua	"	"	726 13 3
	1012	Mangatainoka River protective works	"	"	1 12 4
	1013	Mangatoro-Coonor Valley	"	"	57 6 0
	1016	Moore's Road	"	"	3 18 0
	1017	Nae-nae and Waiwera Block-Mokomoko (Kopiko-piko)	"	"	55 14 9
	1018	Ngaturi-Aohanga	"	"	247 2 11
	1019	Nikau-Omata	"	"	83 10 9
	1020	Ohinereia	"	"	71 11 2
	1022	Pa Valley	"	"	39 13 0
	1023	Pahiatua-Palmerston (Pahiatua end)	"	"	315 18 4
	1024	Pukewhai	"	"	3 17 6
	1027	Tiraumea-Dew's	"	"	15 4 3
	1028	Tiraumea South-Kaitawa	"	"	8 5 0
	1029	Tiraumea Valley	"	"	447 10 2
	1030	Towai-Coonor	"	Masterton	76 1 6
	1031	Turitea-Makuri	"	Pahiatua	282 11 7
	1032	Tutaekara-Nikau	"	"	86 11 9
	1036	Woodville-Aohanga	"	"	477 13 10
	1037	Akitio Improved-farm settlement	Akitio	"	61 19 6
	1038	Akitio River Road	"	"	251 8 4
	1039	Akitio River Suspension-bridge	"	"	23 13 11
	1040	Alfredton-Weber (Pongaroa-Weber)	Akitio and Patangata	"	1,973 1 5
	1042	Huia and Waikeru	Akitio	"	524 15 5
	1043	Kaituna	"	"	100 17 6
	1044	Kawakawa	"	"	178 11 2
	1045	Korora	"	"	5 0 0
	1046	McLeod's	"	"	75 11 3
	1047	Makuri-Aohanga (Rakaunui)	"	"	476 16 1
	1050	Mangatiti	"	"	1,191 9 8
	1051	Mangatiti Improved-farm Settlement	"	"	358 6 1
	1052	Manuhara	"	"	290 15 3
	1054	Masterton Reform Association	"	"	11 11 6
	1055	Mecalickstone	"	"	115 4 0
	1056	Mount Arthur	"	"	213 13 10
	1057	Pahiatua Nos. 1, 2, 3, 4	"	"	527 6 5
	1058	Pakowai-Mataikona Settlement roads	"	"	96 0 6
	1059	Pakowai-Spur Road (Lang's)	"	"	31 3 6
	1060	Paraengahuata	"	"	19 9 4
	1061	Pongaroa-Aohanga	"	"	289 10 11
	1062	Pongaroa Cemetery Reserve	"	"	59 13 0
	1063	Pongaroa Township	"	"	13 8 1
	1065	Rakaunui Bridle-track	"	"	3 0 0
	1066	Range Road	"	"	534 2 10
	1067	Spur Road, Waikawa-King Creek	"	"	61 8 3
	1068	Stony Hill	"	"	0 18 0
	1069	Towai	"	"	177 6 10
	1070	Waihi	"	"	39 19 10
	1071	Waihi-Akitio	"	"	81 18 0
	1072	Waihi River-Fall Road Bridge	"	"	199 4 11
	1073	Waihi Valley	"	"	415 0 2
	1074	Waihoki-Pakowai	"	"	45 10 3
	1075	Waihoki Valley	"	"	334 11 3
	1076	Waiotiaki (£200, £1 for £1)	"	"	106 10 7
	1078	Waiowaka Road extension	"	"	249 6 0
	1079	Waipatukaka	"	"	220 3 4
	1080	Blue Creek Bridge, near Nireaha	Eketahuna	Masterton	235 12 6
	1081	Bowen's-Hastwell	"	"	66 6 2
	1083	Eketahuna-Nireaha	"	"	158 0 0
	1086	Hukanui-Pahiatua	"	Pahiatua	103 16 2
	1088	Kaipororo South-Parkville	"	Masterton	128 9 0
	1089	Kaipororo-Stirling	"	"	43 11 0
	1090	Makakahi Bridge, Hamua	"	"	1 2 6
	1092	Mangaone (Section 120, Block I.)	"	"	41 4 6
	1093	Mangaoronga Road	"	"	29 5 4
	1094	Mangaraupi and Mangaroa No. 2 Roads	"	"	458 17 0
	1095	Mangaroa	"	"	85 1 6
	1096	Mangatainoka River Bridge, Newman-Stirling	"	"	9 6 8
	1097	Mangatainoka Valley	"	"	38 11 6
	1098	Mari's Road	"	"	25 0 11
	1099	Newman-Stirling	"	"	190 5 0
	1100	Newman-Stirling (Creamery-Stirling)	"	"	199 19 6
	1101	Parkville-Mangatainoka	"	"	567 3 2
	1102	Parkville-Wellington No. 2 (£1 for £1)	"	"	59 9 6
	1103	Pukehoi-Waiwera	"	"	160 15 5
	1104	South Road, Parkville	"	"	23 0 0
	1105	Stirling Block	"	"	92 15 4
	1106	Tawatahia	Eketahuna and Masterton	"	40 18 6

TABLE No. 4—continued.

STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—continued.

Vote No.	Item No.	Name of Work.	County.	Electorate	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.—continued.			£ s. d.
101	1107	WELLINGTON—continued. Waiwera Block	Eketahuna and Pahiatua	Pahiatua	360 15 4
	1108	Wellington Special Settlement (North Road) ..	Eketahuna	Masterton	200 0 0
	1109	Barton's—Mangamahoe Junction ..	Mauriceville	"	9 11 1
	1111	Mangamahoe Road ..	"	"	121 18 10
	1112	Mount Baker (Tawataia Tollgate), Mangamahoe ..	Mauriceville and Eketahuna	"	56 17 6
	1113	Smith's Road ..	Mauriceville	"	96 11 0
	1117	Alfredton—Weber (Alfredton end) ..	Masterton and Akitia	"	1,112 10 3
	1122	Bismarck Road North (Downes's—McRae's) ..	Masterton	Wairarapa	88 13 6
	1125	Blairlogie Junction—Whareama (£1 for £1) ..	"	"	200 0 0
	1126	Castle Hill ..	"	Masterton	305 18 6
	1127	Christchurch Association ..	"	Pahiatua	16 12 6
	1128	Duffy's Section (road to) ..	"	Wairarapa	64 9 6
	1129	Eparaima Deviation (£1 for £1) ..	"	"	100 0 0
	1130	Fernyhurst—Kaiwhata ..	"	"	181 0 0
	1131	Fernyhurst—Bewa ..	"	"	623 16 8
	1137	Kaiwhata Run 49 ..	"	"	115 4 11
	1138	Kakaamu ..	"	Masterton	280 0 0
	1144	Maungatakatō ..	"	"	242 10 8
	1145	Masterton—East Coast (Masterton—Gladstone) (£1 for £1) ..	Masterton and Wairarapa South	Wairarapa	250 0 0
	1146	Masterton—Tenui (through Mangapakeha Swamp) (£1 for £1) ..	Masterton and Castle-point	Masterton	50 0 0
	1149	Pori ..	Masterton	"	98 12 5
	1150	Puketoi ..	"	"	321 2 5
	1151	Ruamahanga Bridge (Upper Opaki—Mount Bruce) (on account of £1,984) ..	Masterton and Mauriceville	"	80 18 5
	1152	Saunders's Road ..	Masterton	"	106 17 5
	1155	Upper Opaki Road South (£1 for £1) ..	"	"	156 17 0
	1156	Utewai Road (Waterfalls) ..	"	Pahiatua	65 9 8
	1158	Wainuiomata ..	"	Masterton	100 0 0
	1159	Waitawhiti Bridge (Alfredton—Weber) ..	"	"	250 0 0
	1160	Wangaehu (£1 for £1) ..	"	"	784 13 3
	1161	Wangaehu Valley—Te Ore Ore—Pioneer Block ..	"	"	54 8 7
	1162	Akitia Bridge (main road) ..	Patangata	Pahiatua	36 16 3
	1167	Bismarck Road, Wharau District ..	Wairarapa South	Wairarapa	172 7 10
	1168	Craigie Lee (Douglas Road) ..	"	"	139 0 6
	1169	Gladstone—East Coast ..	"	"	278 3 11
	1171	Gladstone—Ponatahi (Wall's) ..	Wairarapa South and Featherston	"	320 9 6
	1172	Hinau Gully ..	Wairarapa South ..	"	126 16 3
	1173	Kaitangata—Waiohine ..	"	"	82 0 0
	1174	Kaiwhata Valley ..	"	"	36 10 3
	1175	Karaka Bay—Kaiwhata ..	"	"	133 14 10
	1176	Mangatariri Valley ..	"	"	63 3 0
	1178	Norfolk Road, towards Mount Holdsworth ..	"	"	11 9 1
	1179	Para (£1 for £1) ..	"	"	47 10 0
	1180	Rocky Hill—Wainuioru ..	"	"	222 17 6
	1181	Taueru Bridge, Masterton (East Coast Road) (£1 for £1) ..	Wairarapa South and Masterton	"	495 2 8
	1182	Turner's Road—Wainuioru ..	Wairarapa South ..	"	48 5 6
	1184	Waiohine Valley ..	"	"	105 0 11
	1185	Wharau—Kaiwhata ..	"	"	63 3 2
	1187	Cameron's Road—East Coast Road ..	Featherston	"	122 6 4
	1188	Cross's Creek ..	"	"	30 2 1
	1189	Hautotara Traffic bridge (£1 for £1) ..	"	"	666 3 8
	1191	Ngakonui to Clifton Grove and Summer Hill ..	"	"	61 16 6
	1192	Pahaoa (£612, £1 for £1) ..	"	"	170 16 11
	1198	White Rock ..	"	"	200 0 0
	1199	Woodside—Waiohine ..	"	"	21 11 2
	1204	Kimberley Road, Blocks V. and VI. ..	Horowhenua	Otaki	293 11 1
	1207	Mangaone Bridges ..	"	"	100 0 0
	1212	Otaki (Main West Coast Road) ..	"	"	200 0 0
	1213	Rikiorangi Bridge (£1 for £1) ..	Horowhenua and Hutt	"	400 0 0
	1217	Waikanae—Te Horo ..	Horowhenua	"	500 3 4
	1219	Waitohu Valley ..	"	"	203 15 0
	1220	Hutt Bridge (rebuilding) (on account of £5,000) ..	Borough of Hutt	Hutt	604 9 4
	1221	Akatarawa Survey District, Block IX., Sections 2 and 3 ..	Hutt	"	50 0 0
	1222	Belmont—Pahautanui ..	"	Hutt and Otaki	123 0 0
	1225	Ebden's Road, through Block III., Belmont Survey District ..	"	Hutt	100 0 0
	1226	Epuni Hamlet ..	"	"	59 19 9
	1233	Mungaroa Bridge and Road (repairs) ..	"	"	150 0 0
	1235	Ngatiawa (extension) ..	"	Otaki	100 0 0
	1237	Pahautanui—Motukaraka ..	"	"	111 18 0
	1238	Paikakariki—Paraparaumu ..	"	"	200 0 0
	1240	Paraparaumu—Mangakotukutuku ..	"	"	84 0 0
	1247	Wainuiomata Valley Road ..	"	Hutt	100 0 0
	1248	Wainui Stream Road ..	"	"	50 0 0
	1251	Village settlements roads ..	"	"	23 14 0
	1252	Contingencies and engineering ..	"	"	1 11 4
		Total—Wellington ..			£38,035 1 3

TABLE No. 4—continued.
STATEMENT showing the NET EXPENDITURE on ROADS, &c.—continued.

Vote No.	Item No.	Name of Work.	County.	Electorate	Net Expenditure for Year ended 31st March, 1908.
		ROADS, ETC.—continued.			£ s. d.
101	1254	NELSON— Belgrove-Tophouse-Tarndale	Waimea and Amuri	Motueka and Hurunui	41 11 0
	1256	Belgrove-Westport-Reefton	Waimea, Inangahua, and Buller	Motueka and Buller	3,295 4 6
	1259	Eves Valley, Waimea West (£1 for £1) ..	Waimea ..	City of Nelson ..	33 8 4
	1269	Motueka River Bridge (Alexander's Bluff) (on account of £1,000)	" ..	Motueka ..	0 8 0
	1270	Motueka River (protective works) (£335, £1 for £1)	" ..	" ..	118 13 8
	1279	Neudorf-Dovedale	" ..	" ..	37 0 0
	1284	Richmond-Collingwood	Waimea and Collingwood	Motueka and City of Nelson	250 0 0
	1285	Riwaka Valley	Waimea ..	Motueka ..	73 14 0
	1286	Ronga Saddle to Whangarae and Onetea	" ..	City of Nelson ..	90 6 0
	1293	Tadmor (Upper)	" ..	Motueka ..	185 5 0
	1294	Upper Mouere roads	" ..	" ..	100 0 0
	1296	Waimea County (flood repairs)	" ..	" ..	300 0 0
	1298	Wairoa Gorge	" ..	" ..	215 1 3
	1303	French Pass, Admiralty Bay, and Croixelles tracks	Sounds ..	City of Nelson ..	120 11 10
	1308	Collingwood (£1 for £1)	Collingwood ..	Motueka ..	14 8 6
	1309	Cook's Road-Bonny Doon	" ..	" ..	85 0 0
	1310	Cross Road-East Takaka	" ..	" ..	150 0 0
	1314	Kaituna (protective works) (near Brewer's)	" ..	" ..	100 0 0
	1317	Onetanea and Pakawau Survey Districts	" ..	" ..	50 0 0
	1320	Pohara-Awaroa	" ..	" ..	159 3 6
	1321	Takaka (East)	" ..	" ..	100 0 0
	1323	Takaka-Riwaka (£1 for £1)	Collingwood and Waimea	" ..	37 4 9
	1324	Takaka roads improvement (£1 for £1)	Collingwood ..	" ..	36 19 2
	1325	Waitapu (Willcock's Road)	" ..	" ..	Cr. 96 15 0
	1327	Brighton-Grey-Bullock Creek	Buller ..	Buller ..	200 0 0
	1330	Buller Road (loop-line, nine miles to Westport) (on account of £1,650)	" ..	" ..	650 0 0
	1334	Karamea-Mud Flat	" ..	Motueka ..	85 0 0
	1336	Mokihinui-Little Wanganui	" ..	" ..	427 2 6
	1347	Boatman's Valley	Inangahua ..	Buller ..	15 0 0
	1348	Brazil	" ..	" ..	22 10 0
	1349	Burke's Creek Bridge	" ..	" ..	189 15 0
	1351	Crushington	" ..	" ..	250 0 0
	1352	Glenroy Bridge (approaches)	" ..	Motueka ..	20 0 0
	1354	Horse Terrace-Hunter's	" ..	" ..	2 8 0
	1355	Howard Valley	" ..	" ..	197 5 6
	1359	Larry's Creek (protective works)	" ..	Buller ..	46 8 0
	1366	Matakitaki Bridge and approaches, Murchison (on account of £6,500)	" ..	Motueka ..	207 3 3
	1369	Reefton-Marua	" ..	Buller ..	1,000 0 0
	1370	Slips Road	" ..	Motueka ..	155 5 6
	1375	Contingencies and engineering	" ..	" ..	81 11 4
		Total—Nelson			£9,046 13 7
		MARLBOROUGH—			
	1376	Anakoa-Manaroa	Sounds ..	Wairau ..	174 8 10
	1377	Anakoa-Titirangi	" ..	" ..	48 8 3
	1378	Arapawa-Te Awaite	" ..	" ..	18 6 10
	1381	Crail Bay-Homewood	" ..	" ..	51 8 6
	1382	Crail Bay Track	" ..	" ..	48 6 0
	1383	Crail Bay-Ely Bay	" ..	" ..	10 9 0
	1384	Crail Bay-South-east Bay	" ..	" ..	34 10 0
	1385	Double Bay-Torea	" ..	" ..	26 8 4
	1386	Elaine Bay-Harvey's Bay	" ..	City of Nelson ..	10 4 6
	1388	Fairy Bay, North-west Bay	" ..	" ..	58 12 6
	1389	Hakahaka-Opihi	" ..	Wairau ..	19 5 0
	1390	Harvey's Bay, Pelorus Sound	" ..	City of Nelson ..	43 5 9
	1391	Harvey's Bay-Tawero Point	" ..	" ..	52 15 0
	1392	Harvey's Bay-Tuna Bay	" ..	" ..	98 3 0
	1393	Hopai-Ely Bay	" ..	Wairau ..	9 3 0
	1394	Kiaho Canal and Kenepuru Track	" ..	" ..	20 14 1
	1395	Kenepuru-Anakoa	" ..	" ..	256 13 6
	1396	Kenepuru-Endeavour Inlet	" ..	" ..	11 5 0
	1398	Kenepuru-Manaroa	" ..	" ..	60 3 9
	1399	Kenepuru Sound	" ..	" ..	39 3 4
	1400	Mabau Sound	" ..	" ..	3 1 0
	1401	Manaroa-Hopai	" ..	" ..	50 2 0
	1403	Nydia Bay-Havelock	Sounds and Marlborough	City of Nelson ..	245 0 9
	1405	Onahau Bay-Kenepuru Sound	Sounds ..	Wairau ..	95 3 2
	1407	Piripaua Neck Cutting and Track	" ..	" ..	184 15 10
	1408	Portage Bay and Waitaria Bay wharves	" ..	" ..	7 0 11
	1409	Port Underwood-Opua	" ..	" ..	26 14 0

TABLE No. 4—continued.
STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—continued.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.—continued.			
101	1410	MARLBOROUGH—continued.			£ s. d.
	1410	Queen Charlotte Sound	Sounds	Wairau	1 8 0
	1411	Resolution Bay—Endeavour Inlet	"	"	98 11 6
	1412	Richmond Bay—Kenny's Isle	"	"	61 8 0
	1413	Robin Hood Bay—Ocean Bay	"	"	1 7 6
	1415	Te Awaite Wharf	"	"	8 10 2
	1417	Tennyson Inlet	"	City of Nelson	76 9 6
	1418	Titirangi—Ship Cove	"	Wairau	2 15 0
	1419	Torea Bay Road	"	"	9 1 6
	1420	Torea Bay Wharf and Shed	"	"	0 8 0
	1421	Torea Neck	"	"	5 16 6
	1422	Tory Heads—Waikawa	"	"	80 6 10
	1423	Waikawa—Picton	Sounds and Marlborough	"	23 18 2
	1424	Waitaria—Manaroa	Sounds	"	60 9 6
	1425	Waitaria—Te Matau-a-Mauī	"	"	78 12 6
	1427	Wet Inlet—Crail Bay	"	"	9 11 6
	1428	Whitamonga—Port Underwood	"	"	53 4 1
	1429	White's Bay—Port Underwood	"	"	75 19 9
	1430	White's Bay—Robin Hood Bay	"	"	30 0 0
	1432	Anakiwi—Grove	Marlborough	"	41 7 6
	1433	Awatere Railway Traffic Bridge (roads contribution)	"	"	500 0 0
	1434	Bartlett's Creek—Langley Dale	"	"	5 12 6
	1435	Blarich—Jordan	"	"	20 0 0
	1436	Blenheim—Conway (£300, £1 for £1)	Marlborough and Kaikoura	Wairau and Hurunui	709 18 5
	1437	Blind River roads	Marlborough	Wairau	10 3 0
	1438	Blind River—Starborough	"	"	24 3 3
	1440	Canvastown—Deep Creek	"	City of Nelson	18 17 0
	1441	Cemetery Gate—Blarich	"	Wairau	10 19 6
	1442	Clarence Bridge (protective works)	Marlborough and Kaikoura	Hurunui	205 9 7
	1445	Grove Bridge	Marlborough	Wairau	280 0 0
	1446	Grove Wharf and Shed	"	"	20 14 1
	1447	Havelock—Grove	"	"	0 8 6
	1450	Kaituna—Tuamarina	"	"	21 11 0
	1452	Mahakipawa—Grove	"	"	58 17 0
	1453	Mahe's Flat Bridge and Road	"	"	147 8 6
	1458	Onahau—Anakiwi	"	"	1 5 0
	1461	Pelorus River (north side) and Sound (Nelson Main Road)	"	City of Nelson	16 19 0
	1464	Picton—Queen Charlotte Sound	"	Wairau	14 1 6
	1465	Port Underwood—Fighting Bay	"	"	2 6 6
	1466	Rai Saddle—Blenheim	"	Wairau and City of Nelson	386 16 2
	1468	Rocky, Dangerous, and Okaramio Creeks bridges	"	Wairau	1,467 14 11
	1469	Ronga Valley	"	City of Nelson	68 3 6
	1471	Saltwater Creek Bridge	"	Wairau	100 0 0
	1479	Top Valley—Bartlett's Creek	"	"	50 15 7
	1485	Wairau River Bridge (£1 for £1)	"	"	154 0 6
	1486	Wairau River—Gravel-pit drain	"	"	8 4 6
	1487	Whitamonga—Difffenbach	"	"	19 2 0
	1492	Kahautara Bluff	Kaikoura	Hurunui	718 14 8
	1493	Kahautara—Conway (seawalls and maintenance)	"	"	385 8 0
	1494	Kahautara—Hawkswood	Kaikoura and Cheviot	"	120 16 0
	1496	Kaikoura—Cheviot (Kahautara River—Kowhai River)	Kaikoura	"	5 0 0
	1497	Puhipuhi Block	"	"	54 19 0
	1498	Contingencies and engineering	"	"	32 10 7
		Total—Marlborough			£8,063 17 1
		WESTLAND—			
	1499	Ahaura—Haupiri	Grey	Grey	99 0 6
	1504	Brunner—Blackball	"	"	200 0 0
	1505	Clarke River Track	"	"	449 4 3
	1506	Deep Creek Ford	"	Westland	6 3 0
	1507	Greenstone Bridge	"	"	59 7 6
	1508	Greenstone—Teremakau (widening road)	"	"	7 0 0
	1512	Hohonu Survey District, Block XIII.	"	"	99 4 9
	1515	Main Coal Creek—Coal Creek Falls	"	Grey	60 6 1
	1520	Poerua Estate	"	Westland	605 17 3
	1521	Poerua Settlement—Bell Hill	"	"	185 14 6
	1522	Seven-mile Bridge—Beach Track, Point Elizabeth	"	Grey	61 10 0
	1524	Waipuna	"	"	177 6 3
	1526	Arahura Bridge (approaches)	Westland	Westland	200 0 0
	1528	Arahura (Upper) Road (protection)	"	"	126 13 9
	1529	Arawata Track	"	"	12 19 6
	1530	Big Bay Track	"	"	250 0 0
	1533	Blue River Track	"	"	99 18 0
	1534	Bluff Tracks	"	"	151 17 5
	1536	Butler Creek Ford	"	"	10 0 0
	1537	Camelback—Hokitika River	"	"	334 14 0
	1539	Christchurch Road (old)	"	"	224 1 10
	1540	Cook River	"	"	128 2 6

TABLE No. 4—continued.

STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—continued.

Vote No.	Item No.	Name of Work.	County.	Electorate	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.—continued.			
101		WESTLAND—continued.			£ s. d.
1541		Cook Valley-Karangarua ..	Westland	Westland	118 15 0
1542		Cropp's Road (extension, Block CXIII.) ..	"	"	149 8 7
1543		Dawson's Road Bridge ..	"	"	92 10 6
1545		Gillespie's Bridge ..	"	"	175 0 0
1546		Goldsborough (protective works) (£1 for £1) ..	"	"	12 0 1
1547		Great South Road (£700, £1 for £1) ..	"	"	438 3 2
1548		Haast-Blue River ..	"	"	126 10 0
1549		Haast Pass ..	"	"	100 4 6
1550		Hokitika-Arthur's Pass ..	"	"	4,767 13 3
1551		Hokitika Flat Road bridges ..	"	"	350 0 0
1553		Hokitika River Bridge (Mout's Rivulet) ..	"	"	18 6 0
1554		Hokitika River (protection) ..	"	"	276 19 5
1556		Hunt's Beach-Makawhio ..	"	"	34 11 6
1557		Isaac Bluff Track ..	"	"	19 18 0
1558		Jackson's Valley ..	"	"	48 1 6
1560		Jacob's River Wire Bridge ..	"	"	130 13 1
1562		Kawhaka Creek Bridge ..	"	"	100 0 0
1565		Kokatahi (Lower) ..	"	"	11 10 0
1566		Kokatahi (Lower) School to river ..	"	"	29 15 10
1567		Kokatahi River-Main Flat ..	"	"	51 0 0
1568		Kokatahi River Bridge ..	"	"	1,081 15 11
1569		Kokatahi River (protective works) ..	"	"	39 4 0
1570		Kokatahi Special Settlement ..	"	"	58 2 6
1571		Koiterangi Municipal Reserve ..	"	"	90 4 0
1574		Little Wanganui (protective works) ..	"	"	226 16 4
1575		Little Waitaha (flood damages) ..	"	"	100 0 0
1576		Loop-line ..	"	"	16 10 9
1577		Mahitahi ..	"	"	29 17 0
1581		McKay's Creek ..	"	"	51 11 0
1583		Okuru Valley-Wharf Road ..	"	"	250 0 0
1584		Otira-Arthur's Pass ..	"	"	999 19 2
1586		Rocky Point (renewing bridges) ..	"	"	66 16 6
1587		Ross (flood damages) ..	"	"	100 0 0
1589		Teremakau overflow, Sandy Creek ..	"	"	59 1 10
1590		Teremakau Settlement (protective works) ..	Westland and Grey	"	232 19 3
1591		Teremakau Traffic-bridge ..	"	"	175 12 7
1592		Turnbull River Road ..	Westland	"	74 19 2
1593		Waiho-Cook Valley ..	"	"	65 11 3
1594		Waiho Springs-Glacier ..	"	"	113 19 8
1595		Waitaba Bridge and Road ..	"	"	4,280 18 5
1596		Waitaha (flood damages) ..	"	"	149 6 9
1597		Waitaha-Kakapohia ..	"	"	80 5 4
1598		Wanganui Flat ..	"	"	184 18 11
1599		Wataroa Flat ..	"	"	100 0 0
1600		Westland Ferry Service ..	"	"	163 0 0
1601		Westland (flood damages) ..	"	"	250 0 0
1603		Contingencies and engineering ..	"	"	10 4 0
		Total—Westland ..			£19,651 15 10
		CANTERBURY—			
1604		Conway Accommodation-house Reserve (old P.W. cutting) ..	Amuri	Hurunui	347 7 4
1606		Culverden-Hammer Plains ..	"	"	258 6 0
1608		Waiau River (£1 for £1) (Glenwyne) ..	"	"	61 10 0
1609		Cheviot County roads ..	Cheviot	"	216 11 8
1611		Hurunui Bridge at Greta ..	Cheviot and Ashley	"	20 6 11
1612		Port Robinson ..	Cheviot	"	9 15 1
1616		Ashley River (protective works) ..	Ashley	"	300 0 0
1620		Eyreton Road District (protection-works) (£1 for £1) ..	"	Kaipoi	145 15 6
1621		Glentui-Wharfedale ..	"	Hurunui	100 0 0
1622		Kowai Bridge (Leithfield) (£1 for £1) ..	"	"	157 2 2
1626		Arthur's Pass-Springfield ..	Selwyn	Selwyn	1,762 9 1
1628		Ellesmere Lake Outlet (on account of £1,000) ..	"	Ellesmere	291 7 6
1632		Lytelton-Sumner (£1 for £1) ..	"	Lytelton	150 0 0
1636		Waimakariri Bridge (White's) (£1 for £1) ..	"	Riccarton and Kaipoi	2,092 12 8
1637		White Cliff's-St. Helen's Coal-mine ..	"	Selwyn	150 0 0
1639		Alford Village Settlement ..	Ashburton	Ashburton	100 0 0
1641		Heron Lake (west side) ..	"	"	350 0 0
1646		Winterslow (track, near Cameron's woolshed, through Run 102) ..	"	"	29 4 0
1647		Arundel ..	Geraldine	Geraldine	100 0 0
1649		Opihi Bridge ..	Geraldine and Levels	"	68 16 0
1651		Opihi River (protective works) ..	Geraldine	"	10 18 1
1654		Temple's Road ..	"	"	25 0 0
1657		Arowhenua Native ..	Levels	"	75 0 0
1660		Pareora River-Saltwater Creek ..	"	Timaru	240 0 0
1661		Fairlie-Pukaki ..	Mackenzie	Waitaki	421 5 8
1662		Lake Ohau (track) ..	"	"	10 0 0
1666		Hook Bridge (£1 for £1) ..	Waimate	"	100 0 0
1669		Otaio Bridge (£1 for £1) ..	"	"	323 16 8
1672		Pareora Settlement Middle Road ..	"	"	177 4 2

TABLE No. 4—*continued*.
STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued*.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.— <i>continued</i> .			
101		CANTERBURY— <i>continued</i> .			£ s. d.
1676		Waihao Bridge—Morven Railway-station ..	Waimate ..	Waitaki ..	100 11 6
1677		Waikakahi Settlement ..	" ..	" ..	18 8 9
1678		Waikakahi Settlement (Dog-kennel Road) ..	" ..	" ..	100 0 0
1679		Waimate—Waihao Forks, and Kapua Settlement roads (£1 for £1) ..	" ..	" ..	42 13 6
1683		Contingencies and engineering ..	..	..	Cr. 92 3 7
		Total—Canterbury ..	..	..	£8,263 18 8
		OTAGO—			
1686		Elderslie ..	Waitaki ..	Oamaru ..	3 11 0
1687		Hampden Bridge (£1 for £1) ..	" ..	Waikouaiti ..	100 0 0
1688		Incholme (sludge-track to Runs 209, &c.) ..	" ..	Oamaru ..	100 0 0
1689		Kartigi Bridge (£1 for £1) ..	" ..	Waikouaiti ..	272 8 10
1690		Maerewhenua Bridge (Hutton's) ..	" ..	Mount Ida ..	301 8 1
1692		Oamaru Creek Bridge ..	" ..	Oamaru ..	42 15 0
1696		Upper Waitaki (Ahuriri Pass) ..	" ..	Mount Ida ..	246 2 10
1697		Ida Valley and Blackstone Railway-stations (roads to)	Maniototo ..	" ..	100 0 0
1698		Kyeburn Bridge and approaches ..	" ..	" ..	500 0 0
1706		Run 219 ..	" ..	" ..	133 0 6
1707		Runs 225E and 225T to 225Z ..	" ..	" ..	32 14 6
1709		Taieri Bridge (Law's Ford) (on account of £800) ..	" ..	" ..	400 0 0
1711		Upper Taieri, Rock and Pillar, Runs 204, 204A ..	" ..	" ..	74 17 6
1716		Shag River Bridge (Bushy) ..	Waihemo ..	Waikouaiti ..	320 1 7
1718		Corner Bush ..	Waikouaiti ..	" ..	8 3 0
1720		Corner Bush—Puketiraki ..	" ..	" ..	50 0 0
1722		Hayward's Point—Purakanui ..	" ..	" ..	175 0 0
1724		Karitane Railway-station Road ..	" ..	" ..	80 19 10
1725		Karitane Recreation Reserve ..	" ..	" ..	92 13 9
1726		Kilmog Hill ..	" ..	" ..	75 0 0
1727		Lower Harbour ..	" ..	" ..	300 0 0
1730		Pryde's Road (Merton) ..	" ..	" ..	150 0 0
1731		Puketiraki Beach ..	" ..	" ..	99 3 8
1733		Purakanui Native Reserve ..	" ..	" ..	2 0 0
1734		Purakanui—Railway-station ..	" ..	" ..	33 18 0
1735		Seacliff Asylum Road ..	" ..	" ..	100 0 0
1736		Seacliff—Puketiraki Road ..	" ..	" ..	119 11 7
1737		Sheep-yards—Round Hill ..	" ..	" ..	24 14 6
1738		Upper Junction—Sawyer's Bay ..	" ..	Chalmers ..	75 0 0
1739		Waitati—Waikari ..	" ..	Dunedin and Waikouaiti ..	118 13 4
1740		Warrington ..	" ..	Waikouaiti ..	14 2 9
1742		Hawksbury ..	Borough of Hawksbury ..	" ..	100 0 0
1743		Blanket Bay—Ravensbourne ..	Borough of West Harbour ..	Chalmers ..	250 0 0
1749		Henderson's Road (£1 for £1) ..	Borough of Maori Hill ..	Dunedin ..	50 0 0
1754		Anderson's Bay ..	Boroughs of South Dunedin, St. Kilda, and Caversham ..	Caversham ..	200 0 0
1757		Main North Road ..	Borough of North-east Valley ..	Chalmers ..	50 0 0
1758		Signal Hill ..	Ditto ..	" ..	50 0 0
1762		Bendigo—Matakanui (on account of £8,821 13s. 5d.) ..	Vincent ..	Mount Ida ..	650 8 5
1766		Cromwell (sand-removal) (£1 for £1) ..	" ..	Wakatipu ..	67 16 0
1767		Galloway Station—Ida Valley ..	" ..	Tuapeka and Mount Ida ..	300 0 0
1770		Makarora—Haast Valley ..	" ..	Wakatipu ..	105 14 0
1772		Wanaka Jetty (head of lake) ..	" ..	" ..	80 0 0
1773		Albert Burn ..	Lake ..	" ..	25 0 0
1778		Ben Lomond ..	" ..	" ..	72 0 0
1779		Ben Lomond Run ..	" ..	" ..	21 18 0
1780		Cardrona Coal-pit ..	" ..	" ..	250 0 0
1783		Glendhu ..	" ..	" ..	96 0 0
1786		Kingston—Queenstown ..	" ..	" ..	94 17 0
1789		Martin's Bay—Lake Wakatipu ..	" ..	" ..	100 0 0
1791		Mount Earnslaw Track ..	" ..	" ..	150 0 0
1793		Pembroke—Matukituki ..	" ..	" ..	250 0 0
1794		Queenstown—Glenorchy ..	" ..	" ..	259 0 0
1797		Wanaka—Wilkin Valley ..	" ..	" ..	100 0 0
1799		Kaik—Lower Portobello ..	Peninsula ..	Chalmers ..	142 14 6
1803		Portobello ..	" ..	" ..	406 7 6
1805		Portobello Jetty ..	" ..	" ..	25 0 0
1806		Portobello—Native Reserve ..	" ..	" ..	7 0 0
1807		Tomahawk (£1 for £1) ..	" ..	" ..	200 0 0
1812		Janefield Settlement ..	Taieri ..	Taieri ..	50 0 0
1813		Kaikorai Valley ..	" ..	" ..	200 0 0
1814		Momona (Schoolhouse—River) ..	" ..	" ..	100 0 0
1816		Taieri Bridge—Pukekura ..	" ..	" ..	193 10 9
1818		Beaumont—Rankleburn ..	Tuapeka ..	Tuapeka ..	125 0 0
1824		Rankleburn, Block IX. ..	" ..	Clutha ..	40 0 0

TABLE No. 4—continued.
STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—continued.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.—continued.			
		OTAGO—continued.			£ s. d.
101	1825	Rankleburn Bush	Tuapeka	Clutha	50 0 0
	1827	Teviot, Block XVIII.	"	Tuapeka	200 0 0
	1834	Akatore River Bridge (£1 for £1)	Bruce	Bruce	150 0 0
	1836	Balmoral Riding (£1 for £1)	"	"	250 0 0
	1837	Barneo Settlement (protective works)	"	"	0 6 0
	1841	Kaitangata, Block II. (£1 for £1)	"	"	22 1 0
	1842	Kaitangata Riding (£1 for £1)	"	"	103 19 6
	1845	Matau Bridge, Kaitangata (£1 for £1)	"	"	200 0 0
	1853	Tokomairiro Riding (£1 for £1)	"	"	214 10 0
	1854	Wangaloa-Coombe Hay (£1 for £1)	"	"	50 0 0
	1857	Catlin's Blocks	Clutha	Clutha	242 11 0
	1861	Glenomaru Blocks	"	"	642 18 8
	1862	Greenfield	"	"	139 13 6
	1863	Hay's Road (Glenomaru-Little Poerua)	"	"	86 1 9
	1865	Heathfield Improved-farm Settlement	"	"	170 15 1
	1872	Mouat's Saddle	"	"	44 15 2
	1876	Owaka River Bridge (£1 for £1)	"	"	150 0 0
	1877	Owaka-Tautuku	"	"	56 5 11
	1878	Owaka Valley	"	"	99 19 4
	1882	Ratanui-Whitehead	"	"	7 14 8
	1883	Rimu, Block XII.	"	"	58 5 4
	1885	Rimu Improved-farm Settlement	"	"	282 2 3
	1886	Tahakopa Bridge (approaches)	"	"	20 1 1
	1887	Tautuku, Block VIII.	"	"	124 15 9
	1888	Tautuku, Block X.	"	"	237 9 0
	1889	Tautuku-Waikawa	"	"	503 6 10
	1894	Waipati Improved-farm Settlement	Clutha & Southland	Clutha and Mataura	100 16 4
	1897	Woodland Block	Clutha	Clutha	350 11 11
	1899	Woodland, Block X.	"	"	49 4 1
	1900	Woodland, Block IX., Improved-farm Settlement	"	"	264 0 3
	1902	Contingencies and engineering	"	"	7 3 7
		Total—Otago			£13,837 14 5
		SOUTHLAND—			
1904		Acker's Village, Invercargill Hundred (south of Block XX. to road east from Section 61 to Section 46)	Southland	Awarua	28 4 8
	1920	Boundary Creek-Wendonside Bridge	"	Wakatipu	125 0 0
	1921	Boxall	"	Invercargill	96 16 11
	1923	Campbelltown roads	"	Awarua	4 3 11
	1924	Cemetery Road, Bluff	"	"	125 0 0
	1925	Centre Bush	"	Wallace	200 0 0
	1928	Chrystall's-Thomson's	"	"	100 0 0
	1930	Clifton	"	Invercargill	81 17 0
	1931	Clifton-Tisbury	"	"	111 15 6
	1932	Colyer's Road	"	Awarua	64 17 1
	1935	Devereaux-East Winton	"	"	4 6 1
	1939	Fairweather Road-Tisbury	"	"	20 0 0
	1945	Fortrose-Tokonui School	"	Mataura	200 0 0
	1947	Frain's Road	"	Awarua	4 0 0
	1948	Gap Road-Spring Hills	"	"	100 0 0
	1949	Gore Bridge (£1 for £1)	"	"	250 0 0
	1952	Gorge-Mataura Bridge	"	Mataura	45 3 9
	1956	Haldane Improved-farm Settlement	"	"	29 14 2
	1957	Hand's Road	"	"	17 5 0
	1961	Henderson-Rouse's Road	"	Awarua	1 17 2
	1964	Invercargill Hundred Blocks	"	"	63 3 11
	1969	Kennington (£1 for £1)	"	"	100 0 0
	1972	King and Henderson's Road	"	"	150 0 0
	1973	Kingswell Creek, Seaward Bush	"	Invercargill	23 15 0
	1975	Leithen Bush	"	Clutha	100 0 0
	1976	Limehills and Centre Bush Village (outfall drain)	"	Wallace	150 0 0
	1977	Line of Hundreds	"	"	150 0 0
	1979	Looney's Road	"	"	200 0 0
	1984	McLean's Road, Spar Bush	"	Awarua	100 0 0
	1987	Main North Road (Harrisville-Herbert Street)	"	Invercargill	150 0 0
	1988	Makarewa Bridge-Anderson's	"	Awarua	200 0 0
	1993	Makarewa-Hedgehope Flood-channel	"	"	437 4 0
	1995	Mataura River Bridge, Menzies's Ferry (£1 for £1)	"	Mataura	1,000 0 0
	1997	Mimiha-Waiariki	"	"	250 0 0
	1998	Mokoreta, Blocks VII. and IX. (£1 for £1)	"	"	62 15 0
	2001	Mokotua Creek Road and Bridge	"	Awarua	263 11 9
	2004	Moturimu Improved-farm Settlement	"	"	102 18 6
	2007	Neil's Road to termination of Seaward Bush Railway	"	Mataura	102 5 0
	2008	New River Ferry-bridge	"	Awarua	400 0 0
	2009	New River Hundred, Blocks III. and X.	"	"	100 0 0
	2010	New River Hundred Blocks	"	"	100 0 0
	2011	New River Hundred-Otakau (Sections 4 to 38, Block XVII.)	"	"	100 0 0
	2012	Niagara Bridge Road (Block VII, Waikawa)	"	Mataura	3 4 2

TABLE No. 4—continued.

STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—continued.

Vote No.	Item No.	Name of Work.	County.	Electorate	Net Expenditure for Year ended 31st March, 1903.
		ROADS, ETC.—continued.			£ s. d.
101	2013	SOUTHLAND—continued. Nicol's Road, Tisbury	Southland	Awarua	40 0 0
	2015	North End County Road—Avenal	"	Invercargill	100 0 0
	2017	North Road (Gladstone Borough)	"	"	500 0 0
	2023	Otapiri Bridge (Dodd's)	"	Wallace	150 0 0
	2027	Otatara Outfall Drain	"	Awarua	1 1 0
	2028	Oteramika	"	Mataura	12 11 11
	2029	Oteramika (£1 for £1)	"	"	500 0 0
	2030	Oteramika, Anderson, Holz and Niederer, and Templeton's Roads	"	"	1 0 0
	2032	Oteramika Block VII. (Invercargill Hundred)	"	Awarua	157 7 10
	2034	Oteramika, Section 26, Block V., to Section 6, Block XIII.	"	Mataura	4 6 6
	2035	Oteramika—Timpany	"	"	0 19 7
	2040	Scott Street, Invercargill	"	Invercargill	7 10 1
	2041	Scott Street, Seaward Bush	"	"	88 10 0
	2045	Seaward Bush (to Sections 1 and 2, Block III.)	"	"	99 5 6
	2046	Seaward Bush drains	"	"	14 16 0
	2047	Seaward Bush (Endowments—Tisbury Sections, Block XXII., Invercargill Hundred)	"	Awarua	148 5 2
	2048	Seaward Bush (Molson Street)	"	Invercargill	31 12 9
	2049	Seaward Bush (Murphy's Road)	"	Awarua	97 9 11
	2050	Seaward Bush (Murphy's Road—Knipe's Land)	"	"	90 15 0
	2061	Tisbury Road—Clifton Street (on account of £481)	"	Invercargill	0 15 6
	2064	Toe-toes, Section 2, Block X.	"	Mataura	0 3 9
	2071	Waikawa Blocks.. .. .	"	"	40 10 0
	2074	Waikawa Goods-shed and Jetty	"	"	28 9 8
	2075	Waikawa Improved-farm Settlement	"	"	70 16 10
	2076	Waikawa—Long Beach Creek	"	"	152 16 8
	2077	Waikawa—Otara	"	"	67 6 8
	2078	Waikawa Valley	"	"	200 0 0
	2079	Waikawa—Wyndham Valley	"	"	379 14 6
	2082	Waimatua, Seaward Bush	"	Awarua	4 12 4
	2083	Waimatuku Bush	"	"	150 0 0
	2091	Wendon and Greenvale Blocks	"	Wakatipu	200 0 0
	2092	Wendonside	"	"	100 0 0
	2099	Winton, Block VIII.	"	Awarua	48 0 1
	2101	Winton Hill	"	"	102 6 7
	2102	Winton Hundred, Block IX. (Sections 9 and 13)	"	"	1 13 3
	2103	Winton Main North Road	"	"	300 0 0
	2105	Wright's Road—Waimatuku Bush	"	"	150 0 0
	2106	Aparima School Road—Line of Hundreds (£1 for £1)	Wallace	Wallace	25 0 9
	2108	Avondale Saddle.. .. .	"	"	50 0 0
	2111	Chamberlain's Gorge	"	"	102 1 9
	2112	Clifden Bridge—Papatotara	"	"	1 7 10
	2114	Clifden—Otautau	"	"	8 13 0
	2117	Fairfax Bridge	"	"	225 0 0
	2123	Heddon Bush—Drummond	"	"	50 0 0
	2124	Heddon Bush (Bayswater)—Otautau (£1 for £1)	"	"	13 3 8
	2127	Jacob's River Bridge (Hamilton Burn Junction)	"	"	300 0 0
	2130	Jacob's River Protection (Etal's Creek)	"	"	40 0 0
	2135	Line of Hundreds (west of railway)	"	"	100 0 0
	2136	Longwood Blocks	"	"	10 16 6
	2137	Longwood, Block XVIII.	"	"	0 10 0
	2139	Nightcaps—Beaumont	"	"	50 0 0
	2140	Nutall's Road (Longwood—Railway station)	"	"	22 0 0
	2142	Opio Bridge (Lower)—Line of Hundreds (£1 for £1)	"	"	50 0 0
	2143	Orawia—Clifden	"	"	29 3 5
	2148	Papatotara Improved-farm Settlement.. .. .	"	"	128 0 6
	2149	Papatotara Punt, Drummond's Ferry	"	"	158 2 11
	2150	Papatotara—Waiau Mouth	"	"	254 5 5
	2151	Pourakino—Wild Bush	"	"	80 0 0
	2152	Riverton—Howell's Point	"	"	231 14 2
	2153	Riverton—Orepuki	"	"	151 0 0
	2154	Rowley's Road, Longwood, Block XVII.	"	"	5 8 3
	2157	Sutherland Gorge	"	"	228 16 6
	2158	Te Tua	"	"	3 0 2
	2165	Wairaki—Nightcaps	"	"	50 0 0
	2172	Wilson's Road, Longwood, Block II.	"	"	17 0 6
	2175	Half-moon Bay Township Tramway	Stewart Island	Awarua	9 3 4
	2180	Port William—Horseshoe Bay	"	"	36 13 8
	2181	Port William—Lee Bay	"	"	157 10 0
	2182	Stewart Island	"	"	238 10 11
	2186	Contingencies and engineering	"	"	12 13 7
		Total—Southland			£12,751 12 6
2187		Works not specifically appropriated, including emergencies for slips, flood-damages, and any calamity that cannot be foreseen			£1,304 10 0
		Vote No. 101—Total for 1902–3			£201,730 12 1

TABLE No. 4—continued.
STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—continued.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure for Year ended 31st March, 1903.
102		TOURIST ROADS, ETC.			
	2	TE KUITI— Hangatiki-Waitomo	Kawhia ..	Waikato ..	£ s. d. 68 14 6
		Total—Te Kuiti .. .. .	..	..	£68 14 6
		ROTORUA—			
	3	Atiamuri-Orakei Korako	East Taupo ..	Bay of Plenty ..	350 3 4
	4	Taupo-Te Aratiatia Rapids	" ..	" ..	29 15 0
	5	Tokaanu Road and Wharf	" ..	" ..	245 17 5
	6	Tokaanu-Taupo	" ..	" ..	125 18 0
	9	Galatea-Waikaremoana	Whakatane & Wairoa ..	" ..	50 16 6
	10	Echo Lake Geyser	Rotorua ..	" ..	57 13 2
	12	Okere Falls	" ..	" ..	39 13 0
	13	Rotoiti-Tarawera, vid Okataina	" ..	" ..	18 5 8
	14	Rotorua-Ngongataha Mount	" ..	" ..	10 16 0
	15	Rotorua-Taupo	Rotorua & E. Taupo ..	" ..	670 17 9
	16	Rotorua-Wairoa	Rotorua ..	" ..	105 7 6
	18	Rotowhero-Galatea	" ..	" ..	97 8 4
		Total—Rotorua .. .. .	..	..	£1,802 11 8
		HAWKE'S BAY—			
	19	Frasertown-Waikaremoana	Wairoa ..	Waipapu ..	184 4 10
	20	Waikaremoana Accommodation-house Road	" ..	" ..	670 13 10
		Total—Hawke's Bay .. .. .	..	..	£854 18 8
		TARANAKI—			
	21	Egmont (£130, £1 for £1)	Taranaki ..	Patea ..	129 18 11
	22	Mount Egmont	Taranaki, Stratford, Egmont, & Hawera ..	Patea and Taranaki ..	79 17 7
	23	Dawson's Falls	Stratford ..	Patea ..	30 0 0
		Total—Taranaki .. .. .	..	..	£239 16 6
		WANGANUI—			
	25	Pipiriki-Purarato	Wanganui ..	Rangitikei ..	194 14 11
	26	Waiouru-Tokaanu	Wanganui and East Taupo ..	Rangitikei and Bay of Plenty ..	419 12 7
		Total—Wanganui .. .. .	..	..	£614 7 6
		NELSON—			
	27	Maruia Hot Springs	Inangahua ..	Buller ..	64 14 11
		Total—Nelson .. .. .	..	..	£64 14 11
		WESTLAND—			
	29	Haupiri-Amuri	Grey ..	Grey ..	83 13 6
	30	Haupiri Hot Springs	" ..	" ..	145 16 3
	32	Franz Josef Glacier	Westland ..	Westland ..	141 8 3
	33	Mathias Pass	" ..	" ..	59 8 0
	34	Mount Tubua Track	" ..	" ..	34 5 6
		Total—Westland .. .. .	..	..	£464 11 6
		CANTERBURY—			
	37	Mount Cook and glaciers	Mackenzie ..	Waitaki ..	67 16 3
	38	Pukaki-Mount Cook	" ..	" ..	228 6 11
		Total—Canterbury .. .. .	..	..	£296 3 2
		SOUTHLAND—			
	41	Clifden-Manapouri	Wallace ..	Wallace ..	101 7 3
	49	Te Anau-Sutherland Falls	Wallace and Lake ..	Wallace and Wakatipu ..	1,424 16 8
	52	Manapouri-Doubtful	Fiord ..	Wallace ..	0 4 6
	53	Manapouri-Dusky Sound	" ..	" ..	942 3 11
		Total—Southland .. .. .	..	..	£2,468 12 4
		Vote No. 102—Total for 1902-3 .. .. .	..	..	£6,874 10 9
		GOVERNMENT LOANS TO LOCAL BODIES ACCOUNT.— ROADS TO OPEN UP CROWN LANDS.			
114		AUCKLAND—			
	3	Maungataniwha No. 2 Block	Mongonui ..	Bay of Islands ..	29 17 0
	8	Parahaki Block	Bay of Islands ..	" ..	5 13 0
	12	Pakanae Block	Hokianga ..	" ..	25 5 0
	13	Pareokawa Block	" ..	" ..	101 0 2
	15	Waimatanui Block	" ..	" ..	9 8 0
	20	Mangakahia Block	Whangarei ..	Marsden ..	Cr. 1,154 4 16

TABLE No. 4—continued.
STATEMENT showing the NET EXPENDITURE on ROADS, &c.—continued.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure for Year ended 31st March, 1903.
114	GOVERNMENT LOANS TO LOCAL BODIES ACCOUNT— ROADS TO OPEN UP CROWN LANDS—continued.				£ s. d.
	AUCKLAND—continued.				
	21	Mangakahia No. 2 Block	Whangarei	Marsden	17 3 0
	23	Opuawhanga No. 1 Block	"	Bay of Islands	13 0 0
	24	Opuawhanga-Whangarei No. 1 Block	"	Marsden	1 10 0
	25	Owai (I.), Opuawhanga (VII.) Block	"	Bay of Islands	160 19 0
	26	Tangihua Block	"	Marsden	149 10 9
	27	Waipu (V., VI., VII., IX., X., XI.) Block	"	"	44 9 3
	29	Whatitiri No. 1 Block	"	"	234 19 6
	30	Mareikura (II.) Block	Hobson	Kaipara	27 6 7
	31	Maropiu Block	"	"	28 3 0
	32	Maungaru Block	"	"	16 9 0
	34	Tokatoka Block	Otamatea	"	1,344 2 0
	38	Awaroa No. 2 Block	Raglan	"	108 8 0
	39	Opuatia No. 1 Block	"	Franklin	203 13 5
	40	Opuatia No. 2 Block	"	"	70 5 6
	41	Opuatia No. 3 Block	"	"	90 4 10
	Total—Auckland				£1,527 2 8
	TE KUITI—				
	51	Te Puroa Block	Raglan	Waikato	10 2 6
	52	Kawhia Block	Kawhia	"	7 0 0
	53	Kinohaku West Block	"	Egmont & Waikato	36 3 0
	54	Kinohaku West No. 2 Block	"	Waikato	2,093 11 1
	55	Mahosenui Block	"	Egmont	545 15 2
	57	Pakeho Block	"	"	266 16 11
	58	Pirongia West Block	"	Waikato	229 3 3
	61	Te Kuiti Block	"	Egmont & Waikato	712 15 0
	62	Whangaingatakapu Block	"	Waikato	41 18 0
	63	Whareorino Block	"	Egmont	293 11 3
	66	Mangaroa Block	Clifton	"	33 15 0
	68	Waikaka Block	"	"	14 5 0
	69	Waitangata Block	"	"	14 5 0
	Total—Te Kuiti				£4,299 1 2
	ROTORUA—				
	71	Kaikokupu Block	Rotorua & Tauranga	Bay of Plenty	79 7 8
	72	Mamaku Block	Rotorua & Piako	"	19 18 0
	73	Mangorewa-Kaharoa Block	Rotorua	"	327 14 6
	74	Okohiriki Block	Rotorua & Piako	"	180 14 6
	79	Waiawa Block	Opotiki	"	339 11 7
	Total—Rotorua				£947 6 3
	HAWKE'S BAY—				
	83	Wharekopae-Tahora No. 2 Block	Cook	Waiapu	719 19 7
	84	Mangopoike Block	Wairoa	Hawke's Bay	3 12 0
	85	Nuhaka No. 3 Block	"	"	223 16 10
	88	Mangatoro No. 1 Block	Waipawa	Waipawa	113 10 0
	Total—Hawke's Bay				£1,060 18 5
	TARANAKI—				
	96	Mangaowata Block	Clifton	Patea	30 8 6
	97	Mangatawa Block	"	Egmont	232 13 0
	101	Moki Block	"	"	684 2 4
	102	Putiki Block	"	"	7 18 3
	103	Rerekapa Block	"	"	184 12 0
	104	Tangitu Block	"	"	59 2 3
	108	Llewellyn Block	Stratford	Patea	217 6 4
	109	Makahu Block	"	"	91 8 3
	110	Mauku Block	"	"	75 5 7
	111	Poarangi Block	"	"	469 4 9
	112	Ross Block	"	"	38 3 6
	113	Tahora Block	"	"	292 11 7
	114	Vera Block	"	"	79 16 0
	115	Waingarara	"	Egmont & Patea	86 7 0
	117	Patupuremu Block	Patea	Patea	23 14 8
	118	Rawhitiroa Block	"	"	23 1 0
	119	Whenuakura Block	"	"	183 19 1
	Total—Taranaki				£2,779 14 1
	WANGANUI—				
	120	Gladstone Block	Wanganui	Rangitikei	67 6 8
	121	Kaitieke Block	"	"	100 9 0
	122	Manganui and Ruapehu Block	"	"	117 6 0
	123	Marton No. 3 Block	"	"	19 8 10
	124	Ngamatea-Maungakaretu Block	"	"	844 13 6
	125	Ngaurukehu Block	"	"	352 2 2
	128	Tauakira Block	"	"	851 8 3

TABLE No. 4—*continued*.
STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—*continued*.

Vote No.	Item No.	Name of Work.	County.	Electorate	Net Expenditure for Year ended 31st March, 1903.
114	GOVERNMENT LOANS TO LOCAL BODIES ACCOUNT— ROADS TO OPEN UP CROWN LANDS— <i>continued</i> . WANGANUI— <i>continued</i> .				£ s. d.
	129	Te Ruanui Block	Wanganui ..	Rangitikei ..	108 10 8
	131	Te Ngaue Block	Patea ..	Patea ..	5 9 6
	133	Ohinewairua (XIII.) Block ..	Rangitikei ..	Rangitikei ..	157 6 1
	134	Ohinewairua-Pukeokahu Block ..	Rangitikei & Hawke's Bay ..	" ..	402 0 10
	135	Oraukura Block	Rangitikei ..	" ..	247 4 6
	136	Pohonuiaatane Block	" ..	" ..	401 12 8
	137	Pukeokahu Block	" ..	" ..	507 18 2
	138	Tiriraukawa-Hautapu Block ..	" ..	" ..	935 15 11
	—	Waimarino No. 2 Block	Wanganui ..	" ..	1 2 11
	Total—Wanganui				£5,119 15 8
	WELLINGTON—				
	139	Hautapu-Ruahine No. 2 Block ..	Rangitikei ..	Rangitikei ..	207 16 11
	140	Kawatau Block	Kiwitea ..	Oroua ..	40 14 10
	141	Onslow Block	" ..	" ..	23 19 9
	144	Dannevirke Centennial Block ..	Akitio ..	Pahiatua ..	187 12 7
	145	Kaiwaka (IV., VIII., XI.) Block ..	Featherston ..	Wairarapa ..	228 5 2
	Total—Wellington				£688 9 3
	MARLBOROUGH—				
	147	Pine Valley Block	Marlborough ..	Wairau ..	70 6 0
	148	Tinline Block	" ..	Nelson ..	57 10 9
	150	Stag and Spey Block	Kaikoura ..	Hurunui ..	228 13 7
	151	Waipapa Block	" ..	" ..	279 6 1
	Total—Marlborough				£635 16 5
	WESTLAND—				
	152	Waitaha Bush	Westland ..	Westland ..	397 11 4
	Total—Westland				£397 11 4
	OTAGO—				
	154	Catlin's (IV., V., VII., VIII.) Block ..	Clutha ..	Clutha ..	23 5 0
	156	Lauder-Tiger Hill Block	Vincent ..	Mount Ida ..	400 0 0
	157	Gimmerburn Block	Maniototo ..	" ..	129 0 0
	159	Maniototo No. 3 Block	" ..	" ..	132 12 6
	160	Naseby, Maniototo, and Gimmerburn Block ..	" ..	" ..	93 8 2
	161	Naseby No. 2 Block	" ..	" ..	291 9 10
	162	Swinburn Farm-homestead Block ..	" ..	" ..	52 19 6
	Total—Otago				£1,122 15 0
	Vote No. 114—Total for 1902-3				£18,578 10 3
	*Votes 101, 102, and 114—Grand total for 1902-3				£227,183 13 1
	Add expenditure of previous years				£5,684,219 19 10
	Total expenditure to 31st March, 1903				£5,911,403 12 11

TABLE NO. 4—continued.
STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—continued.

Vote No.	Item No.	Name of Work.	County.	Net Expenditure for Year ended 31st March, 1903.
		ROADS ON GOLDFIELDS.		£ s. d.
108	1	Subsidies towards the construction of roads and tracks in mining districts, and minor works for the development of mineral resources	..	1,682 2 1
				£1,682 2 1
		<i>Auckland.</i>		
	4	Cabbage Bay-Port Charles and Cape Colville	Coromandel	273 6 1
	5	Tairua-Whenuakite	"	150 0 0
	6	Coromandel-Cabbage Bay	"	84 0 0
	7	Tokatea-Kennedy Bay	"	19 19 0
	8	Coromandel-Kuaotunu <i>via</i> Matarangi	"	171 11 6
	10	Tiki-Manaia	"	285 1 6
	11	Manaia-Waikawau	"	301 0 0
	12	Mercury Bay-Whenuakite and Boat Harbour	"	100 0 0
	13	Kuaotunu-Mercury Bay	"	300 0 0
	14	Whitianga-Gumtown	"	209 6 6
	15	Coromandel-Whangapoua	"	303 0 0
	16	Kikowhakarere-Cabbage Bay	"	251 18 0
	17	Wharf Road, Coromandel	"	500 0 0
	18	Whitianga-Kaimarama	"	244 15 0
	19	Mahakirau Goldfield road	"	121 0 9
	21	Opitonui Road	"	110 15 6
	22	Ohuka Creek Bridge	"	250 0 0
	24	Four-in-Hand Road	"	54 16 6
	26	Macronic Mine Road	"	200 0 0
	27	Waiwawa River Bridge	"	400 0 0
	28	Gumtown Road	"	300 0 0
	29	Kapowai Track	"	200 0 0
	30	Mahaki Goldfield Track	"	203 0 0
	31	Owera Bridge	"	350 0 0
	32	Driving Creek School Bridge, Tokatea Road	"	100 0 0
	33	Driving Creek School Bridge	"	200 0 0
	34	Waitaia Mine-Battery	"	260 0 0
	37	McColl's Creek Bridge	"	50 0 0
	40	Driving Creek-Tokatea	"	100 0 0
	44	Thames-Waikawau	Thames	276 0 0
	45	Thames-Hikutaia	"	168 0 0
	46	Upper Tararu Road	"	137 0 0
	47	Tapu Creek and extension	"	147 0 0
	49	Hikutaia-Whangamata "Wires" Track	"	305 0 0
	50	Matatoki Road	"	10 2 6
	51	Wharepoa Settlement Road	"	151 2 0
	52	Omahu-Whangamata	"	106 0 0
	53	Puriri-Neavesville	"	300 0 0
	54	Neavesville-Upper Landing	"	82 14 0
	55	Upper Landing-Tairua	"	200 0 0
	57	Thames-Whangamata	"	200 0 0
	58	Whangamata-Wentworth	"	237 0 0
	61	Waiotahi Road	"	100 0 0
	62	Waiomo Creek Road	"	207 0 0
	63	Tapu and Mercury Bay Track	"	178 0 0
	64	Tapu-Gumtown	"	400 0 0
	65	Gumtown-Welcome Jack	"	150 0 0
	66	Crosbie Settlement Road	"	100 0 0
	67	Moanataiari Road	"	100 0 0
	68	Kauaeranga Bridge	"	299 6 0
	69	Upper Tairua Bridge	"	93 15 0
	72	Hikutaia-Waihi	Ohinemuri	151 14 0
	73	Waitekauri-Golden Cross	"	320 19 0
	74	Waihi-Whangamata	"	48 4 0
	75	Paeroa-Te Aroha	"	214 7 0
	77	Komata Reefs-Waitekauri	"	140 0 0
	78	Hikutaia-Waitekauri	"	10 0 0
	80	Netherton roads	"	22 10 0
	81	Hikutaia-Maratoto	"	124 0 0
	82	Tui Mine Track	"	237 0 0
	83	Waihi-County Boundary	"	67 7 5
	84	Komata Creek Road	"	190 0 0
	85	Paeroa-Waihi	"	480 0 0
	86	Karangahake Mountain Track	"	74 5 0
	87	Peel's Creek Road	"	100 0 0
	88	Dividing-range Track-Mangakino	"	100 0 0
	89	Karangahake Hill Track	"	158 15 0
	90	Waitawheta Road, deviation	"	71 17 6
	91	Karangahake Track extension	"	105 0 0
	92	Waihi-Tauranga	"	197 3 4
	97	Komata Drain	"	82 10 0
	98	Mangakara Creek Bridge	"	150 0 0
	100	Thompson's Track	Piako	105 0 0
	101	Waihi-Katikati	Tauranga	100 0 0
				£13,292 2 1

TABLE NO. 4—continued.

STATEMENT showing the NET EXPENDITURE ON ROADS, &c.—continued.

Vote No.	Item No.	Name of Work.	County.	Net Expenditure for Year ended 31st March, 1903.
		ROADS ON GOLDFIELDS—continued.		£ s. d.
		<i>Marlborough.</i>		
103	105	Onamalutu-Wakamarina	Pelorus Road Board	76 0 0
	107	Top Valley Road	"	44 0 6
	108	Picton-Grove	"	515 15 10
				£635 16 4
		<i>Nelson.</i>		
	110	Bonny Doon Road	Collingwood	200 0 0
	111	Anatoki Track	"	134 7 0
	112	Vants to Bubu	"	200 0 0
	113	Kaituna-Ferntown	"	168 0 0
	114	Ferntown-Pakawau	"	143 18 8
	115	Takaka-Collingwood " Inland " Road	"	175 8 4
	117	Taitapu Boundary Track	"	187 13 6
	118	Takaka Roads	"	12 0 7
		Protecting bridge, Waitapu	"	200 0 0
	119	Collingwood Bridge	"	4,101 14 5
	122	Collingwood-Kaituna	"	124 19 6
	123	Milnthorpe Road	"	200 0 0
	125	Pakawau-Puponga	"	100 0 0
	130	Wangapeka-Baton	Waimea	200 0 0
	131	Thorpe-Churchill	"	100 0 0
	135	Thorpe-Neudorf	"	100 0 0
	136	Chandler's-Wakapeka Junction	"	49 0 0
	137	Chandler's-Rolling River	"	200 0 0
	141	Tableland Track	"	40 0 0
	145	Millerton Road	Buller	250 0 0
	146	Lyell Bridge-Ryan's	"	100 0 0
	147	Wilson's Lead Road	"	100 0 0
	148	Granity Creek South	"	250 0 0
	149	Denniston Hill Road	"	497 3 4
	151	Stony Creek-Waimangaroa	"	200 0 0
	152	Westport-Mokihinui	"	250 0 0
	154	Costello's Hill Road	"	200 0 0
	155	Lyell-Eight-mile (widening)	"	200 0 0
	156	Addison's Road-Buller Road	"	250 0 0
	157	Promised Land-Ohinemuri Creek	"	100 0 0
	158	Land of Promise Road	"	100 0 0
	160	Mokihinui-Little Wanganui River	"	991 0 11
	161	Mokihinui end of Westport Road	"	300 0 0
	162	Westport-Waimangaroa	"	649 8 11
	163	Karamea Bridge	"	578 9 4
	164	Virgin Flat Road	"	100 0 0
	165	Fairdown-Beach	"	100 0 0
	170	Addison's	"	100 0 0
	172	Millerton-Mine Creek	"	200 0 0
	173	Mokihinui-Ngakawau	"	350 0 0
	174	Waimangaroa-Birchfield	"	200 0 0
	175	Blackwater Track	"	200 0 0
	177	Lyell-Denniston	"	100 0 0
	178	Welshman's Terrace	"	200 0 0
	180	Britannia Mine Road	"	200 0 0
	183	Seddonville-Mokihinui Mine	"	200 0 0
	184	Coal Creek extension	"	200 0 0
	185	Cascade Creek Road	"	200 0 0
	187	Fairdown Station-Waimangaroa (widening)	"	300 0 0
	196	Reefton-Marua	Inangahua	702 0 0
	199	Mangle's Valley Road	"	283 0 0
	200	Burke's Creek Bridge	"	30 12 0
	201	Blackwater-Big River	"	150 0 0
	202	Inangahua Bridge	"	248 10 9
	204	Big Ohika Creek Bridge	"	873 7 1
	205	Boatman's Valley Road Bridge	"	390 0 0
	206	Warwick-Marua Bridge	"	48 2 10
	208	Just-in-time Track	"	300 0 0
	211	Road to Matakita River Bridge	"	200 0 0
	212	Glenroy River Road	"	300 0 0
	217	Reefton-Progress	"	20 0 0
				£17,848 17 2
		<i>Westland.</i>		
	219	Waipuna Road	Grey	150 0 0
	220	Blackball-Healy's Gully	"	450 0 0
	221	Seven-mile Creek-Nine-mile Bluff	"	1,150 0 0
	222	Cape Terrace Road	"	200 0 0
	223	Hatter's Terrace-Bell Hill	"	250 0 0
		Carried forward		2,200 0 0

TABLE NO. 4—continued.

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—continued.

Vote No.	Item No.	Name of Work.	County.	Net Expenditure for Year ended 31st March, 1903.		
		Brought forward .. ..	..	£	s.	d.
				2,200	0	0
		ROADS ON GOLDFIELDS—continued.				
		Westland—continued.				
103	224	Main Grey Bridge repairs	Grey	2,036	3	11
	225	Moonlight Creek Bridge	"	9	18	1
	226	Waipuna Bridge	"	244	17	5
	228	Taylorville Bridge	"	458	8	0
	229	Nelson Creek Bridge—Grey—Marsden Road	"	100	0	0
	230	Nelson Creek Bridge—Hatter's Terrace	"	200	0	0
	231	Maori Creek Bridge	"	100	0	0
	232	Eight-mile Creek Bridge approaches	"	130	0	0
	233	Moonlight—Blackball	"	325	0	0
	234	Kotuku—Bell Hill	"	250	0	0
	235	Moonlight Road	"	250	0	0
	238	Teremakau Bridge—Payne's Gully	"	50	0	0
	241	Grey—Dunganville Road bridges	"	150	0	0
	242	Nelson Creek—Bell Hill	"	250	0	0
	247	Saltwater Creek Bridge	"	150	0	0
	248	Brunner—Blackball	Brunner Borough	231	12	0
	249	Reefton—Hokitika—Ross	Westland	2,092	9	4
	250	Great South Road	"	132	3	0
	251	Kokatahi Road	"	100	0	0
	252	Wataroa Bluff Track	"	157	10	5
	253	Doughboy Road extension	"	50	0	0
	254	Humphrey's—One-mile	"	238	8	6
	256	Gillam's Gully Track	"	374	3	7
	257	Hokitika—Jackson's	"	158	16	0
	258	Adair's Track (widening)	"	265	9	1
	259	Seven-mile Creek—Taipo	"	270	0	0
	260	Okarito Forks—Waiho	"	1,021	9	8
	261	Browning's Pass Track	"	91	0	0
	262	Seddon's Terrace Track	"	293	12	6
	263	Lamplough Track	"	157	0	0
	264	Blue Spur Road Bridge	"	50	0	0
	266	Ogilvie's Beach Road	"	9	19	0
	267	Kanieri Forks Road	"	103	9	7
	268	Teremakau—Paroa	"	76	12	0
	269	Dillman's Road to Nos. 4 and 5 Channels	"	180	6	0
	270	Duffer's Road (widening)	"	221	5	6
	271	Kanieri Lake Road	"	171	4	6
	272	Tucker Flat Road	"	33	0	9
	273	Three-mile Bluff—Okarito	"	150	0	0
	274	Wataroa Gorge Track	"	136	1	10
	277	Metalling Awatuna Road	"	100	0	0
	278	Kanieri Bridge	"	3	17	6
	280	Back Creek Road and Bridge	"	84	18	6
	281	Saltwater Track	"	66	1	8
	282	Whitecomb Valley Road	"	21	15	0
				£13,946	13	4
		Otago.				
	286	Clarendon—Berwick	Bruce	127	15	0
	287	Lawrence—Waipori	Tuapeka	225	0	0
	288	Lawrence—Roxburgh	"	550	0	0
	289	Waitahuna—Lawrence	"	175	0	0
	290	Waipori—Waitahuna	"	175	0	0
	291	Waipori—Bush Road	"	200	0	0
	292	Lawrence County boundary	"	350	0	0
	293	Fitzgerald's Bridge	"	400	0	0
	295	Beaumont—Rankleburn	"	50	0	0
	296	Beaumont—Miller's Flat	"	50	0	0
	297	Waitahuna—Round Hill	"	100	0	0
	316	Lawrence—Clyde	"	50	0	0
	304	Arrowtown—Macetown	Lake	100	0	0
	307	Crown Terrace—Cardrona	"	150	0	0
	309	Arthur's Point—Moke Creek	"	40	0	0
	310	Johnston Creek Road extension	"	450	0	0
	320	Waikaka Township—Little Waikaka (Knapdale Road Board)	Southland	150	0	0
	321	Waimumu Road	"	300	0	0
	323	Stoney Ford Bridge—Nokomai	"	300	0	0
	325	Waikaia Goldfield Road	"	150	0	0
	326	Waikaia—Whitecomb	"	100	0	0
	336	Stewart Island Road to Mines	Stewart Island	91	19	4
				£4,284	14	4
		Expenditure for year ended 31st March, 1903 .. ..	..	51,690	5	4
		Expenditure for previous years .. ..	..	535,450	9	1
		Total expenditure to 31st March, 1903, on Roads on Goldfields .. ..	..	£587,140	14	5

Development of Goldfields.—Table No. 5—continued.

STATEMENT showing the EXPENDITURE for WATER-RACES on GOLDFIELDS out of Public Works Fund to 31st March, 1903, and the LIABILITIES on that Date—continued.

LOCALITY AND NAME OF RACE.	EXPENDITURE.						LIABILITIES.				Total Expenditure and Liabilities.	LOCALITY AND NAME OF RACE.
	Survey and Construction, 1870-1902.	Grants Subsidies, 1870-1902.	Survey and Construction 1902-1903.	Grants Subsidies, 1902-1903.	Totals.		Authorities on Construction.	Authorities on Grants, Subsidies.	Contracts.	Totals.		
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Brought forward ..	340,161 0	132,498 11 9	1,728 18 1	768 18	3,975,157 8 2	..	..	230 15 0	..	230 15 0	0 375,388 3 2	MIDDLE ISLAND—continued.
NELSON PROVINCIAL DISTRICT— <i>ctd.</i>												NELSON PROVINCIAL DISTRICT— <i>ctd.</i>
Subsidies—												Subsidies—
Jones, Baxter, and party, water-race from Roaring Meg	..	800 0 0	..	..	800 0 0	..	..	..	..	..	800 0 0	Jones, Baxter, and party, water-race from Roaring Meg.
Bell Hill Co.'s Race ..	322 18 2	500 0 0	..	..	500 0 0	..	..	..	..	..	500 0 0	Bell Hill Co.'s Race.
Randall Creek Water-race ..	..	218 0 0	..	..	218 0 0	..	..	..	..	..	322 18 2	Randall Creek Water-race.
Wills and party, water-race at Sulky Gully	..	..	..	..	..	..	..	..	..	..	218 0 0	Wills and party, water-race at Sulky Gully.
OTAGO PROVINCIAL DISTRICT—												OTAGO PROVINCIAL DISTRICT—
Subsidies—												Subsidies—
Arrow ..	..	612 10 0	..	..	612 10 0	..	..	..	..	..	612 10 0	Arrow.
Beaumont and Tuapeka ..	4 6 2	640 0 0	..	..	644 6 2	..	..	..	..	..	644 6 2	Beaumont and Tuapeka.
Carrick Range ..	..	9,249 13 1	..	..	9,249 13 1	..	..	..	..	..	9,249 13 1	Carrick Range.
Mount Pisgah ..	..	200 0 0	..	..	200 0 0	..	..	..	..	..	200 0 0	Mount Pisgah.
Lawrence Drainage-channel ..	..	3,092 19 0	..	..	3,092 19 0	..	..	..	..	..	3,092 19 0	Lawrence Drainage-channel.
Ophir Tail-race ..	..	1,150 0 0	..	..	1,150 0 0	..	..	..	..	..	1,150 0 0	Ophir Tail-race.
Muddy Creek Channel ..	..	850 0 0	..	..	850 0 0	..	..	..	..	..	850 0 0	Muddy Creek Channel.
St. Bathans ..	..	1,625 0 0	..	..	1,625 0 0	..	..	312 10 0	..	312 10 0	2,000 0 0	St. Bathans.
Maerewhenua ..	1,065 0 0	..	..	..	1,065 0 0	..	..	..	..	..	1,065 0 0	Maerewhenua.
Artesian wells, Maniototo ..	20 0 0	..	..	..	20 0 0	..	..	..	..	..	20 0 0	Artesian wells, Maniototo.
Improving water-supply, Oamaru ..	1,150 7 2	..	..	..	1,150 7 2	..	..	..	..	..	1,150 7 2	Improving water-supply, Oamaru.
Mountain Hut Water-race ..	3,449 9 3	..	1,982 2 9	..	4,831 12 0	..	..	..	..	..	4,831 12 0	Mountain Hut Water-race.
Government Works—												Government Works—
Mount Ida ..	71,418 3 5	..	2,205 9 5	..	73,623 12 10	..	..	..	..	..	73,623 12 10	Mount Ida.
Waipori ..	11,263 1 0	..	..	..	11,263 1 0	..	..	..	..	..	11,263 1 0	Waipori.
CANTERBURY PROVINCIAL DISTRICT—												CANTERBURY PROVINCIAL DISTRICT—
Subsidy—												Subsidy—
Ninety-mile Beach Water-race	65 6 7	..	..	..	65 6 7	..	..	..	..	..	65 6 7	Ninety-mile Beach Water-race.
SOUTHLAND PROVINCIAL DISTRICT—												SOUTHLAND PROVINCIAL DISTRICT—
Subsidy—												Subsidy—
Round Hill ..	..	133 19 4	..	..	133 19 4	..	..	..	..	..	133 19 4	Round Hill.
GENERAL—												GENERAL—
Increased water-supply ..	530 4 0	100 0 0	..	..	630 4 0	..	..	..	..	..	630 4 0	Increased water-supply.
DEPARTMENTAL—												DEPARTMENTAL—
Salaries, travelling, advertising, &c.	6,720 6 8	..	..	..	6,720 6 8	..	..	..	..	..	6,720 6 8	Salaries, travelling, advertising, &c.
TOTALS ..	436,170 2	651,670 13 2	5,316 10 3	831 8	3,493,988 14 2	..	..	543 5 0	..	543 5 0	0 494,531 19 2	TOTALS.
SUMMARY.												SUMMARY.
NORTH ISLAND ..	80,708 19 3	1,585 5 4	..	..	82,294 4 7	..	..	..	..	..	82,294 4 7	NORTH ISLAND.
MIDDLE ISLAND ..	436,170 2	651,670 13 2	5,316 10 3	831 8	3,493,988 14 2	..	..	543 5 0	..	543 5 0	0 494,531 19 2	MIDDLE ISLAND.
TOTALS ..	516,879 1	953,255 18 6	5,316 10 3	831 8	3,576,292 18 9	..	..	543 5 0	..	543 5 0	0 576,826 3 9	TOTALS.

Development of Goldfields.—Table No. 5a.

STATEMENT showing ASSISTANCE towards PROSPECTING, and MISCELLANEOUS SERVICES, out of Public Works Fund to 31st March, 1903, and the LIABILITIES on that Date.

	Total Expenditure to 31st March, 1901.	Net Expenditure during 12 Months ended 31st March, 1902.	Total Net Expenditure to 31st March, 1902.	Liabilities on 31st March, 1902.	Total Net Expenditure and Liabilities.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Assistance towards prospecting* ..	14,316 4 6	1,131 0 4	15,447 4 10	1,821 17 7	17,269 2 5
Purchase of diamond-drill ..	722 1 5	..	722 1 5	..	722 1 5
Prospecting deep levels, Thames,— Queen of Beauty Claim ..	25,000 0 0	..	25,000 0 0	..	25,000 0 0
Inspector's fee, deep-level shaft, Thames ..	500 0 0	..	500 0 0	..	500 0 0
Purchase of Cassrell's and Bennett's leaseholds, Paeroa ..	2,250 0 0	..	2,250 0 0	..	2,250 0 0
Compensation Proclamation of Rivers Water Conservation—	17,785 16 0	13,215 10 8	31,001 6 8	..	31,001 6 8
Reports on Coromandel Harbour and Kuaotunu Sludge-channel ..	80 12 6	..	80 12 6	..	80 12 6
Engineer's salary and expenses ..	1,998 13 10	424 9 7	2,423 3 5	..	2,423 3 5
Eweburn Reservoir ..	16,361 19 2	84 18 9	16,446 17 11	..	16,446 17 11
Home Gully Dam ..	..	1,025 12 6	1,025 12 6	..	1,025 12 6
Telephone-line, Bannockburn to Nevis ..	50 0 0	..	50 0 0	..	50 0 0
Reports on Ross Flat ' ..	284 10 8	..	284 10 8	..	284 10 8
Resumption of land ..	862 7 0	..	862 7 0	..	862 7 0
Water-supplies for Mining Town- ships—					
Waitekauri ..	445 2 5	..	445 2 5	..	445 2 5
Karangahake ..	607 6 5	..	607 6 5	..	607 6 5
Mackeytown ..	279 0 5	71 19 7	351 0 0	..	351 0 0
Clyde ..	..	375 0 0	375 0 0	725 0 0	1,100 0 0
Thames Drainage Board contribution ..	..	1,000 0 0	1,000 0 0	..	1,000 0 0
Waimumu Main Tail-race ..	..	500 0 0	500 0 0	1,848 3 0	1,848 3 0
Charlton Creek Main Tail-race ..	..	236 5 5	236 5 5	563 6 9	799 12 2
Totals ..	81,543 14 4	18,064 16 10	99,608 11 2	4,458 7 4	104,066 18 6

* Expenditure prior to 31st March, 1894, £2,630 16s. 2d.

TABLE No. .

STATEMENT showing the EXPENDITURE on TELEGRAPHS out of Public Works Fund to 31st March, 1903, and the Liabilities on that Date.

Line.	Expenditure during Twelve Months ended 31st March, 1903.	Total Expenditure and Liabilities.
	£ s. d.	£ s. d.
Telephone Exchanges,—		
Ashburton ..	25 3 4	
Auckland ..	1,235 3 10	
Blenheim ..	14 6 6	
Christchurch ..	911 16 10	
Dannevirke ..	424 7 3	
Dunedin ..	847 0 7	
Feilding ..	32 7 1	
Gisborne ..	83 12 0	
Greymouth ..	25 9 3	
Hawera ..	28 7 3	
Hokitika ..	55 0 6	
Invercargill ..	328 0 8	
Masterton ..	212 4 6	
Napier ..	88 10 4	
Nelson ..	24 4 6	
New Plymouth ..	31 16 8	
Oamaru ..	57 7 11	
Pahiatua ..	19 13 4	
Palmerston North ..	110 14 0	
Rotorua ..	130 17 7	
Stratford ..	12 1 8	
Thames ..	42 0 10	
Timaru ..	50 4 2	
Wanganui ..	258 4 9	
Wellington ..	785 15 4	
Westport ..	290 18 9	
New wires,—		
Doubtless Bay ..	6,369 8 4	
Waihopo ..	38 10 5	
Carried forward ..	12,533 8 2	..

TABLE NO. 6—*continued.*STATEMENT showing EXPENDITURE ON TELEGRAPHS out of Public Works Fund—*continued.*

Line.	Expenditure during Twelve Months ended 31st March, 1903.			Total Expenditure and Liabilities.		
	£	s.	d.	£	s.	d.
Brought forward	12,533	8	2			
New wires— <i>continued.</i>						
Horeke	195	8	3			
Whangaroa	0	10	0			
Totara North-Mangonui	99	2	11			
Warkworth-Whangarei	70	19	6			
Aoroa-Mangawhare	8	5	5			
Tuakau-Onewhero	259	6	0			
Pahi-Whakapirau	0	13	4			
Raupo-Rehia	167	0	9			
Ahuroa	0	10	10			
Waingaro-Ngaruawahia	2	12	2			
Awhitu Central-Manukau Heads	49	8	9			
Auckland-Waiheke Island	475	17	1			
Otahuhu-East Tamaki	17	15	4			
Henderson-Swanson	88	11	8			
Hobsonville	70	3	4			
Waerenga	223	4	6			
Peria-Victoria Valley-Fairburns	450	16	5			
Cambridge Sanatorium	99	18	0			
Cambridge-Hautapu-Fencourt	14	10	0			
Ardmore	1	12	10			
Paeroa-Komata	88	14	7			
Opotiki-Ohiwa	35	9	6			
Ormond-Gisborne	32	4	0			
Gisborne-Tokomaru Bay	247	14	6			
Taradale-Fernhill	65	15	4			
Pukehou-Te Aute	7	1	0			
Waipawa-Elsthorpe	56	6	8			
Waipukurau-Hatuma	4	6	3			
Weber-Waione	181	0	11			
Blackburn-Whakarara	9	3	0			
Opunake-Pungarehu	42	3	5			
Otakeho-Auroa	64	3	9			
Okaiawa-Matapu	40	2	6			
Kaponga-Awatuna	81	0	8			
Awatuna-Tekiri	51	2	0			
Manaia-Inaha	5	15	10			
Hawera-Manaia	43	19	4			
Normanby-Eltham	21	18	7			
Wanganui-Okoia	8	18	4			
Wanganui-Castlecliff	1	16	9			
Taihape-Ruanui	12	0	6			
Awahuri-Rongotea	135	17	6			
Shannon-Tokomaru	0	3	0			
Porirua-Titahi Bay	37	12	8			
Rongomai	17	8	11			
Eketahuna-Nireaha	11	15	3			
Papatawa	1	2	0			
Kaitawa-Tane	153	16	11			
Taita-Upper Hutt	30	17	3			
Mabau	128	8	11			
Pelorus Sound	501	17	11			
Kaituna-Okaramio	105	11	2			
Golden Downs	0	11	10			
Motupipi	104	6	0			
Karamea	147	8	11			
Newton Flat-Fern Flat	42	8	5			
St. Helen's	8	11	0			
Ngahere	9	13	10			
Koiterangi-Upper Kokatahi	33	18	9			
Waiho Ferry	27	17	11			
Kumara-Marsden	1	5	6			
Ross-South Lagoon	1	12	6			
Hurunui	2	13	0			
Kowai Bush	0	18	5			
Gebbie's Valley-Kaituna	32	9	5			
Akaroa Trunk	15	3	10			
Green Park	47	6	8			
Lauriston	2	3	1			
Westerfield	1	4	6			
Geraldine-Hilton	106	9	0			
Carried forward	17,641	6	9			

TABLE No. 6—*continued*.
STATEMENT showing EXPENDITURE on TELGRAPHS out of Public Works Fund—*continued*.

Line.					Expenditure during Twelve Months ended 31st March, 1903.	Total Expenditure and Liabilities.
					£ s. d.	£ s. d.
Brought forward					17,641 6 9	
New wires— <i>continued</i> .						
Waimate Trunk					8 6 9	
Seacliff-Waitati					60 2 0	
Dunedin-Palmerston					7 11 2	
Dunedin-Balclutha					13 9 3	
East Taieri					13 9 1	
Waikawa Bureau					13 5 0	
Waikaka-Maitland					28 6 1	
Kawarau Bridge-Gibbston-Waitiri					76 9 8	
Waikaia-Wedonside					87 10 10	
Riversdale-Pyramid					9 10 6	
Scott's Gap					64 13 9	
Riverton-Orepuki					5 15 3	
Gore-Balfour					90 17 8	
Gore-Otama					407 2 4	
Bluff-Half-moon Bay					339 19 9	
Purchase of material					49,710 11 10	
					68,578 7 8	
Expenditure to 31st March, 1902					937,887 2 3	1,006,465 9 11
Total expenditure .. .. .					..	1,006,465 9 11
Liabilities, 31st March, 1903 .. .. .					..	27,409 0 0
Total expenditure and liabilities.. .. .					..	£1,033,874 9 11

TABLE No. 7.

STATEMENT showing the EXPENDITURE on PUBLIC BUILDINGS out of Public Works Fund to 31st March, 1903, and the LIABILITIES on that Date.

	Total Expenditure to 31st March, 1902.	Expenditure for Year ended 31st March, 1903.	Total Expenditure to 31st March, 1903.	Liabilities on Authorities, Contracts, &c., 31st March, 1903.	Total Expenditure and Liabilities.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Judicial	438,855 17 7	33,224 2 11	472,080 0 6	10,723 2 11	482,803 3 5
Postal and Telegraphic	257,685 16 9	74,686 2 0	332,371 18 9	20,783 12 5	353,155 11 2
Customs	9,968 14 9	6,630 1 1	16,598 15 10	24,738 0 0	41,336 15 10
Offices for Public Departments	223,747 2 6	7,993 8 2	231,740 10 8	5,058 17 11	236,799 8 7
Lunatic Asylums	475,593 1 5	10,166 10 3	485,759 11 8	4,296 0 2	490,055 11 10
Defence Depot, Wellington	3,022 9 5	450 16 9	3,473 6 2	..	3,473 6 2
School-buildings	1,087,967 5 8	57,790 12 0	1,145,757 17 8	16,002 1 3	1,161,759 18 11
Hospitals	55,683 10 7	3,539 17 8	59,223 8 3	2,991 0 0	62,214 8 3
Quarantine Stations	6,863 19 5	..	6,863 19 5	..	6,863 19 5
Survey	543 4 5	..	543 4 5	..	543 4 5
Parliament Buildings	59,450 14 4	1,503 9 3	60,954 3 7	..	60,954 3 7
Government House, Auckland	4,940 0 4	..	4,940 0 4	..	4,940 0 4
Wellington	7,753 15 4	577 4 10	8,331 0 2	..	8,331 0 2
Agricultural	6,744 8 8	883 17 0	7,628 5 8	3 14 4	7,632 0 0
Miscellaneous	16,429 8 4	9 0 4	16,438 8 8	..	16,438 8 8
Totals	2,655,249 9 6	197,455 2 3	2,852,704 11 9	84,596 9 0	2,937,301 0 9

TABLE No. 8.

STATEMENT showing the EXPENDITURE on LIGHTHOUSES, HARBOUR WORKS, and HARBOUR DEFENCES out of Public Works Fund, to 31st March, 1903, and the LIABILITIES on that Date.

	Total Expenditure to 31st March, 1902.	Net Expenditure during 12 Months ended 31st March, 1903.	Total Expenditure to 31st March, 1903.	Liabilities on Authorities, Contracts, &c., to 31st March, 1903.	Total Expenditure and Liabilities.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
LIGHTHOUSES.					
Akaroa	7,148 16 5	..	7,148 16 5	..	7,148 16 5
Brothers	6,241 0 0	..	6,241 0 0	..	6,241 0 0
Cape Campbell .. .. .	..	74 0 6	74 0 6	1,506 0 3	1,580 0 9
Cape Egmont	3,354 6 4	..	3,354 6 4	..	3,354 6 4
Cape Foulwind	6,955 9 1	..	6,955 9 1	..	6,955 9 1
Cape Kidnappers	2,109 11 7	..	2,109 11 7	..	2,109 11 7
Cape Maria van Diemen	7,028 14 8	..	7,028 14 8	..	7,028 14 8
Cape Palliser	6,712 9 6	..	6,712 9 6	..	6,712 9 6
Cape Saunders	6,066 6 3	..	6,066 6 3	..	6,066 6 3
Centre Island	5,785 19 0	..	5,785 19 0	..	5,785 19 0
Cuvier Island	7,405 9 11	..	7,405 9 11	..	7,405 9 11
East Cape	7,594 8 8	1,636 5 1	9,230 13 9	..	9,230 13 9
French Pass Beacon	668 15 8	..	668 15 8	..	668 15 8
French Pass	1,427 17 5	..	1,427 17 5	..	1,427 17 5
Hokitika	801 9 7	..	801 9 7	..	801 9 7
Jackson's Reef Beacon	3,180 0 5	..	3,180 0 5	..	3,180 0 5
Kahurangi Point	1,795 0 7	4,371 17 5	6,166 18 0	3 18 5	6,170 16 5
Kaipara	5,571 8 0	..	5,571 8 0	..	5,571 8 0
Manukau Heads	600 13 11	..	600 13 11	..	600 13 11
Marine Store	499 11 3	..	499 11 3	..	499 11 3
Moeraki	2,943 1 11	..	2,943 1 11	..	2,943 1 11
Moko Hinou	8,185 11 0	..	8,185 11 0	..	8,185 11 0
Portland Island	6,554 14 5	..	6,554 14 5	..	6,554 14 5
Puysegur Point	9,958 19 5	..	9,958 19 5	..	9,958 19 5
Stephen Island	9,454 11 11	..	9,454 11 11	..	9,454 11 11
Timaru	1,116 17 3	..	1,116 17 3	..	1,116 17 3
Tiritiri Cable	1,085 19 6	..	1,085 19 6	..	1,085 19 6
Tory Channel	353 7 7	..	353 7 7	..	353 7 7
Waipapapa Point	5,969 18 11	..	5,969 18 11	..	5,969 18 11
Miscellaneous, including expenditure on s.s. "Hinemoa" and "Stella"	20,866 18 1	..	20,866 18 1	..	20,866 18 1
Total Lighthouses	147,437 8 3	6,082 3 0	153,519 11 3	1,509 18 8	155,029 9 11

TABLE No. 8—continued.

STATEMENT showing the EXPENDITURE on LIGHTHOUSES, HARBOUR WORKS, and HARBOUR DEFENCES, out of Public Works Fund—continued.

	Total Expenditure to 31st March, 1902.	Net Expenditure during 12 Months ended to 31st March, 1903.	Total Expenditure to 31st March, 1903.	Liabilities on Authorities, Contracts, &c., to 31st March, 1903.	Total Expenditure and Liabilities.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
HARBOUR WORKS.					
Cape Maria Lighthouse, new dwelling-house .. ..	.. ..	.. ..	.. ..	45 13 8	45 13 8
Maungaturoto Wharf	250 0 0	.. ..	250 0 0	.. ..	250 0 0
Wharf at Howick	1,087 18 2	.. ..	1,087 18 2	.. ..	1,087 18 2
Pollok Wharf, Manukau	150 0 0	.. ..	150 0 0	.. ..	150 0 0
Whangarei Heads Wharf	600 0 0	.. ..	600 0 0	.. ..	600 0 0
Matakana Wharf	556 10 3	.. ..	556 10 3	.. ..	556 10 3
Onehunga, examining-room and office .. ..	.. ..	194 3 2	194 3 2	.. ..	194 3 2
Waiuku Channel	357 11 6	.. ..	357 11 6	.. ..	357 11 6
Coromandel Wharf	Cr. 0 10 0	.. ..	Cr. 0 10 0	.. ..	Cr. 0 10 0
Waitara Harbour	2,000 0 0	.. ..	2,000 0 0	.. ..	2,000 0 0
Removing eel-weirs, Patea River	50 0 0	.. ..	50 0 0	.. ..	50 0 0
Wairoa Harbour	1,500 0 0	.. ..	1,500 0 0	.. ..	1,500 0 0
Mokau Wharf	12 13 9	.. ..	12 13 9	.. ..	12 13 9
Napier Harbour	1,840 1 3	832 13 6	2,672 14 9	.. ..	2,672 14 9
Manawatu River, snagging	214 13 3	.. ..	214 13 3	.. ..	214 13 3
Foxton Marine Reserve, Protection of	50 0 0	.. ..	50 0 0	.. ..	50 0 0
Castlepoint Jetty	51 14 1	.. ..	51 14 1	.. ..	51 14 1
Cape Campbell Lighthouse Jetty .. ..	.. ..	6 5 0	.. ..	.. ..	6 5 0
Kaikoura Jetty and Harbour	2,912 16 10	.. ..	2,912 16 10	.. ..	2,912 16 10
Pictou, removal of old wharf	94 0 0	.. ..	94 0 0	.. ..	94 0 0
Nelson, dredging harbour	2,806 15 8	.. ..	2,806 15 8	.. ..	2,806 15 8
Motueka Wharf, protection	100 0 0	.. ..	100 0 0	.. ..	100 0 0
Collingwood Harbour	745 18 8	.. ..	745 18 8	.. ..	745 18 8
Pakawau Wharf	2 0 0	.. ..	2 0 0	.. ..	2 0 0
Karamea Wharf	559 19 11	.. ..	559 19 11	.. ..	559 19 11
Little Wanganui Wharf, wharf approach, and snagging river	311 0 10	25 0 0	336 0 10	.. ..	336 0 10
Westport Harbour	14,110 18 7	.. ..	14,110 18 7	.. ..	14,110 18 7
Greymouth Harbour	127,233 19 6	.. ..	127,233 19 6	.. ..	127,233 19 6
Hokitika Harbour	58,780 5 10	.. ..	58,780 5 10	.. ..	58,780 5 10
Okarito Wharf, repairs and extension	283 4 4	4 6 6	287 10 10	.. ..	287 10 10
Lyttelton, reclamation-works, Stickling Point	1,770 9 1	57 2 6	1,827 11 7	.. ..	1,827 11 7
Okuru Wharf	130 0 0	170 0 0	300 0 0	.. ..	300 0 0
Timaru Harbour	100,000 0 0	.. ..	100,000 0 0	.. ..	100,000 0 0
Taiaroa Heads Lighthouse, enlarging and repairing dwelling .. ..	.. ..	83 7 1	83 7 1	.. ..	83 7 1
Martin's Bay, removal of rock	5 0 0	.. ..	5 0 0	.. ..	5 0 0
Port Levy Jetty	250 0 0	.. ..	250 0 0	.. ..	250 0 0
Toitois Jetty	1,000 0 0	.. ..	1,000 0 0	.. ..	1,000 0 0
Balclutha Jetty	250 0 0	.. ..	250 0 0	.. ..	250 0 0
Catlin's River, removal of rocks	277 19 0	.. ..	277 19 0	.. ..	277 19 0
Catlin's River Jetty	1,015 7 7	.. ..	1,015 7 7	.. ..	1,015 7 7
Queenstown Beacon	35 0 0	.. ..	35 0 0	.. ..	35 0 0
Queenstown Jetty	297 8 0	.. ..	297 8 0	.. ..	297 8 0
Jackson's Bay Jetty	32 6 4	.. ..	32 6 4	.. ..	32 6 4
Raising dredge "Hapuka"	777 7 9	.. ..	777 7 9	.. ..	777 7 9
Miscellaneous	400 0 0	.. ..	400 0 0	.. ..	400 0 0
Stewart Island Wharf, Horseshoe Bay	230 0 0	.. ..	230 0 0	.. ..	230 0 0
Chatham Islands: Waitangi, removal and extension of wharf and store	20 0 0	.. ..	20 0 0	.. ..	20 0 0
Chatham Islands: Shed at Pitt Island	1 10 0	.. ..	1 10 0	.. ..	1 10 0
Total Harbour Works	323,154 0 2	1,372 17 9	324,526 17 11	45 13 8	324,572 11 7
HARBOUR DEFENCES.					
Guns	147,768 18 10	.. ..	147,768 18 10	.. ..	147,768 18 10
Ammunition	24,531 6 7	.. ..	24,531 6 7	.. ..	24,531 6 7
War Office stores	9,933 10 9	.. ..	9,933 10 9	.. ..	9,933 10 9
Torpedo-boats and torpedoes	20,203 13 7	.. ..	20,203 13 7	.. ..	20,203 13 7
Submarine mining stores	17,665 2 2	.. ..	17,665 2 2	.. ..	17,665 2 2
Miscellaneous	18,009 5 10	.. ..	18,009 5 10	.. ..	18,009 5 10
Works in colony	230,740 18 3	6,126 2 7	236,867 0 10	204 15 7	237,071 16 5
Land for depots and batteries	38,327 14 6	.. ..	38,327 14 6	.. ..	38,327 14 6
Total Harbour Defences	507,180 10 6	6,126 2 7	513,306 13 1	204 15 7	513,511 8 8
Grand total	977,771 18 11	13,581 3 4	991,833 2 3	1,760 7 11	993,113 10 2

APPENDICES TO THE PUBLIC WORKS STATEMENT, 1903.

APPENDIX A.

AUDITED STATEMENT OF EXPENDITURE ON PUBLIC WORKS
OUT OF THE PUBLIC WORKS FUND FOR THE YEAR
1902-3.*Prepared in compliance with Section 8 of "The Public Works Act, 1894."*

SIR,— Public Works Department, Wellington, 11th June, 1903.
In compliance with the 8th section of "The Public Works Act, 1894," I enclose a statement of the expenditure during the preceding financial year on all works and services chargeable to the Public Works Fund.

I have, &c.,

WM. HALL-JONES,

Minister for Public Works.

The Controller and Auditor-General, Wellington.

STATEMENT of NET EXPENDITURE on all WORKS and SERVICES chargeable to the PUBLIC WORKS
FUND for the Year 1902-3.

Class.	Votes.	Summary.	Appropriation.	Expenditure.	Credits.	Net Expenditure.
			£	£ s. d.	£ s. d.	£ s. d.
XX.	83	PUBLIC WORKS FUND. Public Works, Departmental ..	12,500	13,645 7 6	826 9 1	12,818 18 5
XXI.	84-85	Railways	1,194,050	777,484 8 6	17,731 16 3	759,752 12 3
XXII.	86-94	Public Buildings	264,869	204,938 2 5	7,483 0 2	197,455 2 3
XXIII.	95-97	Lighthouses, Harbour-works, and Harbour Defences	26,183	13,595 11 8	14 8 4	13,581 3 4
XXIV.	98	Tourist and Health Resorts ..	26,900	10,968 12 1	19 17 8	10,948 14 5
XXV.	99	Immigration	300	541 15 5	400 0 0	141 15 5
XXVI.	100-103	Roads	480,214	290,389 18 9	9,001 4 4	281,388 14 5
XXVII.	104	Development of Goldfields ..	50,000	24,984 1 4	771 6 0	24,212 15 4
XXVIII.	105	Purchase of Native Lands ..	26,000	16,147 10 0	364 16 7	15,782 13 5
XXIX.	106	Telegraph Extension	71,000	81,472 13 8	12,894 6 0	68,578 7 8
XXX.	107	Rates on Native Lands	910	471 8 9	..	471 8 9
XXXI.	108	Contingent Defence	95,000	60,544 19 3	23,541 7 11	37,003 11 4
XXXII.	109-110	Lands Improvement	11,607	2,348 9 7	..	2,348 9 7
		Unauthorised .. ..	..	3,880 6 3	2,100 0 0	1,780 6 3
		Total Public Works Fund ..	2,259,533	1,501,413 5 2	75,148 12 4	1,426,264 12 10

Public Works Department.

G. J. CLAPHAM,
Accountant.

Examined and found correct.

H. J. H. BLOW,
Under-Secretary.J. K. WARBURTON,
Controller and Auditor-General.

NOTE.—Charges and expenses of raising loans, £88,179 12s. 10d., not included in above figures.

(Details on next page.)

Vote. No.	Name of Vote.	Appropriation.	Expenditure.	Credits.	Net Expenditure.
		£	£ s. d.	£ s. d.	£ s. d.
	PUBLIC WORKS FUND.				
83	Public Works, Departmental— Public Works, Departmental	12,500	13,645 7 6	826 9 1	12,818 18 5
	Railways—				
	Railway Construction—				
	Kawakawa—Grahamtown	20,000	11,538 1 4	166 6 4	11,371 15 0
	Helensville Northwards	20,000	9,553 7 8	..	9,553 7 8
	Paeroa—Waihi	25,000	13,687 10 7	..	13,687 10 7
	Gisborne—Karaka	20,000	13,462 5 7	34 3 4	13,428 2 3
	Stratford—Kawakawa	15,000	11,867 17 11	58 4 11	11,809 13 0
	Marton—Te Awamutu	250,000	112,988 13 10	826 8 0	112,162 5 10
	Blenheim—Waipara	60,000	32,622 17 2	971 18 11	31,650 18 3
	Midland Railway	100,000	39,579 14 6	326 9 0	39,253 5 6
	Ngahere—Blackball	4,000	973 2 9	..	973 2 9
84	Greymouth—Hokitika (Extension to Ross)	10,000	7,244 10 1	..	7,244 10 1
	Otago Central	100,000	40,712 9 0	127 17 5	40,584 11 7
	Heriot Extension	6,000	3,017 14 7	..	3,017 14 7
	Catlin's—Seaward Bush	15,000	5,807 4 5	9 0 0	5,798 4 5
	Riversdale—Switzers	3,000	1,251 5 5	..	1,251 5 5
	Orepuki—Waiau	15,000	6,392 8 1	24 2 0	6,368 6 1
	Land-claims and other Old Liabilities on Construction Account	3,400	655 18 2	21 10 0	634 8 2
	Surveys, New Lines of Railway	1,000	1,095 11 6	23 4 0	1,072 7 6
	Permanent-way and other Materials	76,000	32,688 13 9	685 18 7	32,002 15 2
	Rolling-stock for Gisborne—Karaka Railway	650	758 11 2	..	758 11 2
85	Additions to Open Lines	450,000	431,586 11 0	14,456 13 9	417,129 17 3
	Public Buildings—				
86	General	19,550	12,496 8 2	1,962 8 10	10,533 19 4
87	Judicial	44,250	33,241 5 3	17 2 4	33,224 2 11
88	Postal and Telegraph	70,300	75,424 17 0	738 15 0	74,686 2 0
89	Customs	11,420	6,630 1 1	..	6,630 1 1
90	Lunatic Asylums	23,249	10,182 6 3	15 16 0	10,166 10 3
91	School Buildings	48,500	43,114 6 7	4,577 3 1	38,537 3 6
92	School Buildings (Special)	24,500	19,339 1 6	85 13 0	19,253 8 6
93	Agricultural	4,800	887 2 9	3 5 9	883 17 0
94	Hospitals and other Charitable Institutions	18,300	3,539 17 8	..	3,539 17 8
	Quarantine Stations .. .. .	..	82 16 2	82 16 2	..
	Lighthouses, Harbour-works, and Harbour Defences—				
95	Lighthouses	6,000	6,082 3 0	..	6,082 3 0
96	Harbour-works	5,183	1,372 17 9	..	1,372 17 9
97	Harbour Defences	15,000	6,140 10 11	14 8 4	6,126 2 7
98	Tourist and Health Resorts— Tourist and Health Resorts	26,900	10,968 12 1	19 17 8	10,948 14 5
99	Immigration— Immigration	300	541 15 5	400 0 0	141 15 5
	Construction and Maintenance of Roads, Bridges, and other Public Works—				
100	Roads, Departmental	24,265	21,443 0 1	348 18 10	21,094 1 3
101	Roads, &c.	358,369	210,293 9 3	8,562 17 2	201,730 12 1
102	Tourist Roads, &c.	13,120	6,941 4 1	66 13 4	6,874 10 9
103	Roads on Goldfields	84,460	51,712 5 4	22 15 0	51,689 10 4
104	Development of Goldfields— Development of Goldfields	50,000	24,984 1 4	771 6 0	24,212 15 4
105	Purchase of Native Lands— Purchase of Native Lands	26,000	16,147 10 0	364 16 7	15,782 13 5
106	Telegraph Extension— Telegraph Extension	71,000	81,472 13 8	12,894 6 0	68,578 7 8
107	Rates on Native Lands— Rates on Native Lands	910	471 8 9	..	471 8 9
108	Contingent Defence— Contingent Defence	95,000	60,544 19 3	23,541 7 11	37,008 11 4
109	Lands Improvement— Improved-farm Settlements	5,845	1,567 4 3	..	1,567 4 3
110	Lands, Miscellaneous	5,762	781 5 4	..	781 5 4
	Unauthorised—				
	Services not provided for .. .. .	..	3,880 6 3	2,100 0 0	1,780 6 3
	Total Public Works Fund	2,259,533	1,501,413 5 2	75,148 12 4	1,426,264 12 10

APPENDIX B.

STATEMENT of all LIABILITIES in respect of the Services of the Public Works Department outstanding at the Close of the Financial Year ended 31st March, 1903, prepared in terms of Section 38, Part IV., of "The Public Revenues Act, 1891," and forwarded, as therein provided, to the Audit Office.

Class.	Votes.	Summary.	Total.
PUBLIC WORKS FUND.			
XXI.	84	Railways	£ s. d. 116,766 10 5
XXII.	86-94	Public Buildings	84,596 9 0
XXIII.	95-97	Lighthouses, Harbour Works, and Harbour Defences	1,760 7 11
			203,123 7 4
CONSOLIDATED FUND.			
XIV.	69	Public Buildings	470 5 7
STATE COAL-MINES ACCOUNT.			
	112	State Coal-mines	331 19 0

Vote No.	Name of Vote.	Total.
PUBLIC WORKS FUND.		
84	Railway-construction—	£ s. d.
	Kawakawa-Grahamtown	5,777 3 3
	Helensville Northwards	10 5 10
	Paeroa-Waihi	5,498 18 2
	Gisborne-Karaka	6,982 6 11
	Stratford-Kawakawa	801 3 10
	Marton-Te Awamutu	14,706 10 2
	Blenheim-Waipara	6,166 7 10
	Midland Railway	23,419 5 4
	Ngahere-Blackball	22,497 5 11
	Greymouth-Hokitika (extension to Ross)	24,406 7 7
	Otago Central	1,015 17 2
	Heriot Extension	2 10 0
	Catlin's-Seaward Bush .. .. .	.. .. .
	Riversdale-Switzer's	3,692 18 6
	Orepuki-Waiau	911 16 6
	Land-claims, &c. .. .. .	.. .. .
	Surveys, New Lines of Railway .. .. .	.. .. .
	Permanent-way Materials	877 13 5
		116,766 10 5
	Public Buildings—	
86	General	5,058 17 11
87	Judicial	10,723 2 11
88	Postal and Telegraph	20,783 12 5
89	Customs	24,738 0 0
90	Lunatic Asylums	4,296 0 2
91	School-buildings (part of vote only)	16,002 1 3
93	Agricultural	3 14 4
94	Hospitals and other Charitable Institutions	2,991 0 0
		84,596 9 0
	Lighthouses, Harbour Works, and Harbour Defences—	
95	Lighthouses	1,509 18 8
96	Harbour Works	45 13 8
97	Harbour Defences	204 15 7
		1,760 7 11
Total, Public Works Fund.. .. .		203,123 7 4
CONSOLIDATED FUND.		
69	Public Buildings	470 5 7
STATE COAL-MINES ACCOUNT.		
112	State Coal-mines (completing and equipping Greymouth-Point Elizabeth Railway)	331 19 0

G. J. CLAPHAM,
Accountant.
H. J. H. BLOW,
Under-Secretary.

Public Works Department, 30th April, 1903.

APPENDIX C.

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1902, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1903.

Date of Contract.	Lines of Railway and Branches.	Name of Contract.	Name of Contractor.	Contract to be completed.	Date Contract was completed.	Amount of Contract.	Remarks.
						£ s. d.	
RAILWAYS.							
May 6, 1902	Kawakawa-Grahamtown	Whangarei Bridge	G. M. Fraser and Co.	April 17, 1903	Sept. 29, 1902	6,788 3 3	
Nov. 9, 1900	Helensville Northwards	1,000,000 Bricks, Komokoriki Tunnel	Gardner Bros.	Dec. 29, 1901	Sept. 29, 1902	2,050 0 0	
July 4, 1901	Paeoro-Waihi	Ohinemuri Bridge	J. and A. Anderson	Feb. 13, 1903	..	8,771 15 11	
Oct. 22, 1902	Gisborne-Karaka	Waipaoa Bridge	John McLean and Sons	March 15, 1904	..	6,885 0 0	
April 18, 1903	Stratford-Kawakawa	Toko Station-buildings	J. W. Boon	July 16, 1902	July 24, 1902	710 0 0	
March 25, 1903	Marton-Te Awamutu, N.E.	Surfacemen's Cottages	F. W. Crawford	July 28, 1903	..	649 18 0	
Feb. 5, 1901	"	Girders	J. and A. Anderson	July 15, 1902	Jan. 31, 1903	4,746 0 0	
May 8, 1901	"	Tamaranui Bridge	Scott Bros. (Limited)	Feb. 3, 1903	..	11,500 9 0	
Sept. 12, 1901	"	Land-plan Survey	F. Gillett	Sept. 12, 1901	Dec. 31, 1902	384 0 0	
April 24, 1901	Marton-Te Awamutu, S.E.	Steel Girders, Toitot Creek Bridge	Scott Bros. (Limited)	Aug. 15, 1902	Oct. 30, 1902	1,890 0 0	
May 8, 1901	"	One 122 ft. 6 in. Steel-girder Span for Hautapu River Bridge	Scott Bros. (Limited)	Sept. 3, 1902	..	1,180 0 0	
Jan. 27, 1902	"	Joinery, Mangaweka and Ohingaiti Station-buildings	Zazonskowski Bros.	Two weeks after being notified	Sept. 26, 1902	199 3 11	
Jan. 21, 1902	"	Timber, Ohingaiti Station-buildings	Alexander Bell	March 4, 1902	Oct. 31, 1902	325 16 3	
Jan. 21, 1902	"	Timber, Mangaweka Station-buildings	Alexander Bell	April 1, 1902	Oct. 31, 1902	725 0 5	
May 30, 1902	Blenheim-Waipara, N.E.	Ironbark, Mangaweka Section	W. B. Sharp	Dec. 6, 1902	Oct. 31, 1902	674 1 11	
Sept. 8, 1902	Blenheim-Waipara, S.E.	Seddon Station-buildings	May and McKinley	Aug. 17, 1902	Nov. 29, 1902	1,373 1 9	
March 20, 1902	"	Timber for Sheep and Cattle Yards	Wallace and Laurie	Oct. 7, 1902	Oct. 13, 1902	281 18 10	
Sept. 11, 1902	"	6 Platelayers' Cottages	J. P. Petersen	July 31, 1903	..	1,495 0 0	
Nov. 18, 1902	Midland (Motupiko-Tadmor)	Hurunui Bridge	Scott Bros.	May 30, 1904	..	3,598 17 0	
Jan. 12, 1903	"	Motueka Bridge	Langlands and Dixon	Nov. 23, 1903	..	8,681 18 0	
Sept. 17, 1902	"	Land-plan Survey	F. J. Ledger	March 31, 1904	..	165 0 0	
Dec. 4, 1902	"	Inangahua Bridge	J. Fitzgerald	Feb. 1, 1904	..	6,394 10 0	
Feb. 12, 1901	"	Patterson's Creek Viaduct (at Landing)	M. O'Connor	July 26, 1902	..	6,852 0 10	
Sept. 1, 1902	Ngahere-Blackball	Ngahere Bridge	Scott Bros. (Limited)	Oct. 15, 1902	..	11,082 8 6	
Aug. 21, 1902	Grey-mouth-Hokitika (extension to Ross)	Hokitika Bridge	H. Bignell	April 9, 1904	..	23,331 3 11	
Nov. 6, 1900	Otago Central	Superstructure, Poolburn and Manuherikia Bridge	Thomas Dillon	April 12, 1904	..	26,541 10 1	
July 18, 1902	"	Extra Cylinders, Manuherikia Bridge	J. and A. Anderson	Nov. 18, 1901	Nov. 19, 1902	5,852 16 0	
Feb. 18, 1903	"	Timber for Staging Poolburn Viaduct	Dunedin Engineering Company (Limited)	Aug. 28, 1902	Sept. 23, 1902	300 14 9	
June 18, 1902	Riversdale-Swifters	Mataura Bridge	Thomson, Bridger, and Co.	April 8, 1903	..	411 6 3	
Aug. 29, 1901	Orepuki-Waitau	Steel Girders, Waimeamea Bridge	McKechnie and Flemming	May 25, 1903	..	4,799 18 6	
Dec. 23, 1902	"	Waioaka Station-buildings	A. and T. Burt (Limited)	Aug. 19, 1902	Aug. 19, 1902	492 11 6	
Nov. 11, 1901	Permanent-way, Rails	51 Sets 56 lb. Points and Crossings	E. W. Bone	May 10, 1903	..	903 8 0	
April 27, 1903	"	3,000 Ironbark Sleepers	John Anderson	April 30, 1902	May 22, 1902	586 10 0	
			Fitzroy Timber-getters' Association	July 7, 1903	..	453 2 6	

APPENDIX C—continued.

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1901, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1903—continued.

Date of Contract.	Name of Contract.	Name of Contractor.	Contract to be completed.	Date Contract was completed.	Amount of Contract.	Remarks.
AUCKLAND.						
Jan. 3, 1901	Post-office, Gisborne	W. Webb and Sons, Gisborne	Aug. 28, 1901	Oct. 11, 1902	£ 3,798	s. 1
Nov. 20, "	Native School and Residence, Patewa	David Henderson, Ngaurawahia	March 12, 1902	May 3, 1902	677	0
Dec. 17, "	Pacific Cable Station-buildings, Doubtless Bay	C. H. Frankham, Auckland	May 12, "	June 17, "	4,779	0
Jan. 7, 1902	Drill Hall and Gun-room, Auckland	John Davis, Auckland	May 4, "	Jan. 8, 1903	4,391	19
April 17, "	Native School, Residence, Peria	T. Martin, Mongonui	July 9, "	Oct. 7, 1902	298	0
March 25, "	Additions to Post-office, Waihi	T. E. Palmer, Waihi	May 11, "	July 22, "	229	12
May 19, "	Alterations to Police-station, Port Awanui	C. L. Hansen, Port Awanui	July 8, "	Sept. 27, "	210	3
May 20, "	Native School, Omaio	J. H. Moir, Opoiki	Sept. 6, "	Nov. 14, "	850	0
May 13, "	Native School, Torere	James Larkin, Auckland	Sept. 6, "	Oct. 28, "	639	10
May 19, "	Additions to Police-station, Kawhia	Lundon and Scott, Kawhia	Aug. 9, "	Aug. 14, "	297	18
June 25, "	Steel Cell-doors, Mount Eden Gaol, Auckland	Beauey and Sons, Auckland	Dec. 7, "	"	162	0
July 16, "	Post-office, Te Puke	J. C. Adams, Tauranga	Oct. 30, "	Dec. 3, 1902	558	0
July 19, "	Post-office, Dargaville	W. A. Spiers, Dargaville	Nov. 8, "	Nov. 14, "	541	12
July 22, "	Office for Customs and Harbourmaster, Onehunga	J. Smith, Onehunga	Sept. 15, "	Oct. 1, "	182	15
Sept. 5, "	Police-station, Onehunga	G. H. James, Onehunga	Dec. 27, "	Jan. 21, 1903	509	0
Aug. 25, "	Post-office, Paparoa	John Deverell, Paparoa	Nov. 12, "	Jan. 10, "	442	2
Dec. 3, "	Native School, Residence, Te Teko	F. Moody, Whakatane	Feb. 27, "	"	493	15
Dec. 2, "	Native School, Residence, Paeroa	Palmer and Judge, Waihi	Feb. 27, "	"	387	17
Dec. 2, "	Additions to Post-office, Raglan	C. J. Powick, Hamilton East	Feb. 5, "	Feb. 27, 1903	289	12
Dec. 19, "	Native School, Te Kaha	J. H. Moir, Opoiki	April 9, "	"	950	0
Jan. 10, "	Additions, &c., to Sanatorium, Cambridge	C. H. Frankham, Auckland	April 6, "	"	3,080	0
Feb. 9, "	Additions, &c., Mount Albert Industrial School	C. H. Frankham, Auckland	April 30, "	"	885	0
Feb. 26, "	Additions, &c., Police-station, Ponsonby	Mathieson and Ballock, Auckland	May 20, "	"	349	16
HAWKE'S BAY.						
April 15, 1902	Native School, Whangara	Sanders and Atthow, Gisborne	Aug. 10, 1902	Aug. 26, 1902	832	0
July 2, "	Police-station, Ormondville	A. J. Sabin, Takapau	Oct. 14, "	Nov. 22, "	517	6
Sept. 12, "	Post-office, Napier (Spit)	Cooper and Son, Napier	April 1, 1903	"	2,170	16
Oct. 6, "	Post-office, Norsewood	B. Hansen, Norsewood	Dec. 19, 1902	Jan. 18, 1903	343	16
Oct. 17, "	Additions to Post-office, Waipukurau	John Adams, Waipawa	Dec. 9, "	Jan. 15, "	264	16
Dec. 2, "	Government Buildings, Napier	Bull Bros., Napier	Aug. 26, 1903	"	4,743	15
Jan. 30, 1903	Alterations, &c., Police-sergeant's Residence, Napier	Yull and Frame, Napier	April 30, "	"	225	15
TARANAKI.						
April 17, 1902	Outbuildings, &c., Courthouse, Patea	J. McComisky, Patea	June 9, 1902	July 30, 1902	223	8
April 19, "	Police-sergeant's Quarters, New Plymouth	H. Wallath, New Plymouth	Aug. 16, "	Sept. 4, "	570	0
July 18, "	Additions to Post-office, Mania	Robertson and Cave, Okaiawa	Sept. 18, "	Oct. 30, "	290	0
Aug. 22, "	Native School, Puniho	James Loveridge, Puniho	Nov. 23, "	Mar. 31, 1903	650	0
Sept. 6, "	Police-station, Patea	George Boagay, Patea	Dec. 20, "	Mar. 17, "	650	0
Jan. 23, 1903	Post-office, Kaponga	A. R. Burrell, Hawera	April 23, "	"	436	7

APPENDIX C—continued.

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1902, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1903—continued.

Date of Contract.	Name of Contract.	Name of Contractor.	Contract to be completed.	Date Contract was completed.	Amount of Contract.	Remarks.
					£	s. d.
March 23, 1901	Extension of Lighting-plant, Porirua Asylum	Turnbull and Jones, Wellington	April 5, 1901	April 5, 1902	1,473	0 0
March 22, "	Post-office, Wanganui	N. Meuli, Wanganui	Nov. 27, "	July 31, "	5,144	10 4
Jan. 9, 1902	Removal of Native School, Mawhitiwhiti to Parirua	A. F. Riggs, Wanganui	Feb. 28, 1902	July 21, "	360	0 0
March 17, "	Post-office, Pongaroa	H. W. Godfrey, Pahiatua	May 25, "	Aug. 2, "	375	0 0
April 15, "	Clock, Masterton	W. Littlejohn and Son, Wellington	July 11, "	Sept. 3, "	725	0 0
May 16, "	Additions to Post-office, Carterton	H. Trobman, Greytown North	Aug. 3, "	Aug. 3, "	212	0 0
May 22, "	Magistrate's Courthouse, Wellington	James Trevor and Sons, Wellington	May 9, 1903	Nov. 24, 1902	8,025	0 0
July 3, "	Police-station, Taihape	R. J. McDonald, Taihape	Oct. 17, 1902	Nov. 24, 1902	659	0 0
Aug. 6, "	New Wing, Terrace Gaol, Wellington	James Russell, Wellington	Jan. 29, 1903	Nov. 24, 1902	2,963	0 0
Aug. 12, "	Customhouse, Wellington	W. H. Bennett, Wellington	Jan. 29, 1903	Nov. 24, 1902	26,998	0 0
Sept. 5, "	Public Clock, Wanganui	W. Littlejohn and Son, Wellington	April 12, 1904	Nov. 24, 1902	715	0 0
Sept. 5, "	Public Clock, Feilding	W. Littlejohn and Son, Wellington	Aug. 26, 1903	Nov. 24, 1902	475	0 0
Jan. 19, 1903	Post-office, Woodville	E. T. Rendie, Woodville	Aug. 26, "	Nov. 24, 1902	2,005	0 0
Nov. 18, 1902	Post-office, Hunterville	Zajonskowski Bros., Marton	May 14, "	Nov. 24, 1902	1,995	15 10
Nov. 6, "	Post-office, Levin	Adams and Cooper, Levin	April 28, "	Nov. 24, 1902	1,694	17 0
Dec. 15, "	Post-office, Carterton	R. Sanders, Wellington	June 26, "	Nov. 24, 1902	2,982	0 0
Dec. 17, "	Post-office, Raetihi	A. H. Christie, Wanganui	March 12, "	Nov. 24, 1902	465	17 3
Feb. 26, 1903	Head Attendant's Residence, Porirua Asylum	J. Brooks, Wellington	May 23, "	Nov. 24, 1902	338	16 0
Feb. 16, "	Additions to Photo. Gallery, Government Printing Office	McGill and French, Wellington	June 16, "	Nov. 24, 1902	449	12 6
March 26, "	Courthouse, Levin	H. B. France, Levin	July 13, "	Nov. 24, 1902	590	0 0
March 28, "	Auxiliary Asylum, Porirua	Barker and Crump, Palmerston N.	June 23, "	Nov. 24, 1902	2,630	17 0
Jan. 29, 1902	Signalman's House, Karamea	George Lineman, Karamea	March 17, 1902	April 1, 1902	108	8 4
Jan. 24, "	Joinery, Kahurangi Lighthouse	Stewart Timber, Glass, and Hardware Company	Feb. 24, "	Feb. 26, "	143	14 7
Jan. 18, "	Timber, Kahurangi Lighthouse	West Coast Timber Trading Company, Greymouth	Feb. 27, "	June 30, "	380	2 4
April 21, "	Alterations to Post-office, Westport	Hill and Martin, Westport	June 16, "	Aug. 4, "	270	0 0
Sept. 12, "	Constable's Residence, Denniston	Hill and Martin, Westport	Dec. 10, "	Dec. 16, "	687	10 0
March 2, 1903	Auxiliary Reservoir, Nelson Asylum	W. Miller and Sons, Nelson	June 21, 1903	Dec. 16, "	596	18 0
Jan. 23, 1903	Painting, &c., Government Buildings, Blenheim	J. D. Iremonger, Blenheim	April 23, 1903	..	155	0 0
Feb. 7, "	Police Quarters, Havelock	May and McKinley, Blenheim	May 7, "	..	433	11 7
Feb. 20, "	Cast-iron Tower, Cape Campbell Lighthouse	Charles Judd, Thames	Aug. 11, "	..	1,499	6 0
May 13, 1902	Alterations, Police-station, Greymouth	W. Inff, Greymouth	July 7, 1902	Aug. 2, 1902	199	0 0

PUBLIC BUILDINGS—continued.

[illegible]

APPENDIX C—continued.

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1902, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1903—continued.

Date of Contract.	Name of Contract.	Name of Contractor.	Contract to be completed.	Date Contract was completed.	Amount of Contract.	Remarks.
MISCELLANEOUS—continued.						
WELLINGTON.						
April 9, 1902	Coal and Wood Supply for Government Buildings, Wellington	Westport Coal Company	Mar. 31, 1903	Mar. 31, 1903	£	s. d.
May 16, "	Shelly Bay Wharf Extension, Wellington	M. T. McGrath	Nov. 8, 1902	April 1, "	1,383	18 8
July 3, "	Stores Supply, Wellington, Classes I., III., V., and XI., Items 6, 7, 9 to 14, 17, 23, 24, 25	Brice and Co. (Limited)	Mar. 31, 1903	Mar. 31, "	Schedul	rates
Sept. 10, "	Stores Supply, Wellington	G. Winder	Mar. 31, "	Mar. 31, "	"	"
June 21, "	"	A. and T. Burt (Limited)	Mar. 31, "	Mar. 31, "	"	"
June 17, "	"	E. W. Mills and Co. (Limited)	Mar. 31, "	Mar. 31, "	"	"
July 18, "	"	Smith and Smith	Mar. 31, "	Mar. 31, "	"	"
June 4, "	"	New Zealand Portland Cement Company (Limited)	Mar. 31, "	Mar. 31, "	"	"
July 1, "	"	P. Hutson and Co.	Mar. 31, "	Mar. 31, "	"	"
June 17, "	"	W. M. Bannatyne & Co. (Limited)	Mar. 31, "	Mar. 31, "	"	"
May 31, "	"	N. Guthridge (Limited)	Mar. 31, "	Mar. 31, "	"	"
April 17, "	Chimney-sweeping, Public Buildings, Wellington	Harry Smith	Mar. 31, "	Mar. 31, "	175	0 0
April 11, "	Window-cleaning.	B. Gurew and Co.	Mar. 31, "	Mar. 31, "	288	0 0
April 2, "	Removal of Rubbish,	T. Costello	Mar. 31, "	Mar. 31, "	125	0 0
May 31, 1902	Collingwood Bridge at Ferntown	G. M. Fraser and Co., Dunedin	May 8, 1903	..	5,148	13 6
NELSON.						
WESTLAND.						
May 8, 1902	Waitaha Road Bridge	M. O'Connor, Wellington	May 3, 1903	Mar. 10, 1903	4,275	13 9
July 5, "	Renovals and Repairs Main Grey River Cart-bridge	T. Dillon, Greymouth	Mar. 30, "	Feb. 17, "	2,111	12 4
Jan. 20, 1903	Moonlight Creek Foot-bridge	H. J. Reynolds, Hokitika	July 20, "	..	696	13 0
Sept. 17, 1902	Kokotahi Bridge	John Fitzgerald, Greymouth	Sept. 10, "	..	5,364	3 7
June 2, "	Stores Supply, Greymouth, Classes I., II., III., V., VI., VIII., IX., X., IV., Items 1 to 5, and 18 to 37; Class XI., 3, 4, 8, 10, 11, 12, 13, 17 to 24	D. McLean, Greymouth	Mar. 31, "	Mar. 31, 1903	Schedul	rates
June 2, "	Stores Supply, Greymouth, Class VII.	E. M. Holmes, Greymouth	Mar. 31, "	Mar. 31, "	"	"
June 4, "	"	Dalgaty and Co. (Limited)	Mar. 31, "	Mar. 31, "	"	"
July 15, "	"	Sargood, Son, and Ewen	Mar. 31, "	Mar. 31, "	"	"
CANTERBURY.						
May 27, 1902	Stores Supply, Christchurch, Classes I., II., III., V., VI., VII., VIII., IX., X., and XI., Items 3, 4, 8, 10, 11, 12, 13, and 17 to 24	Ashby, Bergh, and Co. (Limited)	Mar. 31, 1903	Mar. 31, 1903	Schedul	rates
June 21, "	Stores Supply, Christchurch, Class IV., Items 1 to 5 and 18 to 37	A. and T. Burt (Limited)	Mar. 31, "	Mar. 31, "	"	"
June 4, "	"	Dalgaty and Co. (Limited)	Mar. 31, "	Mar. 31, "	"	"
July 15, "	"	Sargood, Son, and Ewen	Mar. 31, "	Mar. 31, "	"	"

APPENDIX D.

SCHEDULE of SLEEPER CONTRACTS CURRENT on 1st April, 1902, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1903, showing Deliveries to the latter Date.

Date of Contract or Agreement.	Contractor's Name.	Address.	No. of Sleepers contracted for, and Class of Timber.	Rate per Sleeper.	Place of Delivery.	Date for Completion.	Total delivered to Date.	Date of Completion.
NORTH ISLAND.								
AUCKLAND DISTRICT.								
				s. d.				
5 June, 1900	J. Johnson	Matauri Bay	5,000 puriri	3 9	Kawakawa	5 Dec., 1900..	5,000	28 Mar., 1903.
11 Jan., 1901	Ellis and Burnand	Otorohanga..	20,000 totara	3 0	Ongarue ..	11 Jan., 1902..	20,000	— Feb., "
25 Feb., "	T. H. Reynolds	"	5,000 matai	2	Mangapechi	Not fixed	5,000	13 Mar., "
25 April, "	George Burns	Poro-o-tarao	2,000 totara	3 0	Ongarue ..	25 Oct., 1901..	2,008	11 April, 1902.
11 Dec., "	W. Simcock	Ahuroa ..	1,000 "	3 3	Ahuroa ..	11 Mar., 1902..	1,000	1 July, "
11 Dec., "	D. McKenzie	Kaukapakapa	815 "	3 3	Tahekerua	11 Mar., "	500	21 May, "
— April, 1902	R. McMillan	Waitekauri	250 "	3 6	Karangahake	— April, "	315	— April, "
3 May, "	G. F. Dickson	Kaukapakapa	5,000 "	3 3	Tahekerua	— May, "	250	— May, "
19 May, "	R. McMillan	Kawakawa ..	500 "	3 3	Tahekerua	30 Nov., 1903..	500	— July, 1902.
18 July, "	A. W. Edwards	Kaukapakapa	297 "	3 3	Tahekerua	30 Sept., 1902..	297	18 July, "
27 Aug., "	A. M. Riddell	Ongarue ..	1,224 "	3 0	Kawakawa	18 July, "	1,224	13 Mar., 1903.
5 Sept., "	W. Holmes	Tahekerua ..	1,000 "	3 3	Ongarue ..	15 Dec., 1902..	1,000	10 Jan., "
17 Sept., "	C. H. Clinkard	Makarua ..	1,000 "	3 3	Tahekerua	31 Dec., "	333	"
11 Oct., "	R. Cashel	Ongarue ..	801 "	3 0	"	24 Nov., "	801	24 Nov., 1902.
13 Oct., "	R. McMillan	Kaukapakapa	2,000 "	3 3	Tahekerua	18 Mar., 1903..	600	"
22 Oct., "	Lane and Sons	Totara North	290 puriri	4 0	Kawakawa	22 Oct., 1902..	290	22 Oct., 1902.
31 Oct., "	C. G. Dallas	Ongarue ..	500 totara	3 0	Ongarue ..	31 Dec., "	500	16 Mar., 1903.
31 Oct., "	W. H. Dennis	Taumarunui	200 "	3 0	Taumarunui	31 Dec., "	70	"
31 Oct., "	Ngatai te Manaku	"	200 "	3 0	"	31 Dec., "	200	10 Mar., 1903.
25 Nov., "	W. Drummond	Ongarue ..	386 "	3 0	"	2 Dec., "	386	2 Dec., 1902.
27 Nov., "	Geo. Weeks	"	200 "	3 0	"	27 Nov., "	200	27 Nov., "
27 Nov., "	H. McIvor	Piriaka	400 "	3 0	"	27 Nov., 1903.	400	— Jan., 1903.
28 Nov., "	J. Paul	Puhori	1,000 "	3 3	Taumarunui	27 Jan., 1903..	..	"
29 Nov., "	A. Kelly	Ongarue ..	500 "	3 0	Ahuroa ..	1 June, "	..	"
2 Dec., "	Ngatai te Manaku	Taumarunui	362 "	3 0	Ongarue ..	29 Jan., "	362	10 Mar., 1903.
2 Dec., "	Tutabanga	Ongarue ..	589 "	3 0	Taumarunui	17 Jan., "	589	17 Jan., "
3 Dec., "	Himiaka Ropiti	Taumarunui	400 "	3 0	"	3 Feb., "	81	"
19 Dec., "	C. G. Dallas	Ongarue ..	289 "	3 0	"	16 Mar., "	289	16 Mar., 1903.
19 Dec., "	C. J. Ryan	"	2,879 "	3 0	Ongarue ..	6 Mar., "	2,879	6 Mar., "
10 Jan., 1903	W. Holmes	Tahekerua ..	500 "	3 3	Tahekerua	10 Jan., "	500	10 Jan., "
6 Feb., "	C. Richards	Taumarunui	279 "	3 0	Taumarunui	6 Feb., "	279	6 Feb., "
6 Mar., "	H. McIvor	Piriaka	300 "	3 0	"	6 Mar., "	300	6 Mar., "
10 Mar., "	Kaka	Taumarunui	202 "	3 0	"	10 Mar., "	202	10 Mar., "
28 Mar., "	J. Johnson	Matauri Bay	639 puriri	3 9	Kawakawa	28 Mar., "	639	28 Mar., "
Various ..	Sundry small contractors	Various	258 "	Various	Various	Various	258	14 Mar., "
			840 totara.				840	

APPENDIX D—continued.

SCHEDULE of SLEEPER CONTRACTS CURRENT on 1st April, 1902, and CONTRACTS ENTERED INTO by the Public Works Department, &c.—continued.

Date of Contract or Agreement.	Contractor's Name.	Address.	No. of Sleepers contracted for, and Class of Timber.	Rate per Sleeper.	Place of Delivery.	Date for Completion.	Total delivered to Date.	Date of Completion.
NORTH ISLAND—continued.								
HUNTERVILLE DISTRICT.								
23 Mar., 1900	G. D. Torrey ..	Utiku	1,000 totara	s. d. 3 6	Pawerawera	Not specified ..	..	Order cancelled. 8 Sept., 1902.
10 April, "	T. O'Sullivan ..	"	1,000 "	3 6	"	"	1,034	As completed.
9 June, "	J. Woolston ..	"	500 "	3 6	"	"	207	24 Jan., 1903.
10 Sept., "	R. Franklin ..	"	1,000 "	3 6	"	"	1,168	"
12 Dec., "	Manawatu Timber Com- pany	Feilding	5,000 "	3 6	Mangaweka	31 Mar., 1901 ..	2,633	"
29 Dec., "	W. Murray ..	Maharabara	12,000 "	3 6	"	31 Mar., "	12,307	13 May, 1902.
29 Dec., "	Duncan Corbett	Mangaweka	1,000 "	3 6	Pawerawera	31 Mar., "	929	As completed.
29 Dec., "	E. Andresen ..	"	5,000 "	3 6	Mangaweka	31 Mar., "	5,152	8 Sept., 1902.
21 Jan., 1901	Dixon Bros. ..	"	2,000 "	3 6	Utiku	31 Dec., "	2,177	11 Aug., "
18 July, "	H. Ross ..	Utiku	500 "	3 6	"	Not specified ..	570	17 April, "
6 Aug., "	J. F. Matthews	Mangaweka	1,000 "	3 6	"	31 Jan., 1902 ..	882	As completed.
28 Aug., "	R. Print ..	Utiku	1,000 "	3 6	"	Not specified ..	993	"
Various	Sundry small contractors	Various	4,400 "	3 6	"	"	4,206	"
SOUTH ISLAND.								
NELSON.								
6 Dec., 1901	H. Baigent ..	Nelson	1,500 black- birch	s. d. 3 0	Motupiko	Not fixed ..	1,503	23 April, 1902.
6 Dec., "	F. Mead, jun.	Motupiko	{ 1,000 matai 500 black- birch }	3 0	"	"	1,500	16 June, "
24 Mar. 1903	R. Drew ..	Wangapeka..	500 matai	3 0	"	"	..	"
WESTLAND DISTRICT.								
23 Mar., 1901	D. O'Hara ..	Kumara	500 silver- pine	s. d. 3 0	Kumara Railway-station	23 May, 1901 ..	440	..
3 April, "	G. F. Stewart..	Greymouth..	500 ditto	3 0	"	3 June, "	38	Balance of orde cancelled.
3 April, "	M. McLoughlin	Ngahere	600 "	3 0	"	3 July, "	439	Ditto.
30 April, "	D. O'Brien ..	"	800 "	3 0	"	30 June, "	800	24 May, 1902.
2 May, "	W. Weir ..	Twelve-mile	1,000 totara	3 0	"	2 Aug., "	694	"
2 May, "	Stratford, Blair, and Co.	Greymouth..	1,000 "	3 0	"	2 June, "	1,000	27 Nov., 1902.
6 May, "	S. R. Harris ..	Greenstone ..	2,000 silver- pine	3 0	Kumara Railway-station	6 Sept., "	2,000	2 April, "

APPENDIX D—continued.

SCHEDULE of SLEEPER CONTRACTS CURRENT on 1st April, 1902, and CONTRACTS ENTERED INTO by the Public Works Department, &c—continued.

Date of Contract or Agreement.	Contractor's Name.	Address.	No. of Sleepers contracted for, and Class of Timber.	Rate per Sleeper.	Place of Delivery.	Date for Completion.	Total delivered to Date.	Date of Completion.
SOUTH ISLAND—continued.								
WESTLAND DISTRICT—continued.								
29 May, 1901	C. W. Murtha	Kumara	1,000 totara	s. d. 3 0	Kumara Station	29 Aug.,	1,000	27 Nov., 1902.
6 June, "	J. Molloy	Nelson Creek	1,500 silver-pine	3 3	Ngahere	6 Aug., 1901	1,500	24 May, 1902.
12 June, "	E. Denia	Ross	1,000 ditto	3 3	Hokitika	12 Aug.,	965	Balance of order cancelled.
12 June, "	T. Mears	Nelson Creek	700 "	3 3	Ngahere	12 Aug.,	700	29 April, 1902.
16 July, "	J. Mattison	Totara Flat	350 "	3 3	Totara Flat	16 Aug.,	331	As completed.
16 July, "	J. W. Elason	Greymouth	500 "	3 3	Raupo Siding	16 Aug.,	500	12 Feb., 1903.
16 July, "	S. Dean	Ngahere	500 totara	3 3	Ngahere	16 Oct.,	500	24 May, 1902.
16 July, "	W. Maloney	Greenstone	500 "	3 3	Kumara Railway-station	16 Oct.,	500	2 April, "
27 Aug., "	S. Dixon	Fox's	500 silver-pine	3 3	Ho Ho Siding	27 Oct.,	420	Balance of order cancelled.
13 Sept., "	E. H. Muller	"	500 ditto	3 3	Totara Flat	13 Nov.,	480	Ditto.
13 Sept., "	J. W. Elason	Greymouth	500 totara	3 3	"	13 Nov.,	500	12 Feb., 1903.
16 Dec., 1902	J. Muddock	Kumara	500 silver-pine	3 3	Kumara Station	25 Dec., 1902	466	"
Various	Sundry small contractors	Various	201 ditto	3 3	Various	Various	201	"
OTAGO DISTRICT.								
11 Feb., 1901	Jack Bros.	Forest Hill	2,000 black-pine	s. d. 2 9	Brown's	31 Mar., 1901	570	Balance of order cancelled.
14 May, "	John Hannan	Koromiko	3,000 totara	3 6	Orepuki	31 Dec.,	2,792	Ditto.
14 May, "	Arthur Austin	Papatotara	2,000 "	3 6	Small's	31 Dec.,	806	"
14 May, "	F. J. Bennet	Waiau	2,000 "	3 6	Koromiko	31 Dec.,	852	"
8 June, "	John Keith	Te Tuā	3,000 "	3 3	"	31 Dec.,	515	"
26 July, "	W. St. George	Orepuki	750 "	3 6	Orepuki	31 July, 1902	27	"
26 July, "	"	"	750 black-pine	2 10	"	31 July, "	213	"
5 Aug., "	J. Hodgetts	"	500 totara	3 6	"	31 July, "	213	"
4 Dec., 1902	Wilfred Smith	Owaka	1,000 "	3 3	Owaka	"	213	"
2 Feb., 1903	W. St. George	Orepuki	750 "	3 6	Orepuki	"	213	"

APPENDIX E.

ANNUAL REPORT ON PUBLIC WORKS BY THE ENGINEER-IN-CHIEF.

The ENGINEER-IN-CHIEF to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Public Works Office, Wellington, 1st July, 1903.

I have the honour to submit the following report on the various works completed and in progress throughout the colony during the past year.

RAILWAYS.

ABSTRACT.

The following table shows the expenditure and liabilities on Government railways in New Zealand up to the 31st March, 1903:—

Name of Railway.	Total Length of Railway or Section.	Open for Traffic.	Expenditure to 31st March, 1903.	Liabilities on 31st March, 1903.
	M. ch.	M. ch.	£ s. d.	£ s. d.
Kaihu Valley	19 40	17 21	55,044 17 1	..
Kawakawa-Grahamtown—				
Opua Wharf-Hukerenui	33 8	7 41	112,109 10 7	..
Hukerenui-Grahamtown	25 32	22 52	151,983 12 4	5,777 3 3
Helensville Northwards to Maungaturoto	53 15	13 66	142,971 12 4	10 5 10
Kaipara-Waikato, with Branches	151 1	151 1	1,252,413 5 7	..
Waikato-Thames, with Branches	75 18	62 58	376,151 10 10	5,498 18 2
Thames Valley-Rotorua	69 33	69 33	354,365 9 6	..
Gisborne-Karaka	18 0	13 10	73,431 19 4	6,982 6 11
Wellington-Napier and Palmerston North (including Te Aro Extension and Greytown Branch)	233 12	233 12	2,058,991 19 11	..
Wellington-Foxton .. .. .	..	..	42,116 3 4	..
Foxton-New Plymouth, with Branches	195 49	195 49	1,404,439 4 8	..
Stratford-Kawakawa	101 0	6 26	32,889 1 6	801 3 10
North Island Main Trunk	210 4	78 62	1,127,944 10 4	14,706 10 2
Nelson-Roundell	22 73	22 73	165,522 10 0	..
Midland Railway*	243 55	93 58	287,434 8 9	23,419 5 4
Greymouth-Nelson Creek	7 51	7 51	166,471 11 11	..
Greymouth-Hokitika and Ross	40 37	24 37	200,013 18 5	24,406 7 7
Westport-Ngakawau	19 56	19 56	187,512 15 7	..
Westport-Ngakawau Extension to Mokihinui†	7 12	7 12	..	..
Mokihinui Colliery Line‡	3 69	3 69	..	..
Ngahere-Blackball	2 40	..	1,089 15 8	22,497 5 11
Greymouth-Coal Creek|| .. .. .	5 1	..	..	..
Picton-Waipara—				
Picton-McKenzie	138 15	33 45	327,399 14 1	..
Waipara-McKenzie	35 0	14 59	93,958 11 0	6,166 7 10
Hurunui-Waitaki, with Branches	483 72	443 08	2,252,324 2 8	..
Canterbury Interior Main Line—Oxford-Temuka	83 0	11 44	59,343 9 2	..
Waitaki-Bluff, with Branches	561 48	468 34	3,482,580 17 6	3,695 8 6
Otago Central	182 56	98 18	1,034,064 7 2	1,015 17 2
Invercargill-Kingston, with Mararoa Branch	117 4	97 44	315,833 11 5	..
Forest Hill Railway—Winton-Hedgehope§	12 40	12 40	22,528 19 0	..
Western Railways	71 6	57 56	254,091 11 2	911 16 6
Preliminary surveys .. .. .	..	..	63,985 7 3	..
Miscellaneous .. .. .	..	..	10,336 19 11	..
Stock of permanent-way on hand .. .. .	..	..	45,192 16 3	877 13 5
Value of permanent-way in hands of Railway Department .. .. .	..	..	25,000 0 0	..
Rolling-stock .. .. .	..	..	3,077,205 18 3	100,323 0 0
Total	3,222 47	2,288 15	19,256,744 2 6	217,089 10 5
PROVINCIAL GOVERNMENT LINES, ETC.				
Canterbury (lengths included above) .. .. .	..	..	731,759 0 0	..
Otago .. .. .	..	..	372,522 2 5	..
Gisborne to Ormond Tramway .. .. .	..	..	4,975 1 7	..
Grand total	3,222 47	2,288 15	20,366,000 6 6	217,089 10 5

* The amount shown as expenditure represents the net amount charged against the colony.

† The funds for this extension—namely, £35,501 2s. 11d.—were provided by the Westport Harbour Board.

‡ The funds for purchase of this line, £15,745, were provided by the Westport Harbour Board.

§ The expenditure on this line as a tramway was made by the Lands Department.

|| The funds for purchase and completion of this line, namely, £27,902, were provided for out of State Coal Mines Account.

KAWAKAWA—GRAHAMTOWN.

Section (7 m. 16 ch. to 15 m. ; length, about 8 miles).—The formation has been finished up to 14 m. 72 ch. Two small timber bridges have been built. The platelaying has been done up to about 14 m. 40 ch. The construction of a ballast-siding a mile and three-quarters long has been completed. About half the ballasting has been done.

The construction of the banks for the Whangarei extension has been in progress during the year; a length of about 30 chains has been formed. Little progress has been made with the construction of the Whangarei Bridge; work was delayed for a few weeks, pending a decision on certain suggestions made by local authorities.

HELENSVILLE NORTHWARDS.

Komokoriki Section (49 m. 54 ch. to 56 m. 30 ch. ; length, 6 miles 56 chains).—During the year the tunnel, 51 m. 31 ch. to 51 m. 52½ ch., has been completed and lined. The formation has been completed to 54 m. 30 ch. at Ahuroa Station. The rails have been laid to the same point, and the ballasting is nearly finished. A small station-yard has been made at Ahuroa, and the line is very nearly ready for traffic. The construction of the line up to the second tunnel, 55 m. 28 ch. to 55 m. 49½ ch., is nearly finished. About 370 ft. of the tunnel has been driven at the north end, and the south approach cutting is nearly finished. The earthwork up to the end of the section is well advanced. A contract for a million bricks for tunnel-lining was completed during the year.

PAEROA—WAIHI.

Length, 12 miles 40 chains.—The line has been ballasted to the entrance to the Karangahake Station yard. The excavation of this yard is done. At the west end of the Karangahake Tunnel a length of 1,150 ft. has been driven, and the lining put in for a length of 972 ft. At the east end 826 ft. have been driven, and the lining is in for a length of 690 ft. Some progress has been made with the cuttings from 5 m. to 6 m. 15 ch. It is expected that eighteen months will be required to finish the tunnel at the present rate of progress. Considerable progress has been made with the erection of the combined road and railway bridge over the Ohinemuri River at Karangahake.

GISBORNE—KARAKA.

Gisborne-Kaiteratahi Section (0 m. to 12 m. 65 ch. ; length, 12 miles 65 chains).—The line has been finished to Kaiteratahi Station and opened for traffic.

Karaka Section (12 m. 65 ch. to 18 m. ; length, 5 miles 15 chains).—The contractors for the Waipaoa Bridge are now placing material for the structure on the ground, and are preparing to begin the erection. Good progress has been made with the earthworks. A start has been made with the tunnel, 15 m. 31½ ch. to 15 m. 41 ch., the heading being driven for a length of 90 ft. at the south end and 213 ft. at the north end. The fencing has been erected on about four miles of the section.

NORTH ISLAND MAIN TRUNK.

North End.

Ohinemoa Section (49 m. 19 ch. to 62 m. 48 ch. ; length, 13 miles 29 chains).—This section has been maintained during the year, and trains run every day—up one day, down the other. The slipping ground on this section has not given serious trouble during the year.

Ongarue Section (62 m. 48 ch. to 76 m. 55 ch. ; length, 14 miles 7 chains).—The formation has been finished, all the bridges built, and the rails laid during the year. The line has been partly ballasted over the whole section. Sidings, platforms, and sheds have been constructed at Te Koura, Taringamutu, and Taumarunui Stations; and cattle-yard, engine-shed, and cottages at Taumarunui Station. It is expected that the line will be ready to be opened for traffic in October next up to Taumarunui Station, about 76½ miles from Te Awamutu. Messrs. Anderson's contract for the manufacture of the steel superstructure of the three Ongarue bridges was completed during the year; the erection was done by day labour.

Taumarunui Section (76 m. 55 ch. to 83 m. 23 ch. ; length, 6 miles 48 chains).—The formation is well advanced towards completion, and is expected to be ready for platelaying in about three months. Some country liable to slips is passed through on this section. The contract for the erection of the Taumarunui Bridge over the Wanganui River should have been completed in February last, but the erection was not begun before the end of March, and is still in progress.

Whakapapa Section (121 m. 40 ch. to 129 m. (Marton chainage) ; length, 7 miles 40 chains).—A service road has been cleared, formed, and metalled for about six miles and a half. A large amount of work has been done on the first five miles of the section in bushfelling, constructing culverts, and in earthworks.

South End.

Makohine Section (22 m. 40 ch. to 33 m. 40 ch. ; length, 11 miles).—A portion of this section 8 miles 70 chains long was opened for traffic on the 3rd November last. The Ohingaiti and Mangaweka Station yards have been finished, the latter involving some very heavy earthworks. The Makohine Viaduct has been finished; the structure was tested on the 21st September by a train weighing 611 tons, consisting of nine locomotives and a number of loaded ballast-wagons. The tests were in every way satisfactory.

Mangaweka Section (33 m. 40 ch. to 40 m. 40 ch. ; length, 7 miles).—The trimming of the formation has been done up to 38 m. Two tunnels on the section are finished; the third is finished, except one front; and about 4½ chains of the fourth tunnel have yet to be enlarged and lined. The fencing of the line is being done.

Mangaweka Viaduct.—Four piers are completed; the fifth pier is erected ready for riveting; the columns of the sixth pier are nearly ready for erecting; and the material for the seventh pier

is well advanced. The girders of the first two 80 ft. spans are in place; those for the first span were built in position on a low scaffold. The girders for the second span were built on the top of the first-span girders, and then run out into position. The girders for the third span are now nearly ready to be run out into position. The piers are being erected without scaffolding; and the high girders are being built on the top of those already erected, and run out into position by means of two travellers running on two wire ropes and provided with suitable tackle.

The steelwork for the Toitoi Bridge at 37 m. 54 ch. was manufactured by contract. Most of the material is now at the site.

Paengaroa Section (40 m. 40 ch. to 50 m. 70 ch.; length, 10 miles 30 chains).—The earthworks on this section are now well advanced. The large bank over the Taihape Creek is not yet completed. The only tunnel on this section is at Taihape; the heading was finished in September last, and the enlarging and lining is in progress. The excavation for the Taihape Station yard is nearly complete.

Turangarere Section (50 m. 70 ch. to 61 m. 40 ch.; length, 10 miles 50 chains).—The service roads have been formed, and a number of pipes and culverts put in, as many as could be during the short carting season. Frost also interferes with doing concrete-work on this section. Most of the cuttings have been put in hand, and considerable progress has been made. A contract for the manufacture of the steelwork for the first bridge over the Hautapu has been completed, and the material delivered.

STRATFORD—WHANGAMOMONA.

Toko Section (0 m. to 6 m. 26 ch.; length, 6 miles 26 chains).—This section was completed during the year, and opened for traffic on the 9th August last.

Ururu Section (6 m. 26 ch. to 11 m. 16 ch.; length, 4 miles 70 chains).—All the bush has been felled and cleared. The formation is nearly completed up to 10 m., and the formation of the Gordon Road Station is well advanced. Some very troublesome work had to be done in cutting numerous creek-diversions in ground full of timber. The fencing was carried out well in advance of the formation.

A contract for platelayers' cottages has been let, and the work is now in progress.

MIDLAND RAILWAY.

Tadmor Section (30 m. 58 ch. to 41 m. 5 ch.; length, 10 miles 27 chains).—The culverts have been finished, and the formation is for the most part complete. A contract was let for the erection of a road and railway bridge over the Motueka River in July last, and good progress has been made, the piles are all driven for the piers, and the construction of the piers is well advanced.

Reefton-Inangahua Section.—The formation-works were put in hand in January last, and are now in progress over about two miles and a half. A contract has been let for the construction of a bridge over the Inangahua River at Reefton, and the preparations to begin the erection are being made. A contract was also let for the construction of a bridge over the Inangahua River at the Landing; no work has yet been done.

Oira Gorge.—No construction-works were done on this section of the Midland Railway during the year.

Mount Torlesse Section (6 m. to 18 m.; length, 12 miles).—All the earthworks up to Staircase Gully, at 9 miles 62 chains, have been finished; and the six tunnels between Patterson's Creek and Staircase have been finished. There were six tunnels between these points, of a total length of 88½ chains. Considerable progress has been made with the first tunnel beyond Staircase, and a start has been made with two more. Messrs. Scott Bros.' contract for the erection of the steel superstructure of Patterson's Creek Viaduct was finished during the year. The timber piers built by the Midland Company were strengthened, and a protective wall of concrete blocks was built along the left bank of the creek to prevent the erosion of the base of the slope on which the last piers of the viaduct are built. A small bridge of steel-plate girders on concrete piers was built at 7 m. Platelaying has been finished up to 7 m. 40 ch., and ballasting is being done. A wire-rope way has been erected at 10 m. to lift shingle from the bed of the Waimakariri, and another over Broken River to transport material. Tenders were called for the erection of the Staircase Viaduct, but declined as being too high.

PICTON—WAIPARA.

North End.

Awatere Section (28 m. to 33 m. 60 ch.; length, 5 miles 30 chains).—No earthworks were done on this section, the permanent-way was maintained as required, the Seddon Station yard and buildings were finished, an overbridge built at the south end of Seddon Station yard, and some improvement was made in the cattle-yard at Dumgree Station. A wind-screen was built on the up-stream side of the Awatere Bridge. The line was opened for traffic to Seddon on the 10th October last.

South End.

Omihi Section (0 m. to 15 m.; length, 15 miles).—The formation has been completed during the year, also the fencing and permanent-way. The Omihi and Scargill Station yards were finished, and the section was opened for traffic on the 16th December last. A contract for the erection of additional buildings is in progress.

Waikari Section (15 m. to 23 m. 54.42 ch.; length, 8 miles 54.42 chains).—The earthworks are well advanced up to the Hurunui River, the culverts are nearly finished, and four miles of fencing have been done. The piers for the Hurunui River Bridge are in course of construction, and the manufacture of the steelwork for the superstructure is in progress under contract by Messrs. Scott Bros.

NGAHERE—BLACKBALL RAILWAY.

A contract has been let for the construction of a combined road and railway bridge over the Grey River at Ngarhere, and some progress has been made with the erection. No other construction-works have yet been done.

COAL CREEK RAILWAY.

The completion of this line was begun in August last, earthworks, platelaying, and ballasting being put in hand. A new location for loading-sidings and coal-bins having been decided on, the necessary surveys have been made and the works begun.

HOKITIKA—ROSS RAILWAY.

Work was begun in August last, first at bushfelling and subsequently at earthworks. A contract for the construction of a combined road and railway bridge over the Hokitika River has been let, and some progress has been made with its erection.

OTAGO CENTRAL.

Poolburn Section (98 m. 4 ch. to 105 m. 48 ch.; length, 7 miles 39 chains).—The formation and tunnels are practically complete on this section; the rails have been laid up to the Poolburn Viaduct at 102 m. 58 ch., and this length of the line is partly ballasted. The masonry for the piers of the Poolburn Viaduct has been finished, and the staging for the erection of the superstructure is being built. The piers and abutments of the Manuherikia Bridge are built, and preparations have been made for erecting staging to build the girders on. The contract for the supply of the steelwork for the superstructure of the Poolburn Viaduct and Manuherikia Bridge has been completed.

Spottis Section (105 m. 43 ch. to 114 m. 18 ch.; length, 8 miles 55 chains).—The formation-works on this section are comparatively light, and are now well advanced towards completion.

CATLIN'S RIVER RAILWAY EXTENSION.

The formation-works on this section, three miles and a half long, are virtually complete and the station-yard is well advanced. An approach road from Catlin's River Bridge to the station is being made.

WAIPAHI—HERIOT RAILWAY EXTENSION.

The formation-works for five miles—20 m. to 25 m.—are practically finished. Some small bridges are being built. The rails have been laid on the first 70 chains. Timber for the bridges is being delivered.

OREPUKI—WAIKOU RAILWAY EXTENSION.

The formation-works are finished for the first four miles and a half up to Waihoaka Station, the rails laid and the ballasting nearly finished, and the line fenced. This section of the line can be opened for traffic in a short time. The bush has been felled and cleared for about six miles and three-quarters beyond Waihoaka Station, and the formation-works begun on the first mile beyond that station.

RIVERSDALE—SWITZER RAILWAYS.

A contract has been let for the erection of a combined road and railway bridge over the Mataura River, on the Riversdale—Switzers Railway. The works have not been carried on with the energy that should have been shown.

SURVEYS OF NEW LINES, LAND-PLAN SURVEYS, ETC.

A resurvey of the Kawakawa—Grahamtown line has been made from 15 m. to 18 m., and from 19 m. to 21 m. on the Kawakawa end. A land-plan survey for a ballast-pit has been made. A land-plan survey of the land required for the Grahamtown extension was finished early in the year.

On the Helensville Northwards line the land-plans have been finished from 54 m. 40 ch. to 66 m. 3 ch. The line has been finally located up to 66 m. 3 ch. Beyond this point several trial lines are being run to determine the best line. This is necessary, because of the broken nature of the country and several routes being available.

A petty contract has been let for the land-plan survey of five miles and a half of Gisborne—Karaka Railway.

A contract for the land-plan survey from 67 m. to 83 m., North Island Main Trunk line, north end, was completed during the year.

The land-plan survey of the Tadmor Section of the Midland Railway has been completed during the year.

The survey for a line of railway from Westport to Inangahua Junction is being made. The permanent survey has been finished for a length of five miles and a half, and the trial survey for a further length of 9 miles 50 chains.

The permanent survey of the line from Reefton to Inangahua Junction was finished during the year.

The surveys at Arthur's Pass, undertaken at the suggestion of Mr. V. G. Bogue, to determine the best route for the Midland Railway through the pass, have been completed as far as was deemed necessary to get fairly reliable alignments and longitudinal sections for the best of Mr. Bogue's suggested lines. Plans are now being completed and approximate quantities and estimates prepared to enable a decision being come to as to the best route to adopt.

The land-plan of the Midland Railway at the Springfield end has been finished up to Staircase Gully.

The permanent line has been surveyed from Hokitika to Ross, including a branch line 1 mile 40 chains long into Ross, and a trial-line survey has been made to the Waitaha River, about nine miles and a half south of Ross. The country was explored for about four to five miles south of the Waitaha River.

The land-plan survey of the Otago Central Railway has been completed to 105½ miles, and is now in progress to a point at about 111¼ miles near the end of Ophir Station yard.

The land-plan survey for the Waipahi-Heriot Extension has been finished.

SLEEPERS.

Under contracts and agreements for the supply of sleepers, the deliveries during the year ending the 31st March last were as follow: Auckland District, 31,135 totara, 3,072 puriri, 2,293 matai; Hunterville District, 11,283 totara; Nelson District, 1,903 birch; Westland District, 1,417 totara, 2,711 silver-pine; Otago District, 2,802 totara.

ROADS, BRIDGES, ETC.

Several small contracts were completed during the year on the Westport-Waimangaroa Road and on the Denniston Hill Road.

The section of the Great South Road from Forks to Waiho River was put in a good state of repair by filling in ruts with gravel and broken stone, repairing culverts and fords. Two small bridges were built. About three-quarters of a mile of formation was done on the Ahaura-Haupiri Road. The construction of the Coal Creek Falls Track has been finished. A considerable amount of work has been done in the constructing of the Clark River Track. A length of about three miles and a quarter of the Haupiri Hot Springs Track has been formed. A small contract has been finished for an extension of the Haupiri-Amuri Track. A survey to fix a bridge-site on Evans Creek has been made. A contract for renewing seven of the spans of the Main Grey Bridge has been finished. A contract for the erection of a road-bridge over the Waitaha River has been completed. The approach to the Taylorville Suspension Bridge has been rebuilt, and some general repairs done. The renewal of the timber towers has been delayed through the non-delivery of the necessary ironbark timber. The contract for the erection of the Kokotahi Road Bridge is now nearly finished. A wire suspension bridge has been built over the Moonlight Creek at the crossing of the Blackball-Moonlight Track. A wire footbridge has been built over Waipuna Creek. Several reports have been furnished to, and inspections made for, other Departments.

A report was made to the Wanganui Borough Council on the stability and general condition of the road-traffic bridge over the Wanganui River at Wanganui.

PUBLIC BUILDINGS.

AUCKLAND DISTRICT.

The Departmental Buildings at Auckland, Thames, and Gisborne, and the post-offices at Auckland, Onehunga, and Gisborne were decorated and illuminated in honour of the coronation of His Majesty King Edward VII.

Government House.—The house and grounds have been kept in good order during the year, and all necessary works done.

Admiralty House.—The old Admiralty House has been let for part of the year—latterly at a low rental through being out of repair. The new house has not yet been occupied.

Departmental Buildings, Auckland.—These buildings have been maintained in good order. The lift had to be repaired and the main drain lifted. Some adjacent ground has been bought, and additions to the building are required.

Departmental Buildings, Thames.—A small contract for repairs has been completed during the year.

Departmental Buildings, Tauranga.—These buildings were destroyed by fire on the 16th November last. They are to be replaced by separate buildings for Courthouse and Post-office, with extra offices in the latter building.

Departmental Buildings, Gisborne.—A contract is in progress for alterations, painting, and repairs.

Courthouses.

Supreme Court, Auckland.—The north wall was plastered to keep out the rain, a new Registrar's strong-room has been built, the paths have been put in good order, and various repairs done.

District Court.—The caretaker's residence has been repaired, and a bath-room built. Additional gaslights were fitted in the Magistrate's Court; the roof was re-covered with galvanised iron in place of slates, and various repairs were done to the furniture.

Whangarei Courthouse was repainted and repairs done.

Kawakawa Courthouse was repaired and repainted.

Repairs are in progress in the Rawene Courthouse.

The foundations of the Warkworth Courthouse have been repaired.

The Tauranga Courthouse was burnt down in November last. Tenders are being called for the erection of a new building. Furniture was provided for a temporary building.

The old Courthouse, sold to the Masons, has not yet been removed.

The Raglan Courthouse was examined, and found to be past repair.

The Courthouse at Gisborne has been repainted.

Some repairs to the roof of the Government Life Insurance Buildings have been done.

Gaols.

Mount Eden Gaol.—The back portion of the central wing is nearly ready to receive the roof, and some progress has also been made with the front portion. A Gaoler's residence is being built—for the most part by prison labour. A contract for steel doors was let, and the doors are now ready. A contract has been let for iron staircases and handrailing.

A new cesspit and drain-connections have been constructed at the Gisborne Gaol.

A new wash-house and a drying-closet have been built at the Auckland Asylum, and are now ready for use. The Auxiliary Asylum has been painted. Plans for increased kitchen accommodation have been prepared.

Maungakawa Sanatorium, Cambridge.

A contract for considerable repairs, additions, and alterations is practically finished, though a number of small items have yet to be done. An oil-engine and pump are now being erected, also an electric light plant is being installed. A road is now being formed.

Police-stations.

Rawene.—Some repairs to the fences and building are now being done.

Grey Lynn.—Three sections have been leased from the City Council for a proposed police-station.

Warkworth.—Repairs to the foundations of the building and drains have been carried out.

Waipu.—A single-cell lock-up has been built.

Onehunga.—The old building has been sold, and a new police-station has been built by contract.

Auckland.—A new coach-house has been built, and the stable repaired. Some painting has been done to the main building, and the drains repaired. An iron fence has been built round the sergeant's quarters. Plans for the conversion of the old brigade office into an Inspector's residence have been prepared. A new lock-up and Matron's quarters have been built.

Ponsonby.—The main drain was lifted and relaid. A contract has been completed for building a second story on the building.

Mercer.—A wash-house and porch have been added to the police-station.

Pukekohe.—A wash-house has been built.

Kawhia.—A contract for additions, painting, and fencing has been completed.

Port Awanui.—A new police-station has been built by contract.

Mercury Bay.—Some painting and repairs have been done to the police-station.

Ongarue.—A stable has been built.

Karangahake.—Some repairs have been done to the roof of the police-station.

Otorohanga.—A building has been purchased for a police-station.

Post and Telegraph Offices.

Pacific Cable Station, Doubtless Bay.—The buildings have been completed during the year. A water-supply has been provided. Tenders for building a cottage were declined, being too high.

Mongonui Post-office.—Tenders for additions were declined, and plans for a new building have been prepared.

Rawene.—Repairs to the post-office are now being done.

Kamo.—The post-office has been painted and repaired.

Whangarei Post-office.—A store and lavatory have been added to this building.

Dargaville.—A new post-office has been built, and a contract for alterations, repairs, and painting has been finished.

Aratapu Post-office.—A small alteration has been made in the public room.

Te Kopuru Post-office.—A contract for alterations, repairs, and painting has been completed.

Pahi.—A contract for shifting the post-office building is now in progress.

Waipu Post-office.—The building has been examined and reported on.

Paparoa.—A new post-office has been built.

Newmarket.—Some painting and papering have been done in the house for Inspector of Telegraphs.

Auckland Chief Post-office.—A room has been added to the money-order office; further alterations have been made in the telegraph-operating room. Alterations have been made in the basement walls to receive new machinery, and various other alterations in the building done.

Waiuku.—The post-office has been painted and repaired.

Newton Post-office.—The building has been cleaned, painted, and papered.

Mercer Post-office.—Some furniture and fittings have been supplied.

Onehunga.—The old wooden building, formerly used as a post-office, has been repaired and put in order for a dwellinghouse.

Waotu.—The post-office has been painted and repaired.

Waiki.—A contract for additions to and enlargement of the post-office has been finished.

Te Puke.—A contract for a new post-office has been completed.

Raglan Post-office.—A contract to erect a new front building has been completed.

Gisborne.—The contract for building the new post-office was completed during the year. Letter-boxes, fittings, and furniture have been provided. A clock is being fixed in the tower.

Wairoa Post-office (Hawke's Bay).—A petty contract has been carried out, and some additions made to the residence.

Whakatane.—Tenders for additions were declined, being too high.

Native Schools.

Peria (Mongonui).—A Native school has been built.

Ahipara.—The Native school has been removed to a new site.

Whangape.—Considerable renewals have been done to the old building, and a new class-room built.

Parapara.—The Native-school buildings have been repaired.

Kenana Native School.—A contract for the erection of a residence is nearly completed.

Torere.—Separate buildings for Native school and residence have been completed by contract.

Omaio.—A contract for the erection of separate buildings for a Native school and residence has been completed.

Te Kaha.—A Native school has been built by contract.

Omarunui.—Some repairs to the teacher's residence have been done.

Te Teko.—A teacher's residence has been built by contract.

Paeroa (Tauranga).—A contract for building a Native school has been completed.

Te Waotu.—A contract for repairs, painting, &c., to the Native school has been completed.

Motiti Island.—Tenders were called for the erection of a school, but all were declined.

Parawera.—A contract for building a Native school has been completed.

Whangara.—Separate buildings for a Native school and residence have been erected by contract. The grounds around the building have been drained.

Rangitukia.—The Native-school buildings have been repainted, and the fences repaired.

Tikitiki.—A verandah and an extra room have been built, and some gravelling done.

Tuparoa.—A new chimney and class-room have been built, the school repainted, fencing, and other work done.

Waioamatatini.—Two new rooms have been built, some painting done, and the shelter-shed removed.

Te Araroa.—The buildings have been painted externally and internally, a new bath-room built, and tank fixed, and general repairs done.

Hiruharama.—The school residence and outbuildings have been painted.

Oruanui.—Tenders for the erection of buildings have been received.

Waitahunui.—Tenders have been received for the erection of buildings.

Taumarunui.—Tenders for alterations have been received.

Miscellaneous.

A Native hostelry has been built at Tauranga.

Ongarue Public School.—A porch and shed have been built.

Industrial School, Mount Albert.—Repairs to the slate roof have been done. A large contract for additions is nearly completed, a septic tank has been constructed, and some drainage done.

Ponsonby Hall.—This building has been maintained in a fair state of repair. It was repapered during the year.

Motuhi Quarantine Station.—These buildings were cleaned and painted, and some drainage done. A small cottage was built on the island for the Health Department.

An office has been built at Onehunga for the Harbourmaster.

Bean Rock Lighthouse.—Some steps were fixed at this lighthouse.

Some painting was done in the cabin of the "Hinemoa" when she was under repairs at Auckland.

NEW PLYMOUTH, WANGANUI, AND HAWKE'S BAY DISTRICTS.

New Plymouth Departmental Buildings.—Some minor alterations are being made in the first-floor rooms of this building.

Napier.—A contract has been let for the first portion of new Departmental Buildings in brick, and the erection is now in progress.

Courthouses.

New Plymouth.—The Courthouse has been painted externally.

Hawera.—Drainage and water services have been provided, and connections made with the town sewers and water-supply.

Maniaia.—A contract for the erection of a witness-room and general repairs has been completed.

Patea.—A contract for additions and repairs has been completed.

The Hunterville, Feilding, and Ormondville Courthouses have been painted, and some other minor works done.

Some new furniture has been provided for the Napier Courthouse, and the old furniture renovated.

A fire-prevention service has been provided at the Napier Gaol, a 4 in. main having been laid and connected with the town mains.

Police-stations.

New Plymouth.—A sergeant's residence has been erected, and minor repairs done to the police-station.

Stratford.—Plans have been prepared for additions to the police-station providing for drainage and water-supply, but no action has been taken pending the completion of the town drainage and water-supply schemes.

Hawera.—Drainage-connections have been made with the town sewers, and a water-supply service provided.

Patea.—A new constable's residence has been erected, also lock-up and stables.

Waitotara.—A contract has been let for additions, alterations, and repairs.

Wanganui.—The buildings have been painted externally, and renovated.

Taihape.—A constable's residence, with cells, stable, &c., has been erected.

Foxton.—Contracts for additions, alterations, and repairs have been carried out.

Dannevirke.—The constable's residence has been altered and repaired.

Waipawa.—The sergeant's residence has been painted and repaired, and a new stable has been built.

Ormondville.—A constable's residence and cells have been built.

Napier.—The police-station has been repaired and painted; alterations and additions to the sergeant's residence are in progress.

Spit.—An addition has been built to the police-station.

Post and Telegraph Offices.

Kaponga.—A contract for the erection of a new post-office has been completed.

Opunake.—The drainage and fencing of the post-office grounds, Courthouse, and police-station have been completed.

Hawera.—Drainage and water connections with the town services have been completed; a sound-proof telephone-box has been built; some decayed timber beams have been replaced by brick arches; the battery-room has been relined; some internal alterations and renovations have been done; and a contract for building a new partition, and plastering and distemping the whole building inside, has been completed.

Eltham.—A contract for building a post-office will be advertised immediately.

Urenui.—A contract has been let for the erection of a post-office, but work has not yet been started.

Maniaia.—Additions, &c., have been carried out.

Wanganui.—This large brick building was finished early in the year.

Hunterville.—A new brick building is in course of erection.

Woodville.—A new building in brick is in course of erection.

Waipukurau.—Additions have been made to this building.

Norsewood.—A new post-office has been erected.

Hastings.—Repairs have been done and the building painted.

Spit.—A post-office in brick has been built.

The Customhouse at the Spit has been repaired and painted.

Native Schools.

Pariroa.—A contract for the removal of the school from Mawhitiwhiti and its re-erection at Pariroa has been completed. The roofs have since been repaired and painted.

Puniho.—A school and teacher's residence have been built.

Tangoio.—New buildings have been erected.

A small-arms-ammunition magazine has been built at the back of the Napier Drill-shed.

The post-offices at New Plymouth, Stratford, Hawera, Wanganui, Feilding, Palmerston North, Masterton, Dannevirke, Hastings, and Napier were decorated and illuminated in honour of the coronation of His Majesty King Edward VII.

WELLINGTON DISTRICT.

Levin.—A large building for an Industrial Home for Boys is now in course of erection. A new post-office has been built, also a new Courthouse.

Carterton.—A new post-office in brick has been built.

Martinborough.—Some additions have been made to the post-office, and the buildings have been repainted. Additions have also been made to the police-station.

Porirua Asylum.—A new boiler with automatic stoker has been fixed in position. Improvements have been made in the laundry, and the dairy has been completed. Alterations to the hot-water services have been finished. A small courtyard has been concreted. A new electric-light engine and dynamo have been fixed in position, also a new switchboard. A boiler-feed pump has been fixed. The cast-iron cooking pans have been replaced with copper ones. Some fire-escape ladders have been fixed. The general maintenance of the building has been attended to. Some machine tools have been provided and fixed in the workshop. The outside painting of the Auxiliary Asylum has been finished. The farm buildings have been lighted by electricity, also the dairy and attendants' cottages. Two airing-courts are now being constructed. A head attendant's cottage has been built by contract. A contract has been let for the erection of No. 2 Auxiliary Asylum, and the work is now in progress. A clock with bell to strike the hours has been fixed in position.

Mount View Asylum.—Extensive alterations and renovations have been made in the Medical Superintendent's residence. Alterations have been made in the drainage and water-supply, and electric light has been installed. The exterior of the main building has been painted, and electric light has been installed, as the gaspipes were giving great trouble through corrosion. Some of the pipes for the hot-water service have been renewed in copper. The iron pipes have given great trouble, from the necessity of frequent cleaning. A new gas-stove has been fixed in the office. Improvements have been made in the cooking appliances, and a manhole built at the sewers' junction.

Departmental Buildings.—Considerable settlements having taken place in various parts of the buildings through decay of piles, settlement of concrete blocks, sinking of piles, &c., the work of

raising all parts of the building to the original level was put in hand and is now finished, and all foundations made good. Various alterations have been made in the offices, and repairs and maintenance attended to. New steps have been put in at two of the entrances, and a block crossing at the Whitmore Street entrance.

General Post Office.—A store-room for cablegrams has been made in the cellar. Several of the rooms have been altered and renovated. Extra accommodation has been provided for the letter-carriers; and rooms have been fitted up in Levin's store for various branches of the post and telegraph services.

A small addition has been made to the Telephone Exchange.

Parliament Buildings.—Considerable renovations were made; also alterations were made in various ways. A large amount of steel shelving has been erected in the library. A new cart-approach road has been made from Sydney Street.

General.—Some fencing has had to be done around the various grounds. Some improvements have been made in the grounds of some of the residences.

The Museum House has been converted into offices for the Health Department, and a fumigating-shed has been erected in the grounds.

A new shed has been erected for the gardeners in Government House grounds.

A large amount of work has been done at Somes Island, and a new yard was made for the use of the prisoners engaged in tree-planting.

A contract has been let for the erection of a Customhouse at Wellington, and the work is now well advanced.

Terrace Gaol.—An addition has been made to a warder's cottage—a new approach road has been made. Various repairs have been made; also extensive alterations, re-arrangements, &c., necessitated by the building of the new wing. Some of the old wooden storm-water drains have been renewed. A contract has been let for the erection of a new wing containing sixty cells. The work is now in progress, but is somewhat delayed by scarcity of labour. The new Gaoler's residence has been completed.

Four warders' cottages at Mount Cook have been renovated, and work is in progress at two others. Improvements in one of the drains have been made.

Police-station, Mount Cook.—Three new cells are being built; considerable alterations in the drainage system were involved—a retaining-wall had to be removed, and large excavations made. The main building has been renovated both inside and out, and linoleum laid in some of the rooms.

Sundry repairs have been effected at the Manners Street Police-station, and also at Newtown Police-station. Alterations and additions to the Hutt Police-station are now in progress.

The contract for the erection of a new Magistrates' Court in brick is nearly completed.

Additions have been made to the photographic gallery at the Government Printing Office.

A large amount of work was done in installing electric lighting in many of the offices and Government buildings, and in fitting fire-alarms, also in maintaining the various electric services.

Two contracts have been let for the construction of clocks and their erection in the towers of the post-offices at Masterton, Bluff, Oamaru, Ashburton, Wanganui, and Feilding. Those for Masterton, Bluff, and Wanganui are completed; the others are in progress.

Government House, Departmental Buildings, Parliament Buildings, Printing Office, and Government Life Insurance Buildings were decorated and brilliantly illuminated by electric lamps in honour of the coronation of His Majesty King Edward VII.

MARLBOROUGH DISTRICT.

Departmental Buildings, Blenheim.—The outside of the buildings was painted, and some repairs done; a telegraph lineman's store-shed built, also a bicycle-shed. Linoleum was provided for several rooms. Canvas hose and fittings, additional buckets, and two hand-pumps were added to the fire-prevention service.

Departmental Buildings, Picton.—A pipe was laid from the town water-mains, and hose and fittings provided for fire-prevention service. An office was provided for the District Valuer, and a brick fireproof safe built.

Some fencing was erected at the Postmaster's house, Havelock, and improvements made in the drainage.

New police quarters have been erected at Havelock.

Some repairs and papering were done to the Wairau Native school.

NELSON DISTRICT.

Nelson Asylum.—A contract for outbuildings was completed during the year. A system of electric fire-alarms has been installed. A contract for the construction of an auxiliary reservoir is in progress. Tenders were called for the erection of workshops and piggeries, but only one was received, and it was declined. A considerable amount of general maintenance work was done.

WEST COAST DISTRICTS.

Westport.—The following buildings were completed during the year: Signalman's house, Karamea; constables' residences at Denniston and Seddonville. Repairs, &c., have been done as follows: Additions and repairs, post-office, Lyell; gas-fittings, post-office, Westport; repairs, Warden's Clerk's residence, Westport; painting, &c., to Magistrate's house; repairs, Cape Foulwind Lighthouse; repairs, constable's residence, Charleston; repairs, Courthouse, Westport; repairs and painting police-station, Westport; painting Westport Gaol; fencing post and telegraph office, Denniston.

Reefton.—Some repairs to the police-station have been done. The Clerk of Court's house has been renovated and repaired. Considerable repairs were done to the Courthouse, new gutters laid, and the building painted.

Greymouth.—A contract for the conversion of the old prison into quarters for two married constables has been finished. Some small repairs have been done to the sergeant's house and to the post-office and Public Works office.

Kumara.—Repairs to the post-office have been finished, and some painting done. Some repairs and painting have been done to the bailiff's house and Courthouse, and repairs, &c., to the constable's house.

Hokitika.—Considerable repairs have been done to the gaol and to the Matron's house, and a large concrete tank is being constructed by prison labour as a fire-reservoir for the gaol. General repairs, renewals, and painting have been done to the post-office, new doors fixed to the public entrance, and high-level water-tanks have been erected for fire-prevention purposes. Preparations are being made for carrying out repairs to the drill-shed. Materials were supplied to the Asylum authorities for building quarters for male attendants. General repairs have been done to the Survey Office, and a contract let for building a new Land Board room. Some repairs and painting were done at the sergeant's and constables' houses.

Ross.—Some repairs to the Courthouse have been finished, and a small telephone bureau has been fitted up in the post-office.

Many minor repairs, &c., were done in addition to the above works.

The post-offices at Westport, Greymouth, Hokitika, and Reefton were illuminated in honour of the coronation of His Majesty King Edward VII.

CANTERBURY DISTRICT.

Christchurch Departmental Buildings.—Extensive repairs have been done. The ventilation of some of the offices has been improved. Several offices have been renovated. Additional office fittings and furniture have been supplied. A new office has been built for the Labour Department.

Furniture and fittings have been supplied to the Government offices in Maling's Buildings.

Courthouses.

Christchurch Supreme Court.—Repairs to the building have been done, and the offices renovated. Drainage and water pipes have been repaired and partly renewed. The custodian's house has been renovated.

Lyttelton Courthouse.—The rooms and offices have been renovated, and a witness-box added.

Culverden.—Some furniture has been supplied for the Magistrate's office.

Southbridge.—Some picket and galvanised-iron fencing has been erected. The building has been repaired, and its exterior painted, also the outhouses and picket fence; and a concrete floor laid in the verandah. The grounds have been prepared and grass sown.

Little River.—The building, outhouse, and picket fencing have been repaired as required and painted.

Akaroa.—The ventilation of the Courtroom has been improved, and the building repaired and repainted.

Ashburton.—The exteriors of the Courthouse and outbuildings and fence have been repainted. The Magistrate's and clerks' rooms have been renovated, and the interior repainted.

Geraldine.—An outhouse has been built, and water laid on; and a concrete surface drain constructed.

Timaru.—The slate roof has been repaired, new galvanised eaves-gutters fixed, and repairs done to the outhouses.

Waimate.—Extensive repairs have been done to the interior of the Courthouse, and some new picket fencing has been erected in front.

Gaols.

Two warders' cottages have been built at the Lyttelton Gaol, a retaining-wall built, and some ground levelled.

In the Timaru Gaol some improvements have been made in the kitchen and wash-house appliances, and repairs done in the building.

Police-stations.

Christchurch.—The Police Inspector's residence has been raised, thoroughly repaired, and renovated. Hot- and cold-water and gas services have been provided, and the grounds improved. The Sub-Inspector's house has been renovated, and the fencing repaired. A 3 in. artesian well has been sunk to a depth of 407 ft. It gives 60 gallons per minute, the water rising over 30 ft. above the level of the ground. In the station, wardrobes have been provided in the dormitories. Gas and water pipes have been renewed, and defective drainage made good.

Lyttelton.—Tenders have been received for the erection of a brick lock-up.

Kaiapoi.—The constable's house has been repaired and painted.

Rangiora.—The old police-station building has been repaired. The new building has been renovated and improved, and a verandah built.

Culverden.—General repairs have been done to the constable's house.

Cheviot.—The constable's cottage has been repaired and painted, and a picket fence built.

Lincoln.—Some of the rooms in the constable's house have been renovated, and all buildings at the station repaired and painted. A large amount of fencing has been done, and improvements made in the drains.

Leeston.—Three rooms, a scullery, and verandah have been added to the constable's house, and the old part of the building put in repair.

Akaroa.—A tender for the erection of a new police-station building has been accepted, but the erection is delayed pending the settlement of a question of site.

Geraldine.—A wash-house has been built, and water-supply provided. The stable has been improved. The constable's house has been altered and repaired, and put in a better sanitary condition. All the buildings have been repainted.

Temuka.—The constable's cottage has been enlarged, repaired, and painted.

Timaru.—General repairs have been done to all the buildings in the station, and a new out-house built at the detectives' quarters.

Waimate.—Additions and repairs have been done to the constable's cottage, and the building and fence painted.

Post and Telegraph Offices.

Waiau.—Outhouses have been built, and the buildings renovated and repaired.

Rangiora.—The roof of the building has been repaired.

Papanui.—Some repairs and fencing have been done.

Christchurch.—The letter-carriers' quarters have been renovated, and the yard asphalted. A branch post-office has been fitted up and furnished in Lichfield Street.

Sydenham.—The post-office building has been repaired and painted.

New Brighton.—Some rooms have been repapered and linoleum laid.

Sumner.—Improvements have been made in the wash-house and drainage.

Lyttelton.—The exterior of the building has been painted, and some minor renovations have been done. A signalling flag-pole has been erected.

Timaru.—Some minor repairs have been done, and sanitary fittings provided.

Temuka.—The new two-storied brick post-office has been completed and furnished. A well has been sunk, and windmill and pump provided.

Geraldine.—A water-supply has been laid on from the town mains, and surface drainage provided.

Linoleum has been laid on the floor of the Customhouse at Timaru.

The contract for the erection of an auxiliary asylum at Sunnyside is nearly complete. A contract has been let for the erection of a roof over the court at the Asylum, some new tanks have been provided, and the baker's ovens rebuilt.

Education Department Buildings.

Te Oranga Home, Burwood.—The new two-story wing has been completed. A large recreation-ground has been fenced and levelled, and is being laid down in grass. Concrete footpaths have been formed, and a covered way provided between the two buildings. A cottage has been shifted and fitted up as a hospital. A well has been sunk, a windmill and pump provided, and a water-tower built. Irrigation drains have been constructed from the septic tank. Proper roadway access has been provided, and a large quantity of fencing has been done. Improvements have been made in the laundry, bath-room, and in the old building.

Christchurch Receiving Home for Girls.—Some fittings have been provided, and repairs to the water-service done.

Burnham.—General repairs to the old building have been done. Slow-combustion stoves have been provided. New iron ceilings have been fitted in one dormitory and an attendant's room. The teacher's cottage has been re-roofed, and various necessary repairs to the institute carried out. A detention-yard is being fenced, and the drainage system and water-supply are almost completed. The fire-prevention appliances have been maintained.

Deaf-mutes Institute, Sumner.—May's fire-alarm system has been fitted up in the wards. A water-supply has been provided to the old building from the town main. The contract for the erection of the new brick wing has been delayed for want of bricks, but good progress has now been made.

Native School, Kaiapoi.—A new six-room house, with kitchen, scullery, and bath-room, has been built. The school building has been repaired and painted.

Quarantine-station, Quail Island.—Sundry repairs to the building have been carried out. Three large concrete tanks are being constructed by prison labour, but work has been suspended owing to the "Gracchus" cases.

Land Board Office, Timaru.—Some minor works have been carried out. Extensive alterations and additions to the house are being carried out.

An addition in brick has been made to the Christchurch Poultry Depot.

A morgue has been built at the Hanmer Sanatorium and some repairs done.

The post-offices, Government Insurance, and Maling's Building, Christchurch, and the post-offices at Lyttelton, Ashburton, Temuka, Geraldine, Timaru, and Waimate, were decorated and illuminated in honour of the coronation of His Majesty King Edward VII.

OTAGO DISTRICT.

Police-stations.

Kaitangata.—A petty contract for renovating the police-station buildings has been completed.

Kurou.—A contract for renovations has been carried out.

Invercargill.—A new brick lock-up has been built at the police-station, and a petty contract for repairs and renovations to the sergeant's quarters has been completed.

North Dunedin.—A contract for the erection of a new police-station in brick has been completed.

St. Bathans.—A contract for additions to the police-station has been completed.

Waikouaiti.—A small office has been built by contract.

Bluff.—A contract for repairs and renovations has been carried out.

Tapanui.—A contract for repairs and drainage has been carried out.

Cromwell Police-station and Courthouse.—A contract for repairs, fencing, and removal of sand from the ground has been completed.

Mosgiel.—A contract for painting and renovating the police-station building has been completed.

Lumsden.—A contract for painting and renovating the police-station and Courthouse has been completed.

Mataura.—The building has been renovated, and the drainage improved.

Wyndham.—A contract for additions and repairs is nearly completed.

Oamaru.—A sergeant's residence has been erected.

Courthouses.

Orepuki.—A contract for the erection of a new Courthouse has been completed.

Invercargill.—A contract for building a new strong-room and supply of fittings has been completed.

Dunedin.—The furnishing of the new Law Courts was completed early in the year.

Post and Telegraph Offices.

Dunedin.—A contract for additions and alterations to the post-office buildings is still in progress. The old Supreme Court room is being fitted up as a letter-carriers' room by petty contract, and a contract has been let for railing arcade in front of old Stipendiary Magistrate's Court.

Invercargill.—A contract for painting the outside woodwork has been completed.

Gore.—A small contract for office-fittings has been completed.

Bluff.—A contract for turret clock and chimes for the post-office has been completed.

Tapanui.—A new Postmaster's residence has been built.

A Native hostelry has been built at the Bluff.

A new water-supply pipe half a mile long has been laid from the city main to the Caversham Industrial School, and temporary fever hospital built.

A petty contract for the renovation of the Customhouse, Dunedin, has been completed.

A contract for the erection of an electrician's house at Seacliff is in progress.

Offices have been fitted up and a strong-room built in Briscoe's Buildings, Invercargill, for the Registrar of Births, Deaths, and Marriages.

A large number of small works were carried out in maintaining the various buildings in the district.

MARINE.

The contract for the cast-iron tower for the Kahurangi Lighthouse was completed by Messrs. Judd, of the Thames, and the material was successfully landed at the site of the lighthouse. The tower has been erected, but the floors, stairs, &c., have yet to be done. Three dwellings are partly finished, and various outhouses, sheds, and stores are also in course of erection, drains laid, &c. About 10 acres of bush have been cleared and laid down in grass. The concrete tanks have been completed, except some plastering; paths have been formed, and a short service tramway. The works have been much delayed by the bad landing.

A contract has been let to Mr. C. Judd, of the Thames, for the manufacture of a cast-iron tower for Cape Campbell, and a considerable amount of work has been done on it.

Batley Wharf, in Kaipara Harbour, was reported on. A report was made on the bars and shallows of the Waiwawa River, Mercury Bay. Soundings were taken and a report made on the work required to deepen the Helensville Channel of the Kaipara Harbour. A contract for the supply of timber for Cape Maria van Diemen Lighthouse has been finished. Plans have been made for the extension of the wharf at Whitianga, Mercury Bay. Tenders have been called for the excavation of about 800 cubic yards of rock in the Onehunga Channel, Manukau Harbour.

A survey was made and levels taken at the site of the proposed new lighthouse at Cape Campbell.

A report was made on the repairs required to protective works at the junction of the Wairau and Opawa Rivers.

Reclamation-works at Lyttelton are being carried on by prison labour as available.

Additional accommodation has been provided at the principal lightkeeper's house, Taiaroa Heads Lighthouse.

A goods-shed has been built on the Okarito Wharf.

DEFENCES.

AUCKLAND.

At one of the forts the caretaker's cottage has been connected with the city drainage; at another fort sites for 6 in. guns have been partly excavated. The officers' quarters painted and papered, road repaired, camping-ground formed and metalled, drainage-connections made, and many small but useful works executed.

The jetty bank at the Submarine Depot has been protected by a concrete apron, and a punt repaired.

At one fort the engine-shed and emplacements for electric light have been completed, a wind-mill has been erected, and a directing-station constructed. At another fort the hot-water service to the officers' quarters has been renewed.

A contract for a drill-hall and a gun-shed has been completed. Gas has since been laid on, new fittings provided, some fencing erected, and drainage done.

WELLINGTON.

At one of the forts a gun-emplacement is being converted to receive a more powerful weapon, and a magazine is also being constructed for this emplacement; also a submarine-mining observing-station has been nearly finished and equipped.

A tide-gauge in connection with the quick-firing battery has been set up.

The Point Halswell prison-yard has been asphalted, fences repaired, and the building repainted.

Some improvements were made at the electric-light station. A water-supply reservoir has been provided for Fort Ballance and Mahanga Bay. Some damage to concrete at one of the forts has been made good. An experimental range-indicator has been fixed at one fort. The boundary fence of the reserve has been repaired. Some concrete-work for the minefields has been done. An extension of Shelly Bay Wharf has been carried out by contract. The service tramway at Shelly Bay has been improved, and the site for a new paint-shed excavated. Various repairs to the roads to and around Point Halswell have been carried out during the year, and all necessary maintenance work done.

At another fort wooden gun-foundations have been replaced by concrete ones.

Some repairs to the Trentham rifle range water-supply have been done.

Alexandra Military Depot.—Some improvements in sanitation have been made. A hot-water heating system has been fitted up in the bath-rooms and offices. The billiard-room floor has been covered with linoleum, and various repairs done. The excavation of one parade-ground has been finished, other excavations are being made by brickmakers to obtain clay for bricks. The approach road to Buckle Street has been completed. Considerable trouble has arisen through the stoppage of drains; works are in progress to remedy this defect. Offices for the Commandant are being constructed in the basement. Various works and repairs have been done. Brick foundations for an 8 in. gun have been built in the parade-ground. An asphalt floor has been laid in the shed, built round the gun, and electric light fitted in the shed.

CANTERBURY.

Some alterations to the firing-butts at the Sumner rifle range have been made. The Lyttleton drill-shed roof has been overhauled and repaired. Some repairs have been done to a fire commandant's station, furniture supplied, and the drainage put right. The excavation and concrete work for a searchlight-installation have been carried out. At one of the forts alterations to the store and workshop have been done, an outhouse built, and drains laid.

OTAGO.

Works for a searchlight are in progress, and a magazine is being built. The roofs of some covered ways had to be re-asphalted to stop leaks. A six-roomed warder's cottage has been built. The roof of the prison was repaired. The Port Chalmers gun-shed was repaired and painted. A gun-shed for drill has been put up at one of the batteries.

I have, &c.,

W. H. HALES,

Engineer-in-Chief.

The Hon. the Minister for Public Works.

APPENDIX F.

MIDLAND RAILWAY.

SECOND SUPPLEMENTARY REPORT ON THE ARTHUR'S PASS PROBLEM,
BY MR. VIRGIL G. BOGUE, C.E.

[The diagrams, tables, and correspondence referred to in this report are omitted from the printed paper. These are in the hands of the Public Works Department.]

SIR,—

New York, U.S.A., 27th June, 1903.

Some of my recent letters to you mention additional data which I have received bearing on the Arthur's Pass problem, giving the latest statistics and information relative to the working-cost of heavy grades in this country and Canada.

WORKING COST.

I have combined these additional data with the data contained in my supplementary report, dated the 16th May, 1902, and with some statistics covering several large railway systems, and by the use of graphical diagrams, have obtained a general formula for the cost of the locomotive-mile. These new data are attached hereto, and form a part of this second supplementary report.

The average speed in miles per hour is an essential element of the cost per engine-mile, and is introduced in the formula. The speed that can be attained at any point of a line by a locomotive hauling a given load is determined by the method of virtual or velocity grades, which is explained below. I have calculated the working-costs of the several Arthur's Pass lines by this method, which I believe to be original, and more exact than any heretofore used (see tables of the Appendix).

A comparison of the results of this second supplementary report with my report of the 17th February, 1902, and my supplementary report of the 16th May, 1902, shows a substantial confirmation of the results and conclusions therein contained.

TUNNEL-VENTILATION.

Attached hereto is a copy of the *Railroad Gazette*, describing the apparatus for ventilating the Elkhorn Tunnel, on the Norfolk and Western Railway, the method of finding the volume of air required per minute, and the power required to obtain satisfactory results. I have determined these for the tunnels of lines A and B, and from the horse-power required and the estimated cost of construction of the ventilating-plant I have calculated the annual cost of ventilation for each case. It will be seen that, while the average of these results is only about 14 per cent. higher than the figure used for tunnel-ventilation in my former reports, the difference between the highest and lowest annual cost for the several cases is £464 sterling, and therefore a more accurate comparison is now obtained.

It is proper to remark here that the ventilation of the Elkhorn Tunnel by the apparatus mentioned has been satisfactory. While the Elkhorn Tunnel has a length of only about 3,000 ft., the line upon which it is situated is a coal-road, having a heavy traffic requiring many locomotives, which produce smoke and gases to an excessive degree.

MAINTENANCE OF TRACK IN TUNNELS.

Attached hereto is an extract from a paper read before the Institute of Civil Engineers by Mr. Thomas Andrews, F.R.S., M.Inst.C.E., on the wear of rails in tunnels, and reports of Division Superintendents of the Northern Pacific Railway. Taking these, in connection with the letter from Mr. H. Bissell, Chief Engineer of the Boston and Maine Railroad, relative to the cost of maintenance of track in Hoosac Tunnel, and which was attached to my first supplementary report, I have decided that a much fairer comparison of the several lines will be obtained by estimating the cost of maintenance of way in tunnels at twice the average cost outside. This I have done by adding to the costs given in my first supplementary report the cost obtained by multiplying the number of train-miles *in tunnels* for the several lines and cases considered by the average cost of maintenance of way per train-mile of all New Zealand roads for the year 1900-1.

The final result of this more accurate and refined analysis emphasizes the conclusion that the best line is either line B or line C, or some line between the two.

ANALYSIS OF WORKING-COSTS.

The best of any number of alternate railway-lines between two common points *for any given volume of traffic* will be that which has the least aggregate annual charges, and the relative advantage of the several lines will vary inversely as these charges.

The aggregate annual charges include—first, interest on cost of construction; second, motive power; third, train-service; fourth, maintenance of way and structures; fifth, car-repairs; sixth, other expenses of conducting transportation; and, seventh, general expenses.

General expenses and expenses of conducting transportation, other than motive power, train-service, and car-repairs, will usually be so nearly the same for any line that they may be neglected in computing the relative economy. Maintenance of way and structures, and car (carriages and wagons) repairs, will often be so nearly the same for the several lines discussed that they need not be considered in detail, but only kept in mind in a general way. Train-service affects the relative cost only when the total number of train-miles varies.

Motive power and interest on cost of construction are the chief and often the only items that will determine the relative advantages of alternate lines between common points. The second of these is a simple matter of quantities, costs, and rate of interest, but the cost of motive power is affected by so many conditions that its determination for any given case becomes complex. Variations in the cost of motive power, caused by changes in one or more of the elements that govern it, are so great that any estimate for a complicated case with undulating grades that is not based on consideration of all the elements that affect it is liable to lead to erroneous conclusions.

To obtain a comparison of the several Arthur's Pass lines, substantially complete and accurate, maintenance of way and structures and car (carriages and wagons) repairs have been included. Train-service has been omitted since the difference in its cost for these lines would not appreciably affect the results, the maximum variation being about £39 per annum with 340 trains up to £115 per annum for 1,000 trains.

The cost per engine-mile, which is the unit of the cost of motive power, is based on the locomotive returns which I have received from eight different railway systems. These cover all classes of service and conditions of operation. Table 1 shows these reduced to common units and assembled to facilitate the investigation of the effect of the various elements and conditions of service on the cost of the locomotive-mile.

Except where the tractive power of the engine is given, the returns are not of much value in determining the cost of fuel per engine-mile. It is, however, clearly indicated, as would naturally be expected, that much more coal is consumed per mile in freight service than in passenger service. Further on it will be shown that this is measured by the speed. The heavy-grade service of the Canadian Pacific and the Rio Grande Western indicate what fuel-consumption becomes with engines working to full capacity at very slow speeds. Assuming that $4\frac{1}{2}$ lb. of coal are consumed per horse-power hour, which is a fair average (see Wellington, p. 460), we can ascertain the coal-consumption from the computed horse-power. This method checks with the actual results of engine No. 401, on the Soldiers' Summit grade of the Rio Grande Western, to within $1\frac{1}{2}$ per cent. It checks with the ten returns shown in Table 1, where the weight on drivers was given, to within $6\frac{1}{10}$ per cent. as shown in Table 2; but it should be noted that in most of the comparisons of

Table 2 the average speed had to be assumed in the absence of full data. In cases where the data is complete, it is believed that the agreement would be substantially exact, as with engine No. 401. The average freight locomotive does not have cylinder and steaming capacity enough to maintain a tractive effort equal to its adhesion at greater speeds than nine or ten miles per hour. As the speed increases the mean effective pressure and amount of steam used per revolution is reduced, and the coal consumed per engine-mile is nearly proportional to the amount of steam used. If, then, we compute the cost of fuel per engine-mile at \$1 per ton for a speed of ten miles per hour, and a tractive effort equal to the adhesion, and also construct curves showing the mean effective pressure and the amount of steam or fuel used per mile for all speeds required in percentage of the maximum of fuel consumed at ten miles per hour, as above noted, we may then read off directly the percentage of fuel consumed for any given speed. It is assumed that the engines will be doing their maximum work all the time, as they ought to do, to obtain economic results, either in overcoming train or grade resistance, or in acceleration. Diagram 1 shows the percentage of fuel used per engine-mile for all speeds between ten and thirty-eight miles per hour, the maximum at ten miles per hour being 100 per cent. Diagram 2 gives the cost of fuel per engine-mile in cents at \$1 per ton for any size of engine up to 100 tons on the drivers, and for 10, 20, 30, 40, 50, 60, 70, 80, 90, and 100 per cent. duty. The speed being known, Diagram 1 gives the percentage of duty or fuel-consumption which, interpolated in Diagram 2 over the weight on drivers for the engine considered, gives the cost of fuel per engine-mile at \$1 per ton. This figure must be multiplied by the cost of fuel per ton for the case required.

The returns (Table 1) for costs of repairs and stores are somewhat erratic, but general considerations are sufficient to show that the repairs vary directly as the weight or size of the machine, and that it will be near enough to consider the repairs and stores as one item. Not having complete data, I have assumed, after some deliberation, that the cost of repairs for an engine standing with steam up, not running, will be about one-tenth of what it is when the engine is doing its maximum work. Also, that when the engine is running down hill, with steam shut off, the cost of repairs will be about 55 per cent. of the maximum. It is not contended that this is exact, but that it gives results that compare well with the average of the returns of Table 1, as will appear from an examination of Table 2, which is a comparison of the costs per engine-mile calculated by formula and the actual costs from Table 1. Diagram 3 gives the cost of repairs and stores per engine-mile for engines up to 100 tons on the drivers when doing their maximum work, when running down hill with steam shut off, and when standing, or not running, with steam up.

An inspection of Table 1 indicates that the cost of wages per engine-mile does not vary materially with the weight of the engine, but does vary with the speed. Assuming approximate average speeds for ten of the returns in Table 1, and plotting the results, the curve of Diagram 4 is obtained, which shows the cost of wages per engine-mile for speeds up to ninety miles per hour.

Diagram 5 gives the cost of general expenses per engine-mile for all speeds. The curve of this diagram was obtained in the same general way as that of Diagram 4.

Diagram 6 is a convenient combination of Diagrams 4 and 5, and gives the cost of wages and general expenses per engine-mile for any speed.

The following formulæ are the equations of the lines and curves of the graphical Diagrams 2 to 6 inclusive:—

- C = Total cost of the engine-mile in cents.
- F = Cost of fuel per engine-mile in cents.
- G = " of general expenses per engine-mile in cents.
- W = " of wages expenses per engine-mile in cents.
- R = " of repairs and stores per engine-mile in cents.
- t = Tons on the drivers.
- s = Average speed in miles per hour.
- d = Fuel used per engine-mile at the speed of *s* in percentage of the maximum at ten miles per hour from Diagram 1.
- e = Percentage of maximum cost of repairs and stores.
- e = 100 per cent. when the engine is developing its entire steaming-capacity.
- e = 55 per cent. when running with steam shut off.
- e = 10 per cent. when standing with steam up, but not running.
- c = Cost of coal per ton of 2,000 lb., in dollars.

$$\begin{array}{ll}
 \text{Then, from diagram 2,} & F = 0.3 \, t \, d \, c. \\
 \text{" 3,} & R = 0.0864 \, (t + e \, t). \\
 \text{" 4,} & W = \frac{35}{\sqrt{s}}. \\
 \text{" 5,} & G = 1 + \sqrt{\frac{8}{s}}. \\
 \text{" 6,} & W + G = 1 + \sqrt{\frac{43}{s}}.
 \end{array}$$

Combining these in one equation we obtain the formula for the cost of the engine-mile.

$$\begin{aligned}
 C &= F + W + G + R. \\
 C &= 1 + \sqrt{\frac{43}{s}} + 0.3 \, t \, d \, c + 0.0864 \, (t + e \, t).
 \end{aligned}$$

We now have in Diagrams 1 to 6 inclusive the cost of all the items that go to make up the total cost of the engine-mile, and knowing the tractive power of the engine or the weight on its drivers, and the average speed while running under steam, and also with steam shut off for the round trip considered, both the cost per engine-mile running under steam and the cost per engine-

mile running with steam shut off can be read directly from the diagrams. By multiplying each of these costs by its respective distance and adding the two products together we have the cost of motive power per round trip. The fuel used when running down hill with steam shut off is taken at 10 per cent. of the maximum (see Wellington), and the same percentage is used for helpers returning down grade light. The problem of finding the motive-power cost for any case is thus reduced to the determination of the number of miles run under steam, and also with steam shut off, and the average speed for each condition.

The type and tractive power of the locomotive being determined, its rating and the make-up of trains in each direction are calculated for ten miles per hour on the ruling grades. Helpers are estimated for steeper grades when by their use the total annual cost of motive power is reduced by increasing the length and weight of the trains. For this purpose the tractive power of the engine is taken at nine-fortieths of the weight on the drivers, which can be depended upon at the low speed of ten miles per hour. The train-resistance is taken at 7.31 lb. per ton of 2,000 lb.; the safe average of several experiments at slow speeds. The grade-resistance in pounds per ton of 2,000 lb. is 0.3788 times the rise in feet per mile. Diagram 7 gives the total train and grade resistance for any grade. Dividing the resistance for the ruling grades from Diagram 7 into the tractive power of the engine, and deducting from the result the weight of the engine and tender, gives the weight of the train behind the tender that can be hauled up these grades. Dividing the total weight of the train by the tractive power of the engine, both in pounds, gives the number of miles of 1,000 lb. each per unit of tractive power of 1,000 lbs. This is calculated for trains in each direction and for each helper run, and for the Arthur's Pass lines is shown in Table 3.

As stated above, the engines are supposed to develop their entire steaming-capacity all the time, except when running down grades steep enough to maintain the maximum speed, assumed at sixteen miles per hour, without steam. When the capacity of the engine is not all consumed in overcoming train and grade resistances, the balance is expended in accelerating speed. The momentum or velocity head acquired at the foot of a down-grade is absorbed in overcoming a part of the grade-resistance of the succeeding up-grade. The effect of this is to reduce all of the grades, except long-ruling and helper grades, opposed to trains moving in the direction under consideration.

Having found the miles per unit of tractive power for the several cases required, we next require a table showing the speed in miles per hour that an engine so rated can attain on any grade. It is evident that in all cases no grades steeper than the ruling or rating grade need be considered, because the entire adhesion is used in rating. For convenience the same table should give the momentum of velocity heads in feet corresponding to each speed in miles per hour, from ten miles per hour, the minimum speed on ruling and helper grades up to the maximum speed permissible, in this case sixteen miles per hour down hill and twenty miles per hour up hill or on level track. Such a table, which we will call a "Speed-rating table," was prepared by the late Mr. W. G. Curtis, of the Southern Pacific Company, and published in the "Bulletin of the American Railway Engineering and Maintenance-of-way Association," by Mr. John D. Isaacs, of the same company. It was prepared for rating purposes. This table is computed by dividing the total resistance in pounds per mile for each combination of speed and grade into the tractive power of the engine at the same speed, and dividing the result by the units of tractive power of the engine at ten miles per hour. Table 4 is a similar table which I have computed for the conditions of the Arthur's Pass problem.

The velocity head in feet of any speed is the vertical fall down grade through which a train would have to run by gravity and without frictional resistance to attain that speed. Conversely, it is the vertical rise in feet through which a train running at a given speed, without either friction or motive power, would have to pass to come to rest. The grade of double power is about 20 ft. per mile (see Wellington), and therefore a train running down a 20 ft.-to-the-mile grade, without the use of either power or brakes, will have the same velocity at the bottom that it had at the top, and the speed will be uniform all the way. Trains running down grades steeper than 20 ft. per mile without either power or brakes gain in velocity head the actual fall less 20 ft. per mile. When the maximum permissible speed is attained on such grades brakes must be set. On grades less than the ruling and helper grades, for which the power has been rated at ten miles per hour, the surplus power will accelerate the speed until a balance is effected between the tractive effort and the resistance. This is attained when the velocity heads in feet, corresponding to the respective speeds in miles per hour at the beginning and end of the run under consideration, measured vertically upward from the track profile, give a new grade on which, at the speed corresponding to the velocity head at the end of the run, these forces will be in balance. These new grades are called the velocity or "virtual grades," and are the true grades governing the average speed and cost of motive power for any line. If the velocity heads for the speeds at every point are laid off on ordinates to the track-profile, lines connecting the upper ends of these ordinates are the virtual grades, and we then have the virtual or "operating profile." The operating profile thus gives the speed at every point of the line, in terms of the velocity head at which an engine can haul the given number of miles per unit of tractive power. It also gives the distance run down grade accelerating speed with steam shut off and also under brakes. The distances run under brakes in stopping are also given. The virtual or operating profile eliminates all sags of 20 ft. or less in the track-profile and improves all heavy grades except *long* ruling or helper grades.

If, now, we take the half sum of the velocity heads at two adjacent points of change of virtual grades on the operating profile, we have the velocity head of the average speed between these points. Then multiplying these average speeds by their respective running distances and dividing the sum of these results by the total distance run, all under steam, we have the average speed for the distance run under steam. In like manner we find the average speed for the distance run with steam shut off. These computations and results are given in Table 5. Having found the average

speed for each condition as described, we can ascertain from the diagrams 1 to 6, inclusive, the corresponding costs per engine-mile. The cost of the engine-mile running under steam multiplied by the total number of engine-miles made under steam during the round trip gives the cost of motive power for the distance run under steam per round trip. In like manner the cost of motive power for the distance run with steam shut off, per round trip, is found. The sum of these two gives the total cost of motive power per round-trip train.

Table 6 gives the costs of the engine round-trips for the Arthur's Pass lines, found as described above, and also the cost standing, not running, with steam up.

As shown in my first supplementary report, when assistant engines average less than eighty miles per day, a charge must be made for the time standing, not running, with steam up. The difference between eighty miles per day and the average daily mileage of assistant engines for the lines and number of trains considered is given in Table 7.

Multiplying the figures on Table 7 by the costs from Table 6, which corresponds with the engines required for each line, as given in Table 2 of the first supplementary report, and by 312 working-days per annum, the result will be the annual cost of assistant engines while standing, not running, with steam up, and is given in Table 8.

Multiplying the cost per round trip of the road engines and assistant engines from Table 6 by the number of round trips per annum, and adding the cost of assistant engines while standing with steam up from Table 8, gives the total annual cost of motive power as found in Table 9.

A comparison of these results with those of Table 9 of the first supplementary report shows a difference of only 2 per cent. in the general average. This 2 per cent. lower average cost of the engine-mile is caused by the average speed, as determined from the virtual profiles, being somewhat higher than the speed assumed for the calculations of the report mentioned. These speeds are no higher than can be attained under the conditions governing the operation of these lines.

The cost of the engine-mile being lower, the difference in annual cost of motive power is greater for the cases having the larger volume of traffic and engine-miles, as would naturally be expected.

Line C 1, which had higher annual cost of motive power in the supplementary report referred to than line C, is now seen to have slightly less total motive-power cost. This is due to the shorter length of the ruling grade, which more than balances the slight excess in mileage.

The relatively greater reductions for lines E and F are due to the fact that in each case the ruling grade is a smaller percentage of the total length of the line, a fact not fully discussed in the former report. The effect of reduction in cost by higher speed for line A was partially discounted in the calculations of the first supplementary report by the reductions there made in the cost of fuel per engine-mile for this particular line. The alternate arrangement of motive power for line E shows less favourably than the others, and for 500 and 700 trains per annum in each direction shows an increase in cost on the figures of the said supplementary report. This is due in part to the higher cost now found for engines standing with steam up, and in part to the fact that the road engine stands with steam up, like the assistant engine, for a large part of the time, which was not considered.

ANALYSIS OF TUNNEL-VENTILATION.

Applying the formula used for the design of the ventilating apparatus of the Elkhorn Tunnel, of the Norfolk and Western Railroad, hereto attached, to the conditions of lines A and B at Arthur's Pass, we have—

Area of cross section = 200 sq. ft.

Line A, length 31837 ft. = 6.03 miles.

Line B, length 20328 ft. = 3.85 miles.

$$\text{Then, for line A, } R = \sqrt{\frac{.042 \times 31837}{200}} + 1 = 9.775;$$

$$\text{and for line B, } R = \sqrt{\frac{.042 \times 20328}{200}} + 1 = 7.86.$$

Let V ., the velocity of the air-current in the tunnel = 1500 ft. per minute, which is slightly higher than the highest assumed train-velocity under steam in tunnels. Let S = the velocity of the blast at the outlet of the air passage-way, and C = the required area of the outlet in square feet.

Then for Line A—

$$S = 1500 \times 9.775 = 14670 \text{ ft. per minute.}$$

$$C = \frac{200}{1.2 \times 9.775} = 17.05 \text{ square feet.}$$

Volume of air = $14670 \times 17.05 = 250000$ cubic feet per minute.

And for Line B—

$$S = 1500 \times 7.86 = 11800 \text{ ft. per minute.}$$

$$C = \frac{200}{1.2 \times 7.86} = 21.20 \text{ square feet.}$$

Volume of air = $11800 \times 21.20 = 250000$ cubic feet per minute.

The horse-power required will be $\frac{250}{213} \times 150 = 176$ h.p., to which must be added something to provide for the higher velocity of discharge in this case. It will be safe to use 200-horse power. The cost of fuel, repairs, and stores will be taken at one-half of that for Class B engines. Wages and general expenses will be taken at the same figures as have been used for Class B locomotives.

	Fuel. d.	Repairs and Stores. d.	Wages and General. d.	Total. d.
Operating cost, standing ...	0.75	0.15	4.2	5.1
„ running ...	8.00	1.50	7.4	16.9

The capacity of the plant will be based on eighty train-miles per day in the tunnels for 312 days per annum, or 24,960 miles per annum. In round figures, 25,000 miles per annum is near enough.

The estimated cost of construction and installation of the ventilating plant is as follows:—

	£
Cost of blowers, connections, &c. ...	500
„ boilers and engines ...	1,000
„ outside wall of nozzle ...	500
„ inside „ ...	100
„ buildings ...	300
Total ...	2,400

Interest at $3\frac{1}{2}$ per cent on cost of construction, £84 per annum.

With this data the total annual charges for tunnel-ventilation of Table 10 are obtained.

ADDITIONAL COST OF MAINTENANCE OF WAY IN TUNNELS.

All the data available indicate that the cost of maintenance of way in tunnels is about twice the cost outside for the same length of track. This was referred to in the first supplementary report, but was not taken into account in the calculations. The additional information which I now have on this subject justifies the addition of an extra item for the maintenance of way in tunnels. The total length of tunnels for the several lines considered with the train-mileage and extra cost of maintenance of way at 22.15d. per train-mile is given in Table 11.

SUMMARY OF RESULTS.

Adding together the cost of motive power from Table 9, the cost of maintenance of way and carriages and wagons from Tables 12 and 14 of my first supplementary report, and the cost of tunnel-ventilation and extra cost of maintenance of way in tunnels from Tables 10 and 11 above, the total of the variable items in the annual cost of working, Otira to Bealey, is the result, and is given in Table 12.

Adding interest on cost of construction at $3\frac{1}{2}$ per cent. to the working-costs of Table 12, the total annual charges, which form the true basis for the economic comparisons of these lines, is the final result given in Table 13.

THE SHAY LOCOMOTIVE.

I submitted the profiles of lines C, E, and F to the Lima Locomotive and Machine Company, of Lima, Ohio, builders of the Shay locomotive, and received their reply dated the 14th August, 1902. After making some calculations on the data given in their letter, and finding the assumed fuel-consumption per indicated horse-power hour was rather low, I wrote them for some additional data, and in reply received their letter of the 9th February, which did not contain the desired data, but which did contain an error in calculating the coal-consumption per horse-power hour. I called their attention to these, and their letter of the 16th February confirms my calculations on the coal-consumption per indicated horse-power hour, and also gives the ratio of effective to indicated horse-power at 85 per cent., and the evaporation at 6 lb. of water per pound of coal “to place the estimate on a safer basis.” These revised figures can be depended upon to work out well in practice. The letters of the Lima Locomotive and Machine Company are attached hereto.

The Shay locomotive proposed for the Arthur's Pass lines will develop a maximum tractive power of 33,764 lb. and a speed of six miles per hour on the maximum grades, as stated by the builders. From this data the effective horse-power developed is found to be 540. Then, taking 85 per cent. for the ratio of effective to indicated horse-power, the latter is found to be 635.+. On this basis the water-consumption stated by the builders is 27 lb. per horse-power hour. This is correct for the water-consumption calculated from diagrams, and on that basis 6 lb. of water to 1 lb. of coal is a safe estimate. (See Wellington, p. 463.) With this data, and coal at 13s. per ton, the cost of fuel per engine-mile running up hill is found to be 31d. Running down hill it will be taken at one-tenth that amount, as before, or, say, 3d. per engine-mile. The average cost of fuel per engine-mile for the round trip will then be 17d.

The average speed of the east-bound trains, obtained by dividing the length of the respective lines in miles by the time required as given by the builders, will be seven miles per hour, within a fraction of 1 per cent. for any of the lines considered. The speed returning from Bealey to the Summit is given in the Shay letter of the 9th February at seven miles per hour. From the Summit to Otira it would be twelve miles per hour. This makes the average west-bound speed from Bealey to Otira 10.6 miles per hour, and the average for the round trip about 8.8 miles per hour. These are the average speeds for all three lines, but are sufficiently exact since the variation is only one- or two-tenths of a mile per hour. This average speed of 8.8 miles per hour will be used in taking from the diagram the cost of wages and general expenses per engine-mile.

The running-time west-bound will be: For line C—Bealey to Summit, 22 minutes; Summit level, 2 minutes; Summit to Otira, 39 minutes: for line E—Bealey to Summit, 25 minutes; Summit level, 2 minutes; Summit to Otira, 38 minutes: for line F—Bealey to Summit, 28 minutes, Summit level, 2 minutes; Summit to Otira, 36 minutes.

The heaviest Shay locomotive which the builders recommend for a 42 in. gauge has a tractive power of 33,764 lb., which at the ratio of nine-tenths of the weight on the drivers corresponds to about 150,000 lb. on the drivers. This is the total weight of the Shay locomotive recommended, with about one-quarter of a full load of water and coal, and, as every wheel of both engine and tender is a driver, it is the weight on which to rate the tractive power, and will be used in estimating the cost of repairs per engine-mile from Diagram 3. The builders rate this locomotive to haul 260 tons behind the tender from Otiria to the Summit of line C. On line E it is rated for 223 tons, and for line F 195 tons. I have checked these figures, and find them correct.

All the economic comparisons of the Arthur's Pass lines in my reports have been based on traffic equivalent to five hundred, seven hundred, or one thousand trains per annum in each direction, the east-bound trains having 278 gross tons behind the tender. The number of round trips per annum required by the proposed Shay locomotive to handle this traffic would be—For line C, 535, 748, 1,070; for line E, 624, 873, 1,246; for line F, 713, 998, 1,426. With the above data I have computed the annual costs given in the last column of Table 14.

The minimum day's work for the direct locomotives heretofore considered was eighty miles per day. The average speed of the Shay locomotive is very much less, and it could not make more than three round trips per day, which, on lines C, E, and F, is about $63\frac{1}{2}$ miles. With 312 working-days per annum, this would make 19,812 miles per annum. The number of locomotive-miles required per annum for the lines and volume of traffic under consideration is given in Table 15. Where the annual mileage required does not exceed three round trips per day, or, say, twenty thousand miles per annum, by more than 10 or 15 per cent., it will be assumed that the service can be performed by one Shay locomotive in service and one in reserve. For the two cases requiring greater mileage, two locomotives in service and one in reserve will be necessary. The miles that could be made by these locomotives while standing, not running, with steam up, multiplied by the corresponding cost from Table 14, gives the annual cost for these engines for this condition. This cost, added to the cost per annum while running, from Table 14, gives the total annual cost of motive power for lines C, E, and F, operated with Shay locomotives. These results, together with the annual saving effected by the Shay locomotives, are shown in Table 15.

Mr. E. H. McHenry, Chief Engineer of the Canadian Pacific Railway, in a letter dated the 7th February, 1903, hereto attached, states on the authority of Mr. Thomas Tait, manager of transportation, that the speed of the Shay locomotives on the Phoenix Branch of that railroad up hill is 4.5 miles per hour, and down hill 8 miles per hour. For the round trip this would give an average speed of 6.25 miles per hour. On this basis the cost per engine-mile of the Shay locomotive would be about 32.5d., and the cost standing with steam up, but not running, would be about 9.6d. The annual cost of motive power with the Shay locomotive, using the speed developed on the Phoenix Branch mentioned, is shown in Table 16.

Table 16 has been worked out on the assumption that the same annual mileage could be made as in the previous case, which is not entirely probable. It is not unlikely that for line C with 1,070 round trips per annum, line E with 873 round trips per annum, and for line F with 998 round trips per annum, an additional locomotive would have to be kept in service, and the savings shown in the last column of Table 16 would then be reduced.

The conclusions to be deduced from these figures are that the saving that might be effected by the use of the Shay locomotives for line C are so small that there does not seem to be any justification for adopting such special machine. The cost of breaking up the trains at Otiria and Bealey, and making them up with a less number of wagons for the Shay locomotive with a corresponding increase in the number of train-miles, would probably use up all the saving that they could effect in cost of motive power. For lines E and F the savings in operating-cost that might be effected by the Shay locomotive are hardly large enough to determine the solution of the problem in favour of either of these lines, but if line E or line F were selected from other considerations, it might be advisable to consider the use of this locomotive thereon.

ELECTRIC TRACTION FOR LINE A.

I have investigated the question of electric traction for the long-tunnel line, and on quotations received for the necessary machinery, materials, and labour, with fair allowances for freight, difference in cost of labour, and incidental charges, I find that the installation of power-house, sub-stations, third rail, bonding, transmission line, &c., complete, ready for operation, would be about £60,000 if trains are divided at Otiria into 100-ton units, and about £70,000 if the trains hauled up to Otiria by the road-engine are taken over the summit without breaking. These figures do not include the cost of the electric locomotives, which will cost more than steam locomotives for this service. This omission is favourable to electric traction in the economic comparisons, but the difference is not large enough to materially affect the results. Interest at $3\frac{1}{2}$ per cent. on the cost of electric installation will be about £2,100 per annum with 100-ton trains, and £2,450 with 300-ton trains.

Electric traction in the long tunnel would eliminate the cost of ventilation, which, subtracted from the annual interest-charge of £2,100 for trains of 100 tons, gives excess annual costs for electric traction of £1,188 sterling for 500 trains each way per annum, £1,069 sterling for 700 trains each way per annum, £892 sterling for 1,000 trains each way per annum. To find the net excess annual costs of electric traction there must be deducted from the above figures any saving in cost of motive-power that may be effected by electric operation. There are no other offsets to the above excess charges.

Attached hereto are some extracts from an exhaustive report on the proposed electric equipment of the Park Avenue section of the New York Central and Hudson River Railroad in this city, by Mr. Bion J. Arnold. The conditions of this problem, excepting the cost of coal, are more favourable to electric traction than the Arthur's Pass long-tunnel line. The line is shorter, the number of trains incomparably greater, and the grades much less. The traffic is entirely passenger

and mail, and mostly fast express service, for which electric traction is better suited than for heavy freight service. The cost of coal per ton is about one-third that at Otira. Mr. Arnold finds the cost of motive power with electric traction to be only 2·3 per cent. less than with steam locomotives, which of itself would not be enough to warrant the investment in the electric equipment even with the very heavy traffic of the Grand Central Station.

The letter of Mr. F. D. Casanave, general superintendent of motive power of the Baltimore and Ohio Railroad, gives the cost of operating the electric-power plant in the Baltimore tunnel for the month of March, 1902. While the data is not sufficient to make a direct comparison in figures, it is enough to show that the cost of electric motive power is not economical.

With compound condensing-engines in the power-house, the coal-consumption per indicated horse-power hour will be about 2 lb. An efficiency at the motors of 60 per cent. of the indicated horse-power of the engines is as high as can be realised in the case of the Arthur's Pass line, and it would probably be less. This means that at least 3½ lb. of coal will be required to produce a horse-power at the motors. With steam locomotives 4½ lb. of coal per indicated horse-power are required. Therefore, other things being equal, and under favourable conditions, electric traction might save about one-quarter of the annual expenditure for fuel. An inspection of Tables 6 and 9 shows that a saving of a quarter in the cost of fuel will save about one-tenth of the total cost of motive power, and for line A this amounts to about £146 sterling for 500 trains each way per annum, £180 sterling for 700 trains each way per annum, £230 sterling for 1,000 trains each way per annum. Subtracting these figures from those given above we have net excess annual costs of electric traction over steam locomotives of £1,042 sterling for 500 trains each way per annum, £889 sterling for 700 trains each way per annum, £662 sterling for 1,000 trains each way per annum. For comparison with other lines the above figures may be added to the total annual charges of line A in Table 13.

The conclusion is evident that electric traction for line A cannot be further considered from an economic view point. The success and comparative economy of the ventilating-apparatus at the Elkhorn Tunnel of the Norfolk and Western Railway eliminates the principal disadvantages of steam locomotives and the chief reason for investigating electric traction for this long-tunnel line.

ELECTRIC ROCK-DRILLS.

As confirming my own knowledge that the electric rock-drill for tunnel-construction is still in an experimental stage, I submit letters from Mr. George S. Rice, deputy chief engineer of the New York Rapid Transit Commission; Mr. William Hood, chief engineer of the Southern Pacific Company; and Mr. J. Q. Barlow, of the Oregon Short-line Railroad Company. These gentlemen are at present actually in charge of engineering-works where tunnels are an important element. It is clear that the electric rock-drill should not be seriously considered, under the circumstances, in connection with the tunnels of either of the lines discussed. The engineers of the Rapid Transit Commission visited many places in Europe looking up data for use in the construction of the New York Rapid Transit Subway, which is mostly in rock, with several miles of double-track tunnel.

ELECTRIC PLANT FOR TUNNEL-CONSTRUCTION.

I have investigated the proposition of an electric plant for constructing the long tunnel of line A with a view to the future use of the same for operating the road by electric traction, and find that it is not practicable for the following reasons:—

First, a plant designed for economical results in one service would not be economical in the other, and a plant designed for both would not give the most economical results in either.

Second, by the time a long tunnel could be completed any plant installed in the beginning of construction would have lost much value by ordinary deterioration, and would require considerable outlay for repairs and renewals.

Third, the present "state of the art" in heavy electric traction is such that a plant installed now would probably be out of date, if not antiquated, by the time the work could be completed.

Fourth, the construction of the tunnel can be more economically and expeditiously executed with a steam-driven compressed-air plant and pneumatic drills, a small electric-light plant, and small locomotives. These small locomotives may be either electric or compressed-air, and can be supplied with power by installing a sufficiently large compressed-air plant or electric-light plant as the case may be. The current required for lighting purposes and for the small electric locomotives would only be a small part of that required for the electric operation of the completed road, and for this service direct current would probably be preferable to the high-tension alternating current required for electric traction.

Fifth, electric rock-drills have not been successful on such work as this, and electric air-compressors would be more expensive both to instal and to operate than direct steam-driven air-compressors.

Sixth, it has been shown that electric traction for line A would cost more for annual charges than steam locomotives and a satisfactory ventilating plant combined, and the first cost of the electric installation would add from £60,000 to £70,000 to the total investment.

CONCLUSION.

The question which I have had the honour to investigate under your direction has now been studied in full view of the experience gained in the operation of grades over various railways, and with such data respecting the physical conditions, probable cost, &c., of the several lines treated as are presented by the surveys made at Arthur's Pass prior to the date of my first report. I have not discovered any reason for changing the recommendations of that report. Indeed, the investigations made have only tended to confirm them. When the surveys and maps are completed, the cost and other elements of lines B and C, or some other line lying between them, can be determined quite definitely, and a choice can then be made.

Line E would have a summit tunnel but little over one mile long, while line F would not have any summit tunnel at all ; but either of these lines would be so high on bad slopes approaching the Pass that its average cost of construction per mile would be very heavy, and it is doubtful if instrumental survey would show that either of them could be built for an amount materially less than line B or line C. The surveys that have recently been made may determine this question.

In the mountains on the continent of North America, in some cases where only a moderate traffic was looked for, line C might be considered somewhat the best, because its summit tunnel would be nearly 7,000 ft. shorter than that of line B, and could therefore be constructed in materially less time, often a consideration of prime importance. In New Zealand, the railways are the property of the Government, whose policy looks to the construction of lines which will be adapted not only to the conditions of the present, but as well to those of a comparatively distant future. It has seemed to me, therefore, from a conservative point of view, and considering all the conditions, that either line B, or some line between line B and line C, but near the former, as might be determined by actual survey, would be the best.

Before submitting this supplemental report, I have obtained from the Baldwin Locomotive Works some data respecting locomotives of a type which would be satisfactory for use on line C (see Appendix). I found that instead of a locomotive of 85 tons, suggested by me, as assistant engine on such line, a locomotive of 80 tons would do. On line E, for the alternate arrangement of motive power, the 85-ton locomotives would answer in place of the 90-ton locomotives mentioned.

Yours, &c.,

V. G. BOGUE.

The Hon. the Minister for Public Works, Wellington, New Zealand.

* In these cases the dates given are the dates on which the railways became the property of the Government.
† This comprises 3m. 480b. of railways constructed by the Government, and 1m. 600b. of lines constructed by private company and afterwards purchased by the Government.
‡ This comprises 45m. 500b. of railways constructed by the Government, and 45m. 700b. of lines constructed by private companies under the District Railways Act and afterwards purchased by the Government.
§ This comprises 1m. 250b. of railways constructed by the Government, and 86m. 800b. of lines constructed by private companies under the District Railways Act and afterwards purchased by the Government.
|| This comprises 35m. 400b. of railways constructed by the Government, and 5m. 800b. of lines constructed by private company and afterwards purchased by the Government.
** 9 miles 16 chains formerly returned as opened trackway.
†† In these cases the dates given are the dates on which the title to the railway was actually vested in the Government. Possession was taken of the railway by Government on 25th May, 1896.
‡‡ This comprises 20m. 700b. constructed by Government, and 74m. 20b. constructed by New Zealand Midland Railway Company, and 8m. 440b. partly constructed by New Zealand Midland Railway Company and finished by Government.

Enclosure to Appendix E.

TABLE of LENGTHS of GOVERNMENT LINES AUTHORIZED, CONSTRUCTED, and SURVEYED up to 31st March, 1903.
NORTH ISLAND.

[illegible]

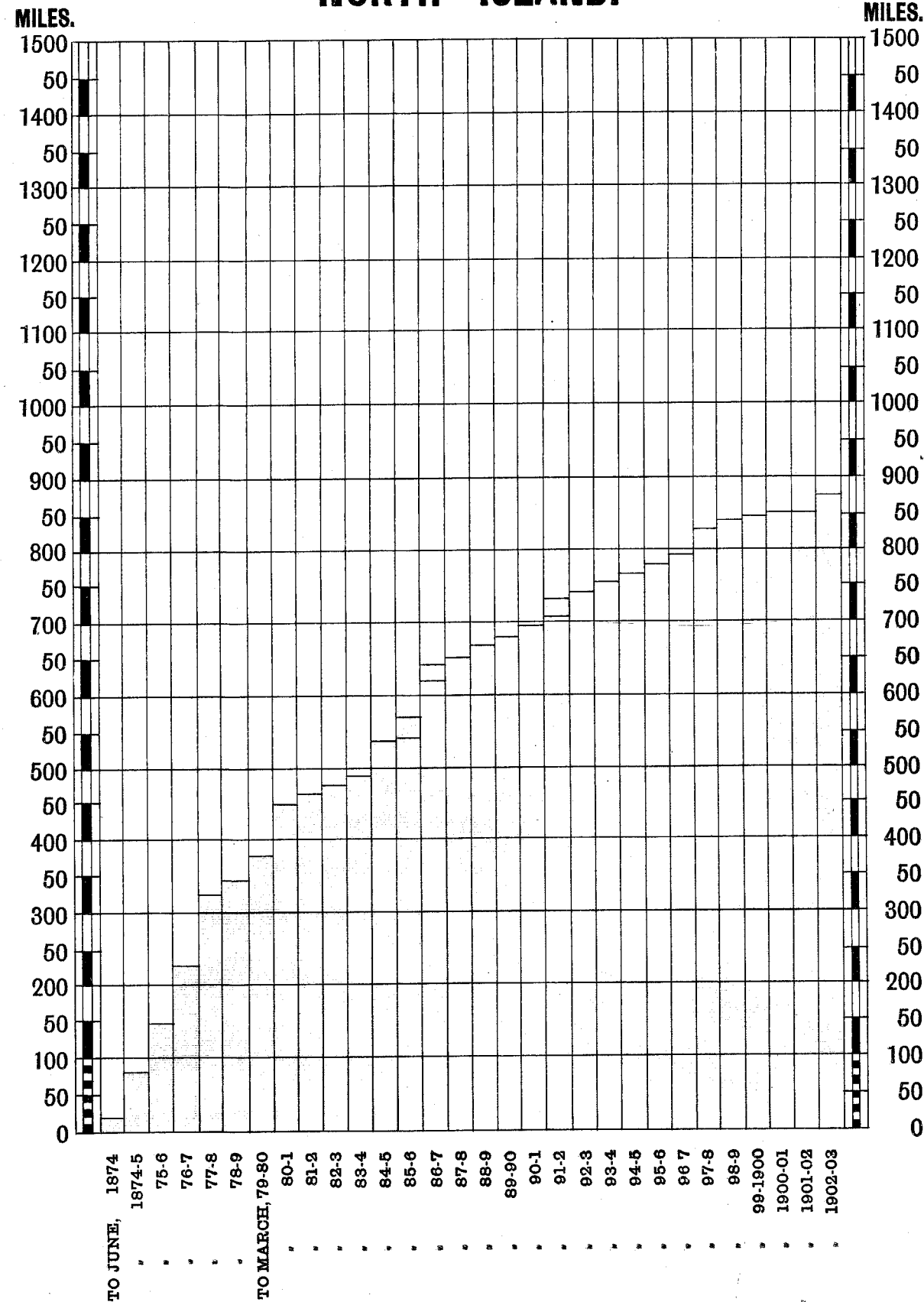
* In this case the date given is the date on which the railway was taken over by the Government.
 † This comprises 12m. 70ch. of railway constructed by Government, and 30m. 60ch. of line constructed by private company under the District Railways Act and afterwards purchased by the Government.
 ‡ This comprises 48m. of railway constructed by Government, and 6m. 71ch. of line constructed by private company under the District Railways Act and afterwards purchased by the Government.

NOTE.—Tasaul and Lichfield Branches not mentioned above, as the rails have been taken up.

NOTE.—Taonui and Lichfield Branches not mentioned above, as the rails have been taken up.

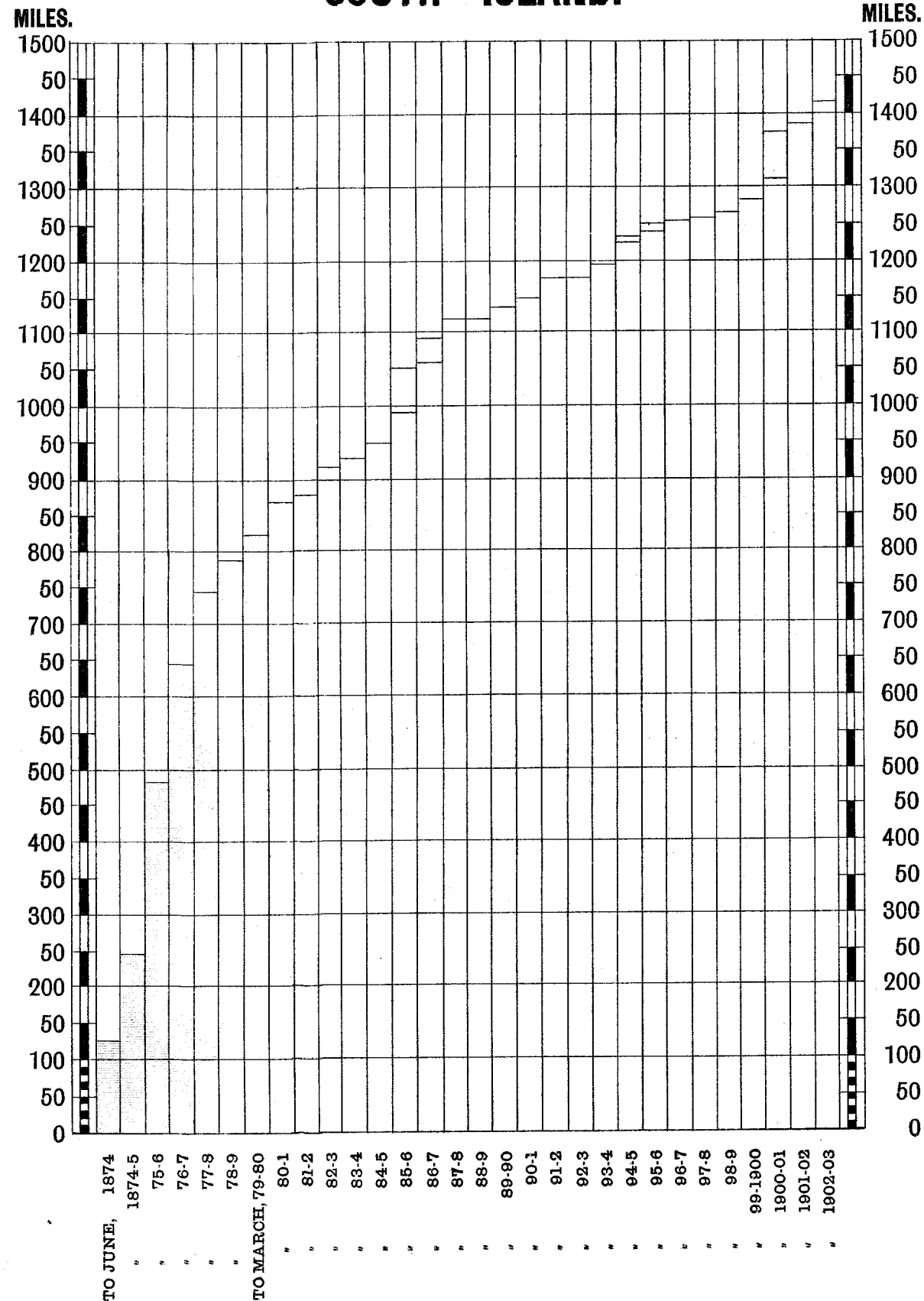
Number of Miles open
of
Government Lines.

NORTH ISLAND.



Number of Miles open
of
Government Lines.

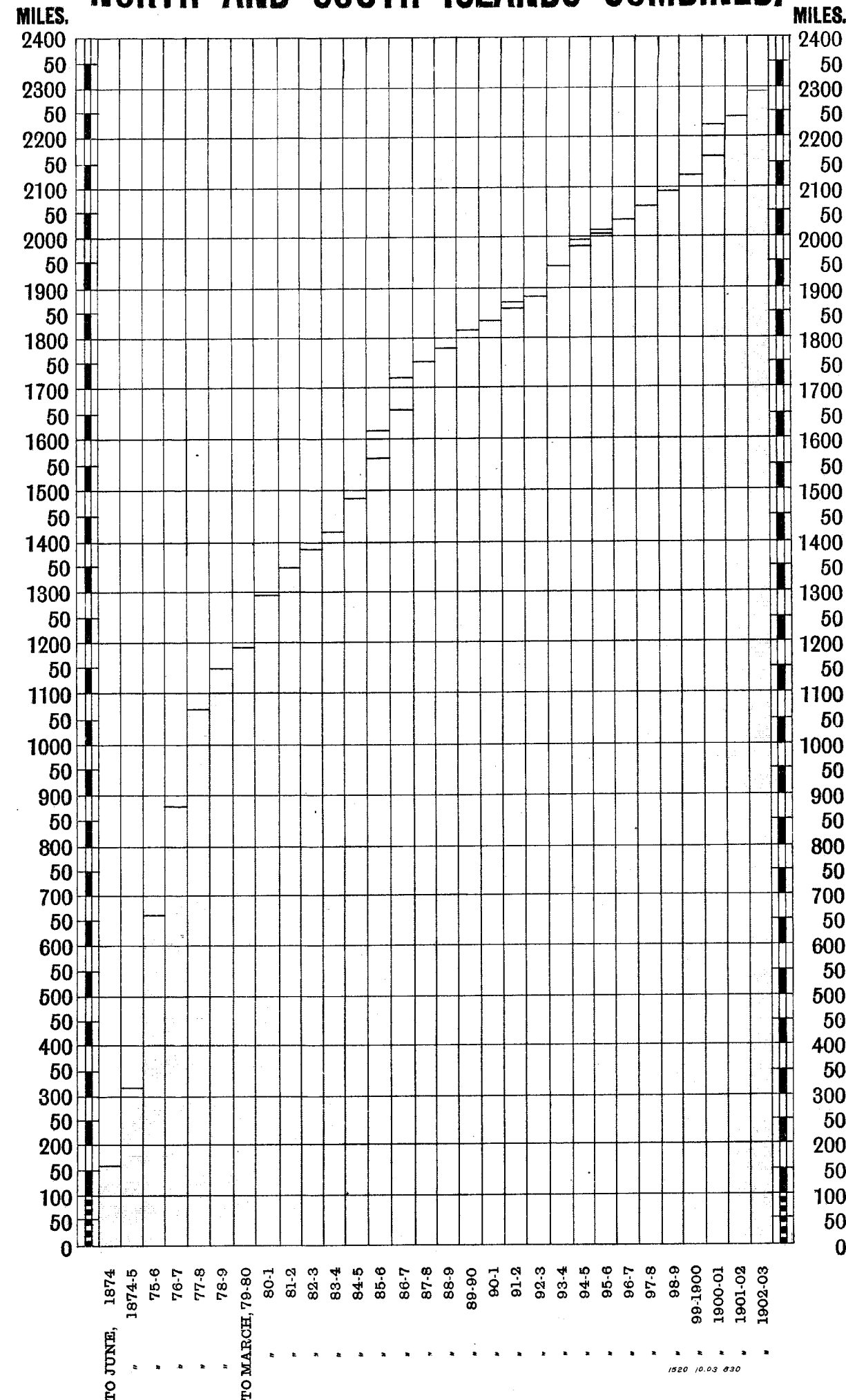
SOUTH ISLAND.

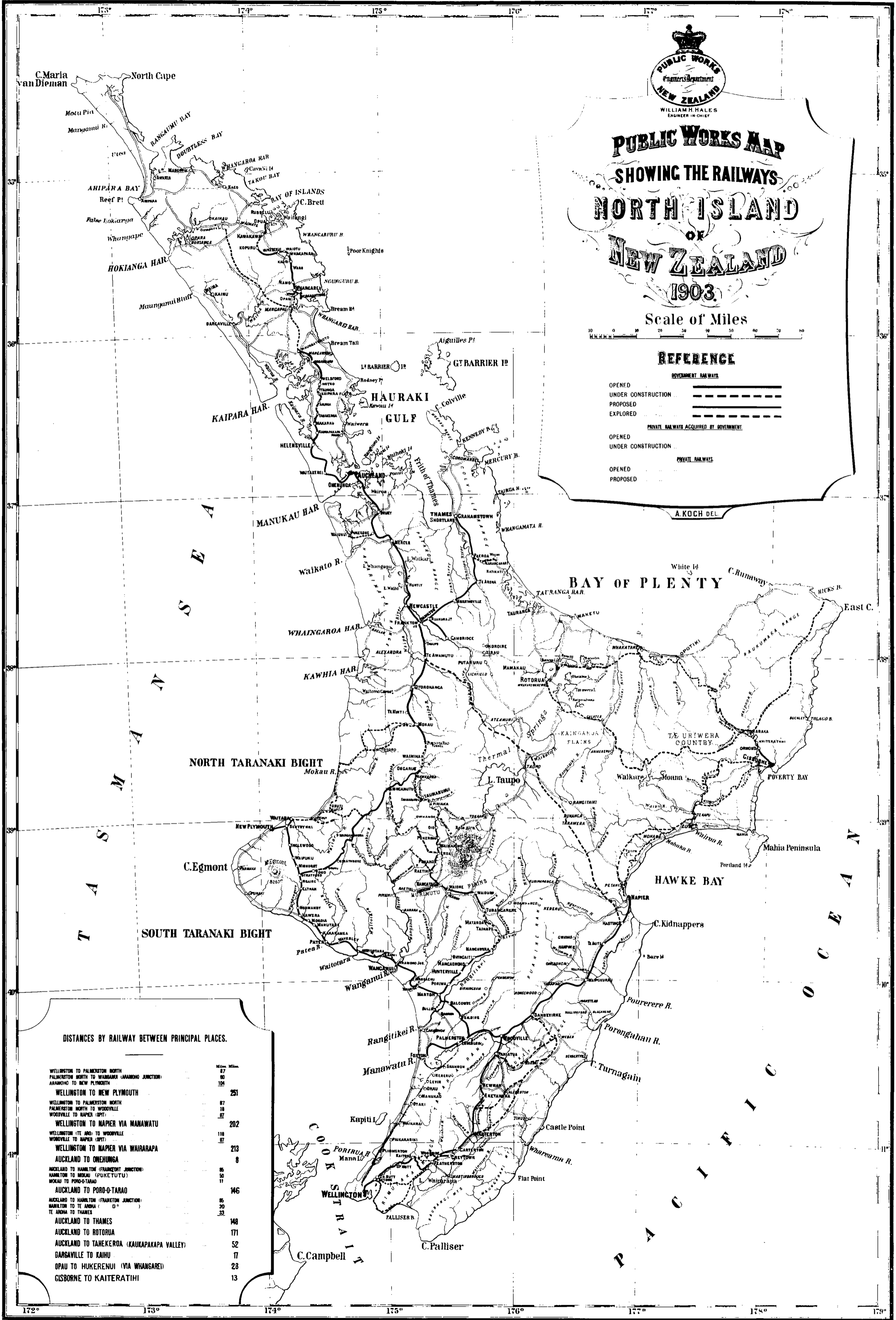


PRIVATE RAILWAYS ACQUIRED BY THE GOVERNMENT SHOWN

Number of Miles open
of
Government Lines.

NORTH AND SOUTH ISLANDS COMBINED.





PUBLIC WORKS MAP
SHOWING THE RAILWAYS
NORTH ISLAND
OF
NEW ZEALAND
1903.

Scale of Miles



REFERENCE

- GOVERNMENT RAILWAYS**
- OPENED
 - UNDER CONSTRUCTION
 - PROPOSED
 - EXPLORED
- PRIVATE RAILWAYS ACQUIRED BY GOVERNMENT**
- OPENED
 - UNDER CONSTRUCTION
- PRIVATE RAILWAYS**
- OPENED
 - PROPOSED

DISTANCES BY RAILWAY BETWEEN PRINCIPAL PLACES.

	Miles.	Miles.
WELLINGTON TO PALMERSTON NORTH	87	
PALMERSTON NORTH TO WANGANUI (ARAMOHU JUNCTION)	80	
ARAMOHU TO NEW PLYMOUTH	104	
WELLINGTON TO NEW PLYMOUTH	251	
WELLINGTON TO PALMERSTON NORTH	87	
PALMERSTON NORTH TO WOODVILLE	18	
WOODVILLE TO NAPIER (SPT)	97	
WELLINGTON TO NAPIER VIA MANAWATU	202	
WELLINGTON (T.E. AND) TO WOODVILLE	110	
WOODVILLE TO NAPIER (SPT)	97	
WELLINGTON TO NAPIER VIA WAIRARAPA	213	
AUCKLAND TO ONEHUNGA	8	
HICKLAND TO HAMILTON (FRANKTON JUNCTION)	85	
HAMILTON TO MOKAU (PUKETUTU)	50	
MOKAU TO PORO-TARAO	11	
AUCKLAND TO PORO-TARAO	146	
AUCKLAND TO HAMILTON (FRANKTON JUNCTION)	85	
HAMILTON TO TE ANAHI	30	
TE ANAHI TO THAMES	33	
AUCKLAND TO THAMES	148	
AUCKLAND TO ROTORUA	171	
AUCKLAND TO TAHEKEROA (KAUKAPAKA VALLEY)	52	
DARGAVILLE TO KAIHU	17	
OPAU TO HUKERENUI (VIA WHANGAREI)	23	
GISBORNE TO KAITERATIHI	13	



WILLIAM H. HALES,
ENGINEER-IN-CHIEF

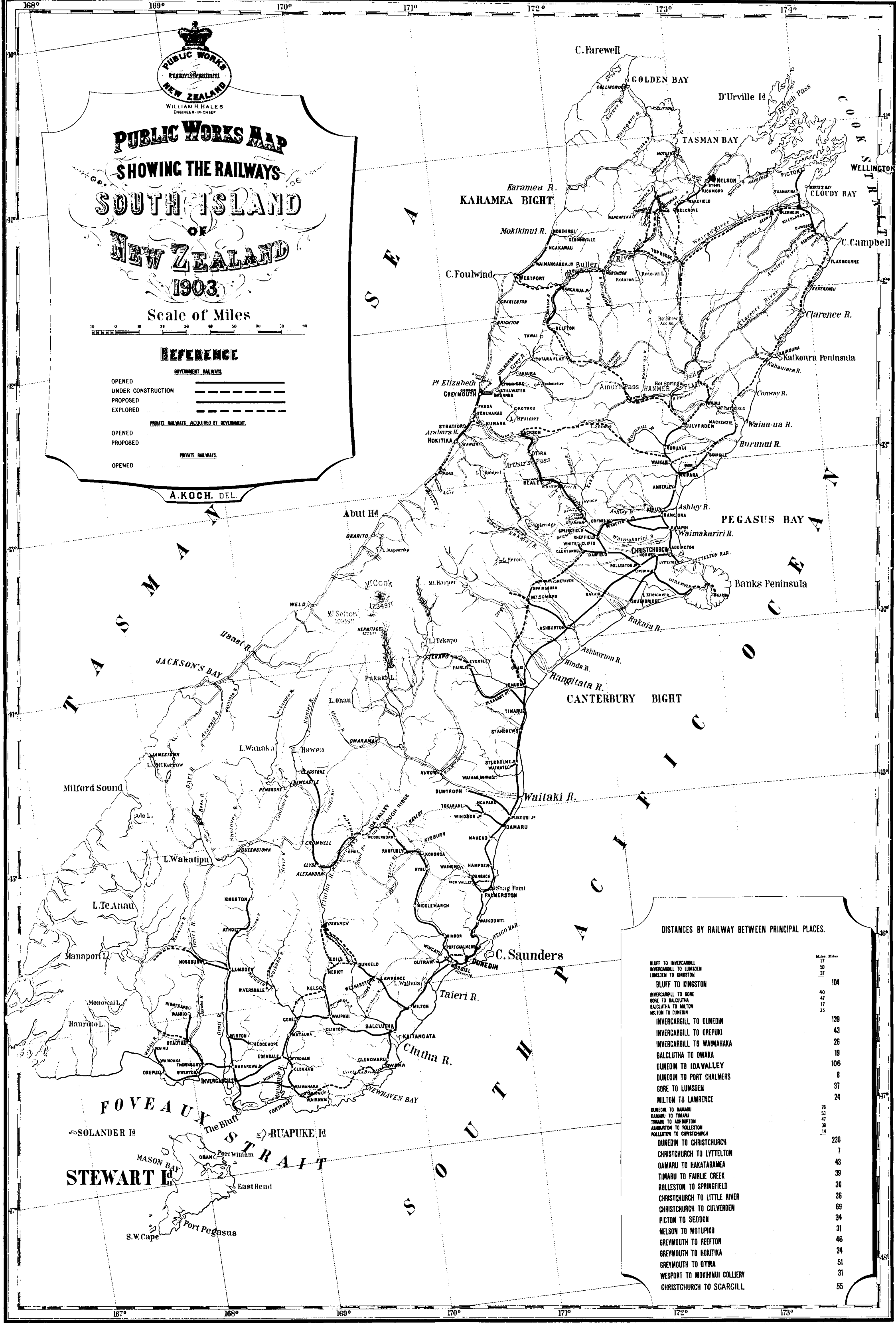
PUBLIC WORKS MAP SHOWING THE RAILWAYS SOUTH ISLAND OF NEW ZEALAND 1903.

Scale of Miles
0 10 20 30 40 50 60 70 80

REFERENCE

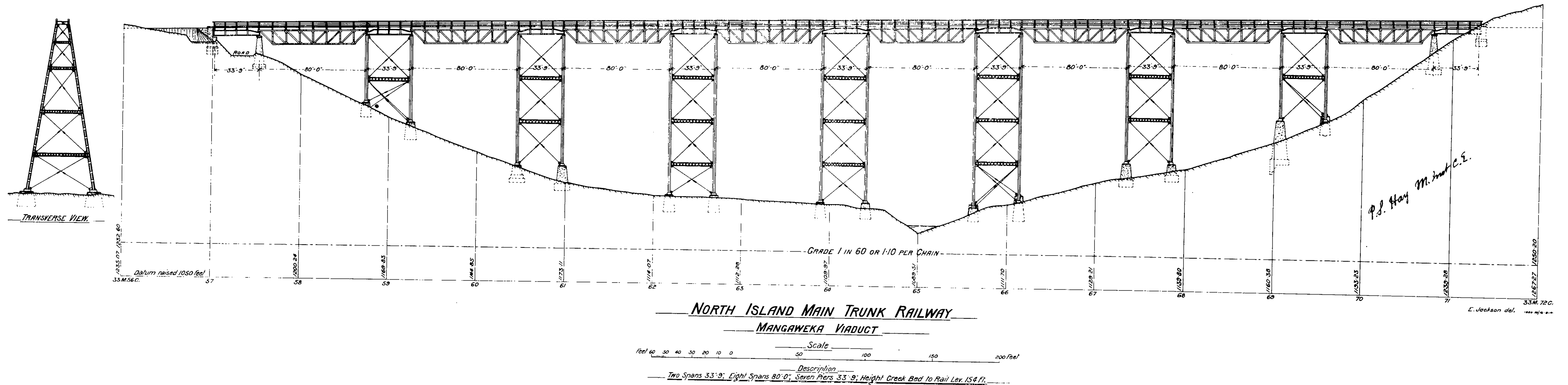
GOVERNMENT RAILWAYS	
OPENED	—————
UNDER CONSTRUCTION	- - - - -
PROPOSED	.....
EXPLORED	.....
PRIVATE RAILWAYS ACQUIRED BY GOVERNMENT	
OPENED	—————
PROPOSED	- - - - -
PRIVATE RAILWAYS	
OPENED	—————

A. KOCH, DEL.



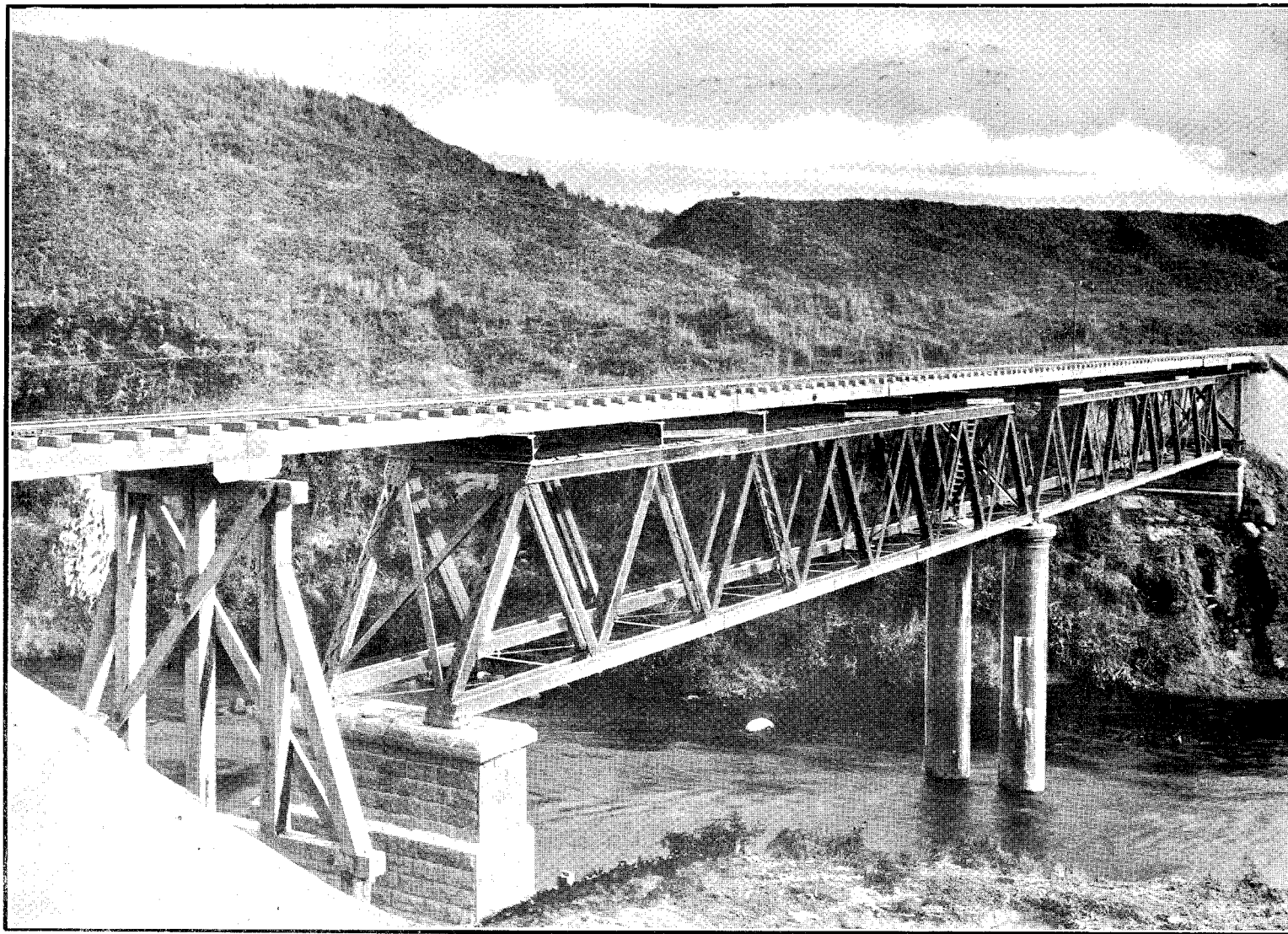
DISTANCES BY RAILWAY BETWEEN PRINCIPAL PLACES.

	Miles
BLUFF TO INVERCARGILL	17
INVERCARGILL TO LUMSDEN	50
LUMSDEN TO KINGSTON	37
BLUFF TO KINGSTON	104
INVERCARGILL TO DUNEDIN	139
INVERCARGILL TO OREPUKI	43
INVERCARGILL TO WAIMAHAKA	26
BALCLUTHA TO OWAHA	19
DUNEDIN TO IDA VALLEY	106
DUNEDIN TO PORT CHALMERS	8
GORE TO LUMSDEN	37
MILTON TO LAWRENCE	24
DUNEDIN TO DUNEDIN	78
DUNEDIN TO DUNEDIN	53
DUNEDIN TO DUNEDIN	47
DUNEDIN TO DUNEDIN	36
DUNEDIN TO DUNEDIN	14
DUNEDIN TO CHRISTCHURCH	230
CHRISTCHURCH TO LYTTELTON	7
DUNEDIN TO HAKATARAMEA	43
TIMARU TO FAIRLIE CREEK	39
ROLLESTON TO SPRINGFIELD	30
CHRISTCHURCH TO LITTLE RIVER	36
CHRISTCHURCH TO CULVERDEN	69
PICTON TO SEDDON	34
NELSON TO MOTUPKO	31
GREYMOUTH TO REEFTON	46
GREYMOUTH TO HOKITIKA	24
GREYMOUTH TO OTIRA	51
WESPORT TO MOKIHINI COLLIERY	31
CHRISTCHURCH TO SCARGILL	55



P.S. Hay M. Inst C.E.

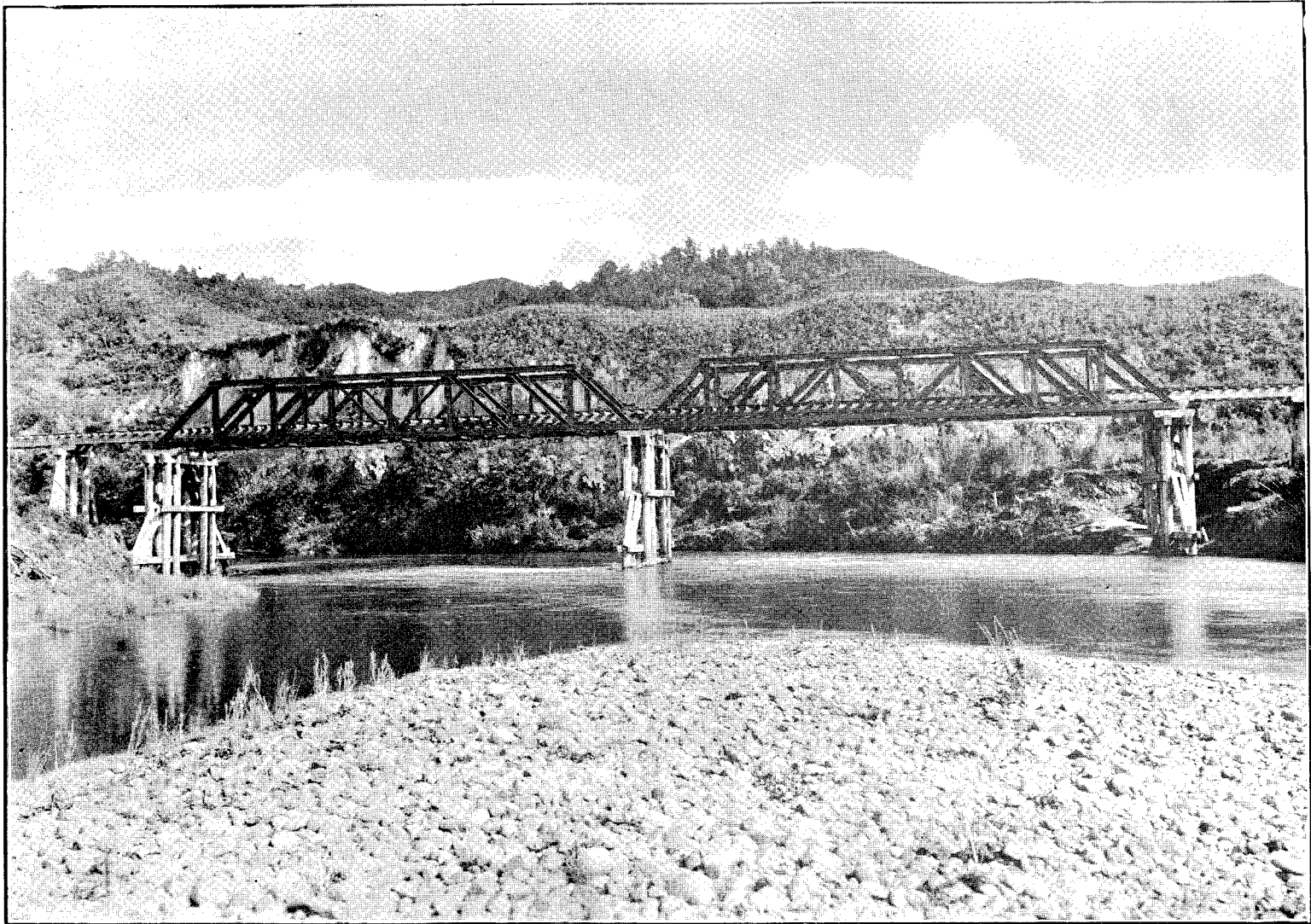
E. Jackson del.



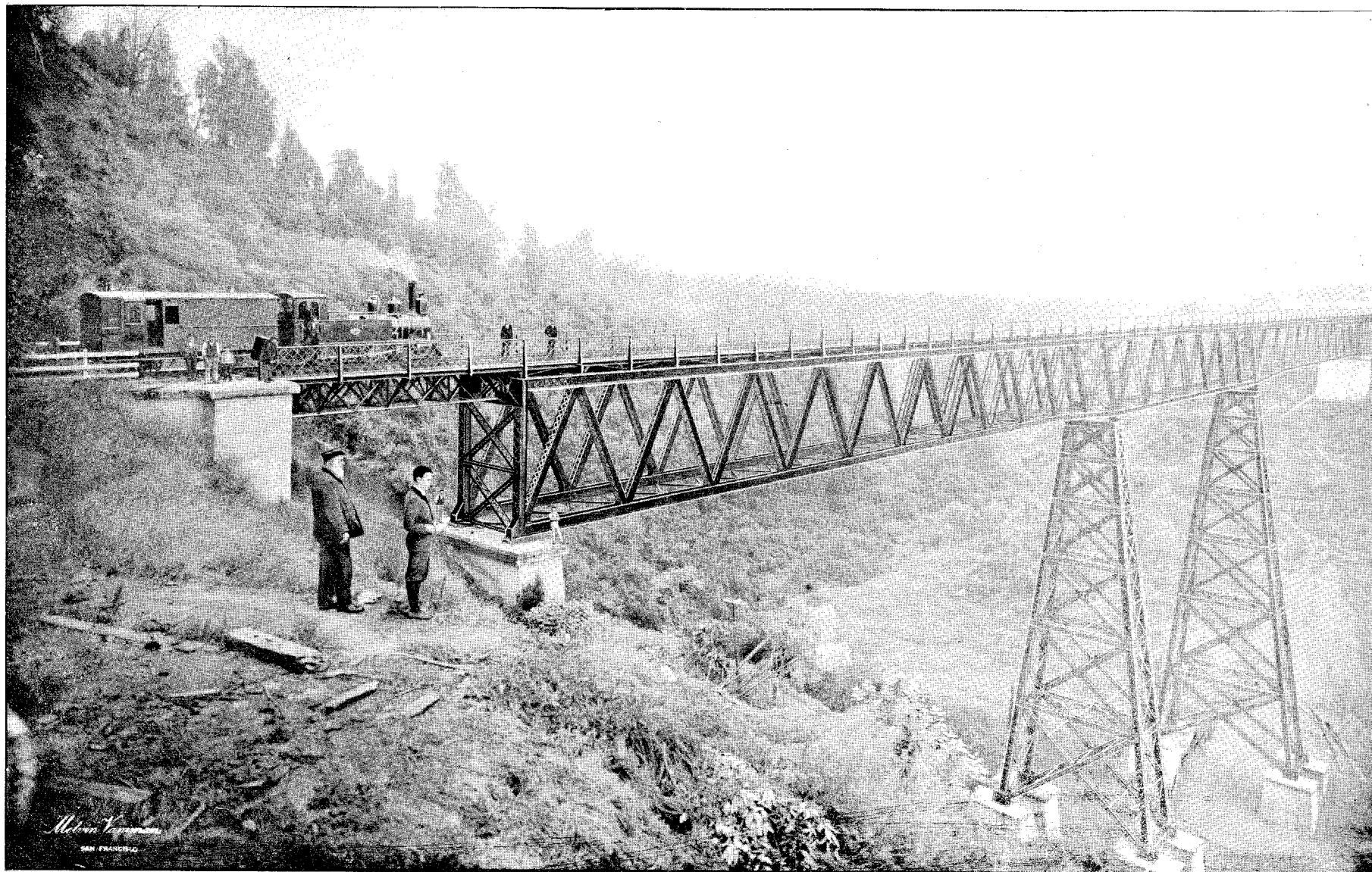
North Island Main Trunk Railway.—Ongarue River Bridge (No. 1 Crossing).
One 11 ft., four 20 ft., and two 100 ft. spans. Height from river-bed to rail-level, 60 ft.



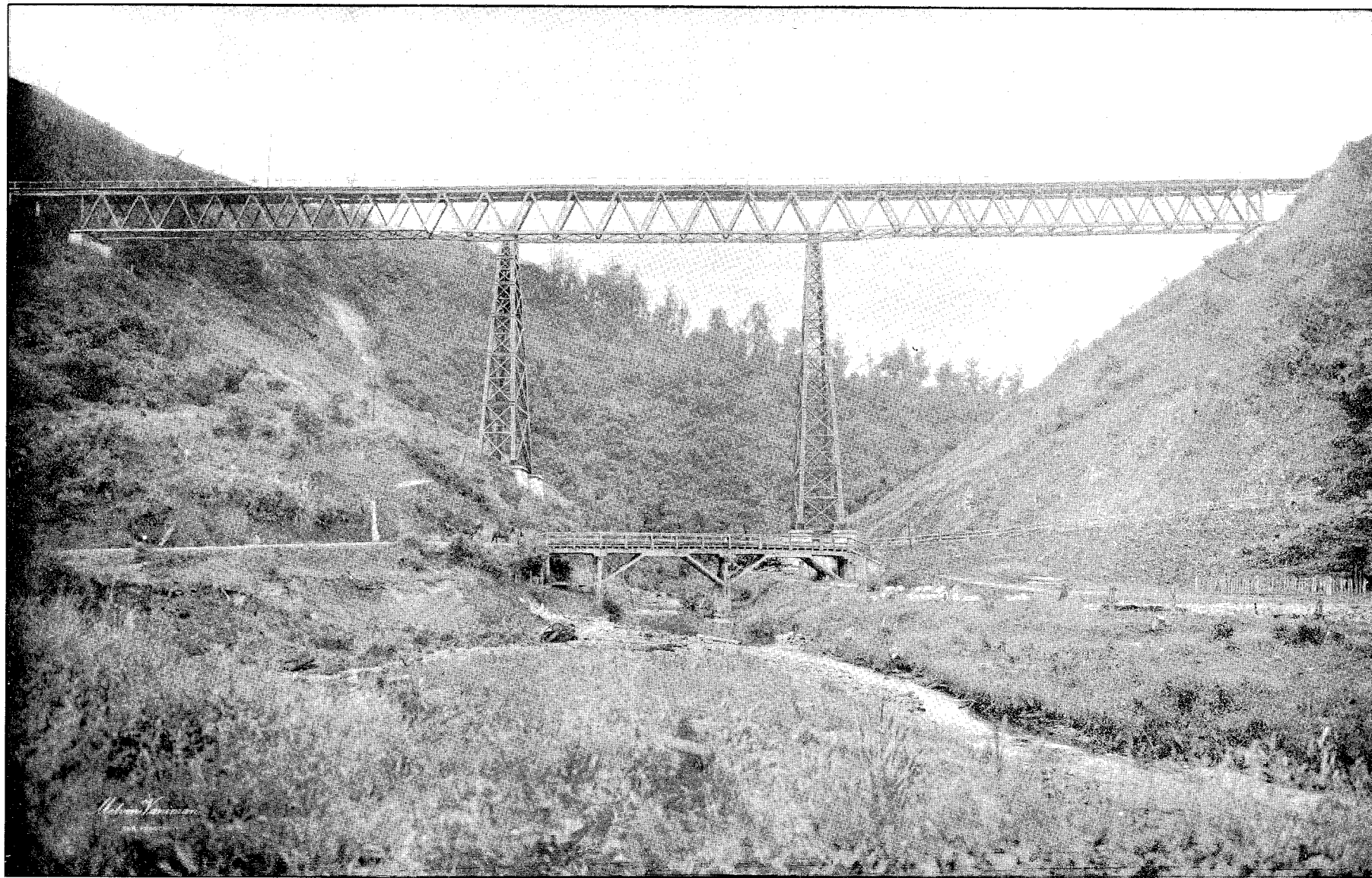
North Island Main Trunk Railway.—Ongarue River Bridge (No. 2 Crossing).
Three 30 ft. and two 80 ft. spans. Height from river-bed to rail-level, 37 ft.



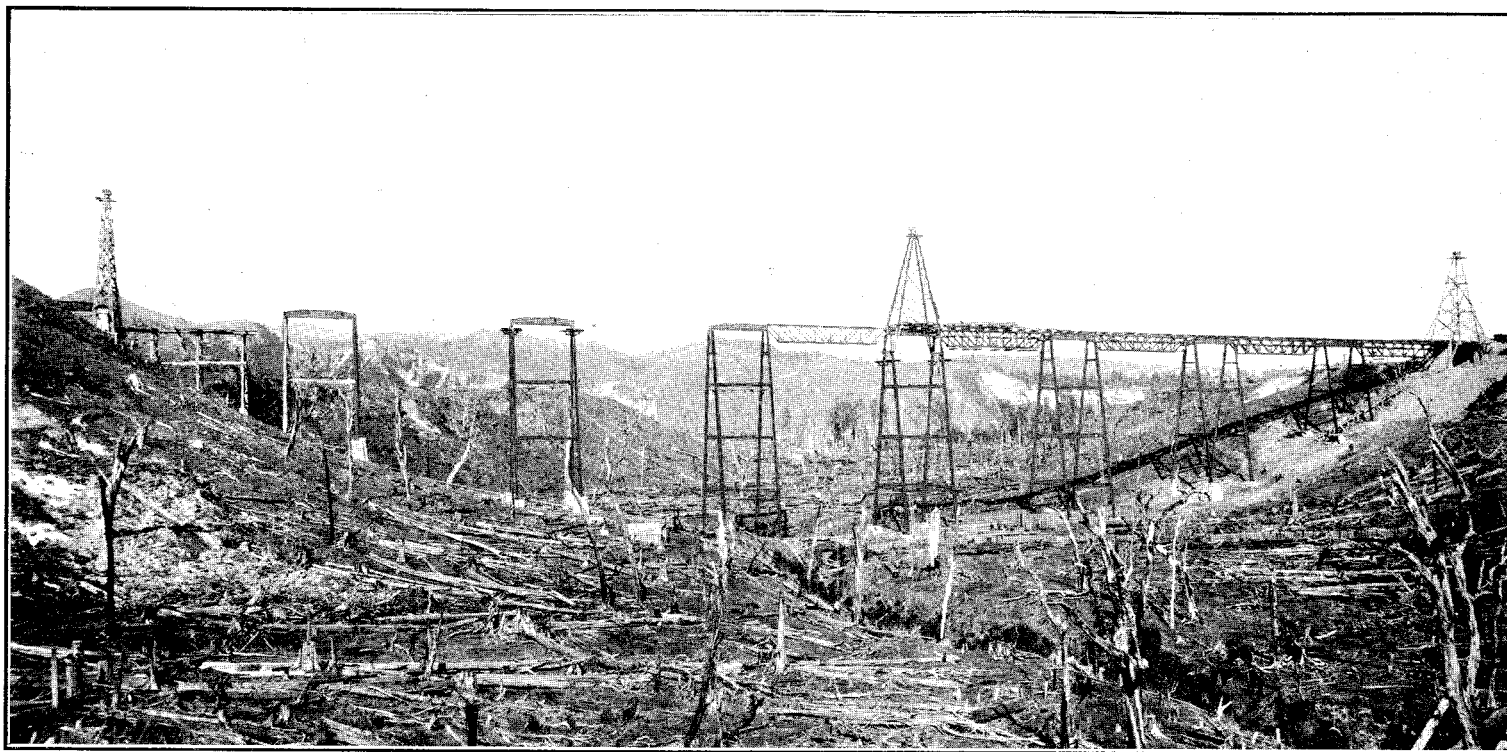
North Island Main Trunk Railway.—Ongarue River Bridge (No. 3 Crossing).
Six 20 ft. and two 80 ft. spans. Height from river-bed to rail-level, 30 ft.



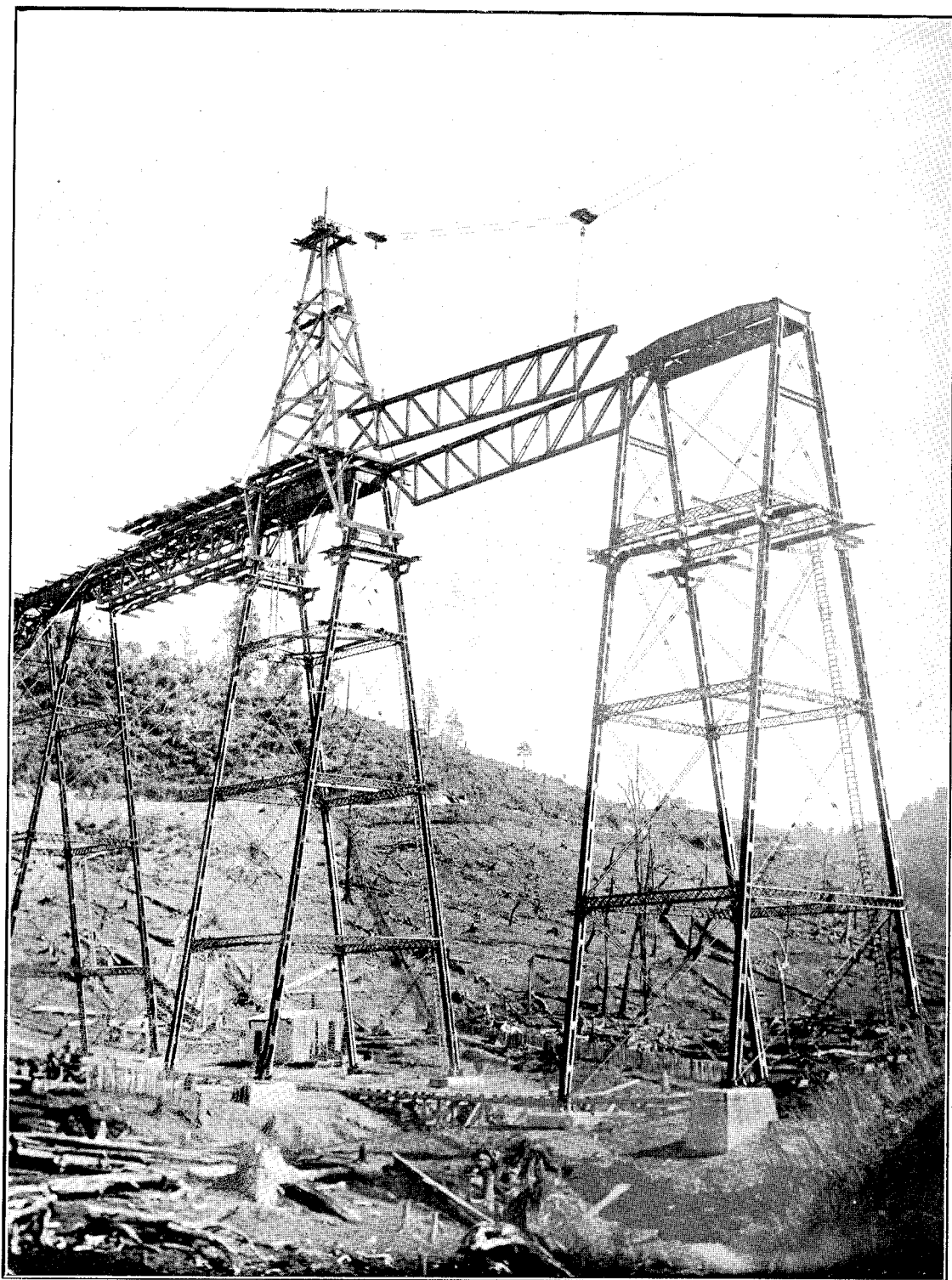
North Island Main Trunk Railway.—Makohine Viaduct.
One centre span of 176 ft., two side spans of 247 ft., and two end spans of 30 ft. Height from bed of creek to rail-level, 237 ft.



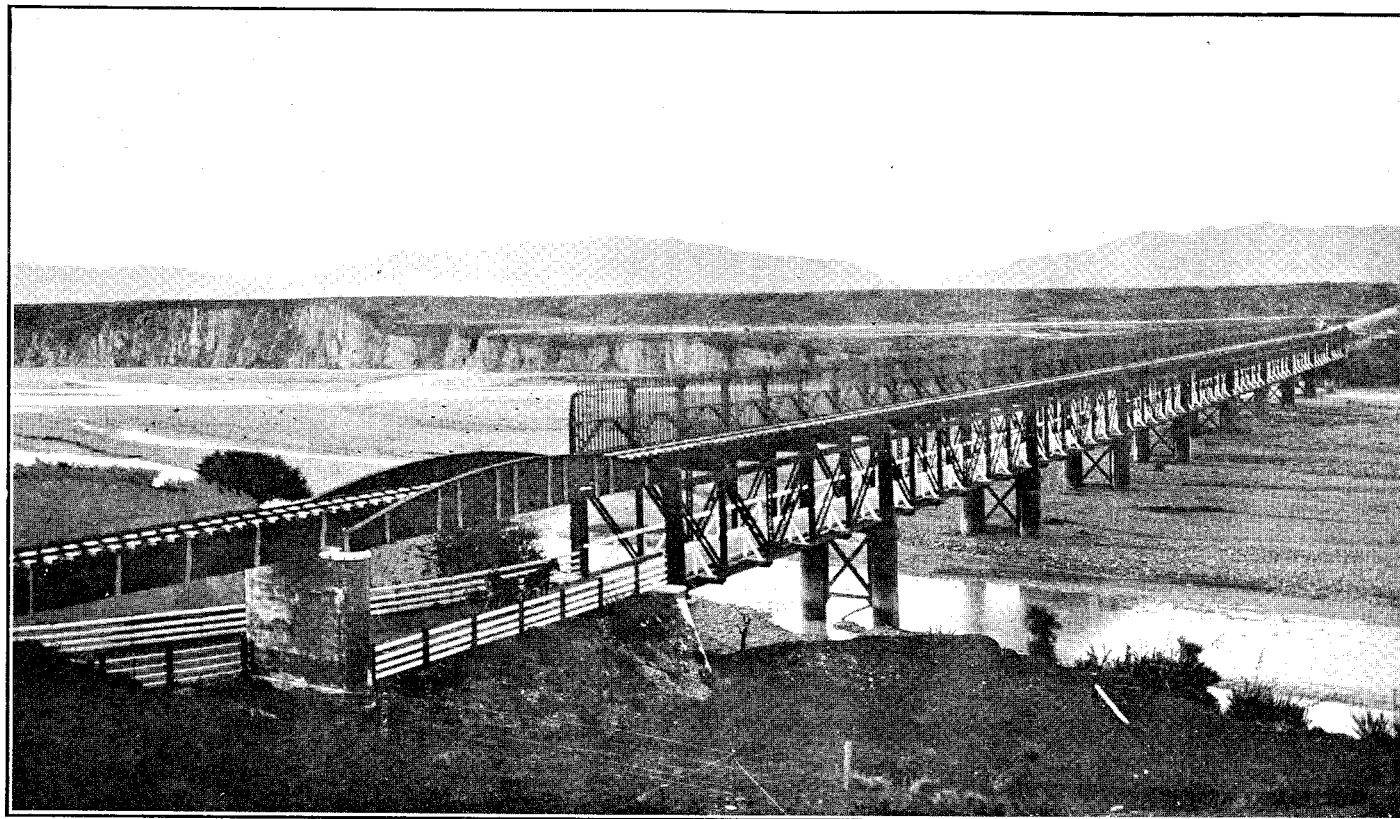
North Island Main Trunk Railway.—Makohine Viaduct.
One centre span of 176 ft., two side spans of 247 ft., and two end spans of 40 ft. Height from bed of creek to rail-level, 237 ft.



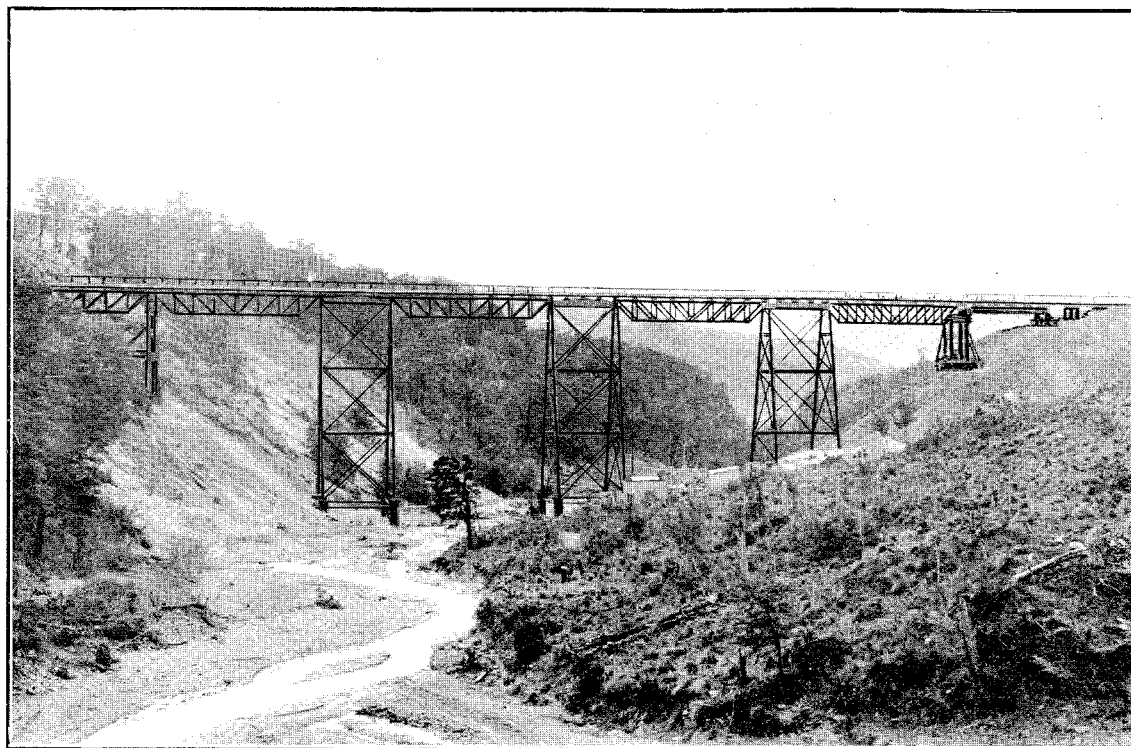
North Island Main Trunk Railway.—Mangaweka Viaduct (in course of Erection).
Two 33 ft. 9 in. and eight 89 ft. spans, and seven braced piers, each 33 ft. 9 in. Height from creek-bed to rail-level, 154 ft.



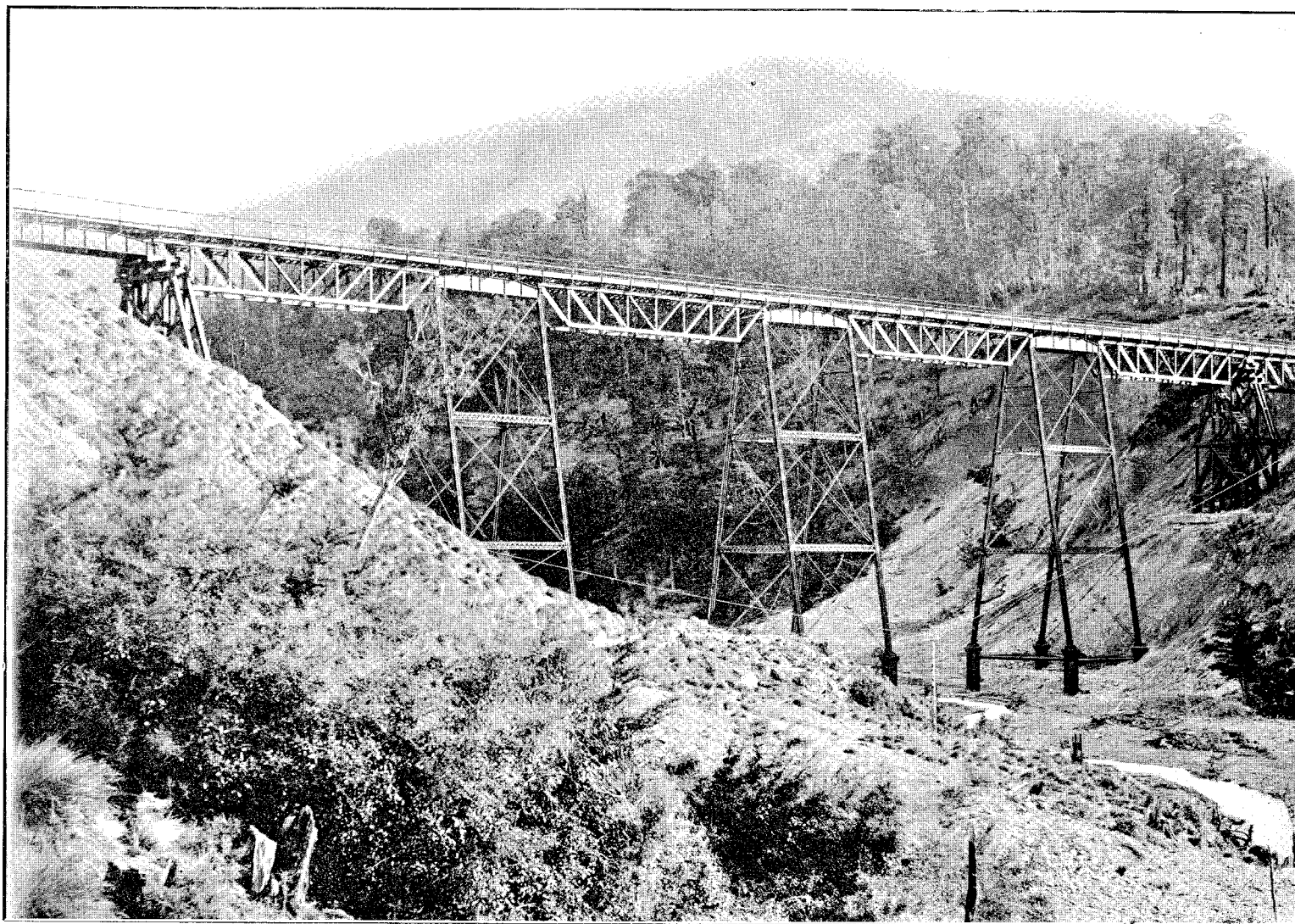
North Island Main Trunk Railway - Mangaweka Viaduct (in course of Erection).
View showing 80 ft. girders being placed in position.



Blenheim-Awatere Railway.—Combined Road and Railway Bridge over Awatere River
One 44 ft., two 60 ft., two 75 ft., and eight 90 ft. spans. Height from river-bed to rail-level, 45 ft.



Midland Railway, Mount Torlesse Section. — Paterson's Creek Viaduct.
One 52 ft. and five 80 ft. spans, and three braced piers, each 33 ft. 9 in. Height from creek-bed to rail-level, 120 ft.



Midland Railway, Mount Torlesse Section.—Paterson's Creek Viaduct (second view).
One 52 ft. and five 80 ft. spans, and three braced piers, each 33 ft. 9 in. Height from creek-bed to rail-level, 120 ft.

