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VICTORIA



COUNTRY ROADS BOARD.

TWENTY-SEVENTH ANNUAL REPORT

FOR YEAR ENDED 30TH JUNE, 1940.

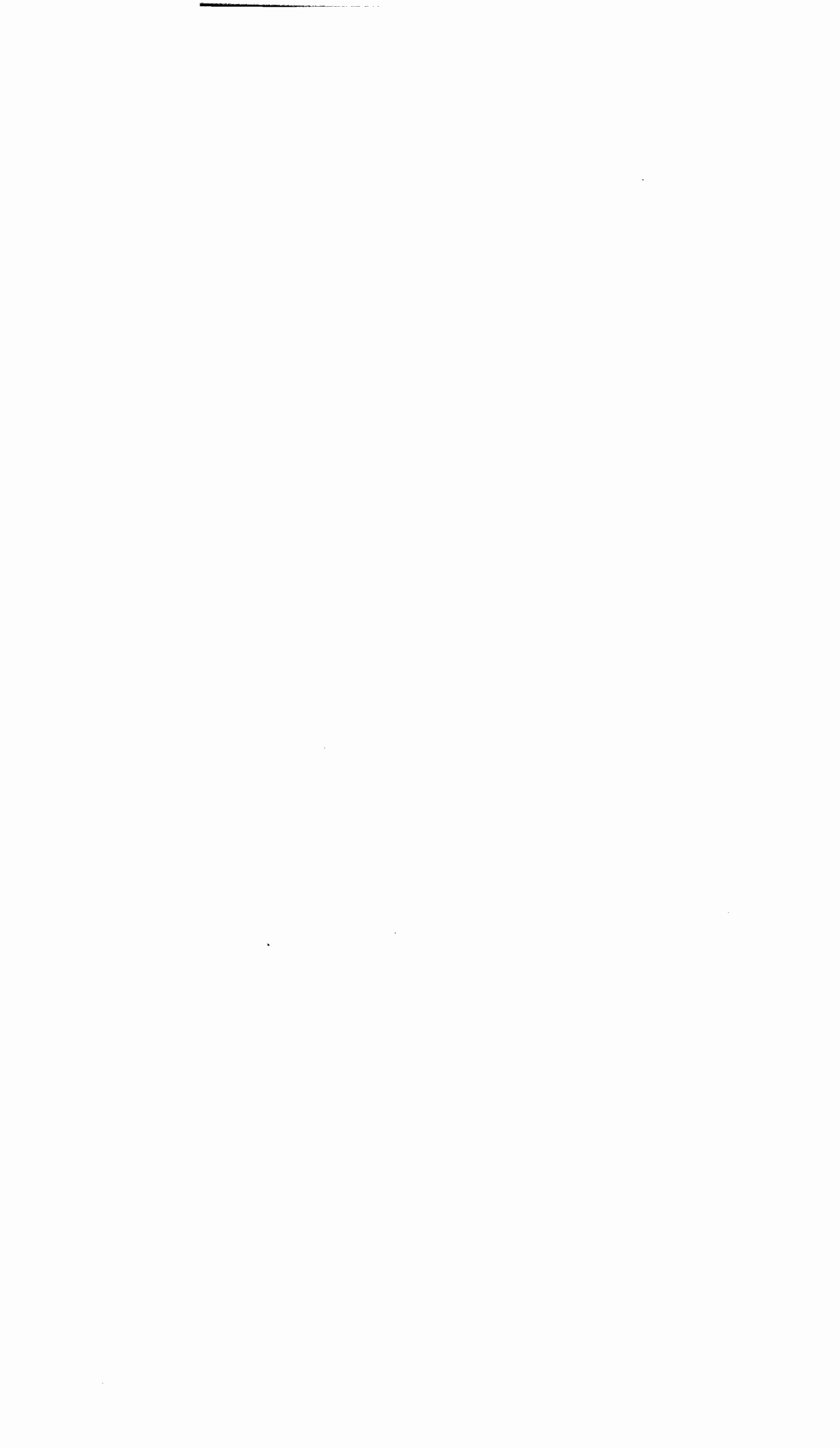
PRESENTED TO BOTH HOUSES OF PARLIAMENT PURSUANT TO ACT No. 3662.

[Cost of Report :—Preparation—Not given. Printing (850 copies), £205.]

By Authority:

H. E. DAW, GOVERNMENT PRINTER, MELBOURNE.

No. 14.—[2s. 6d.]—13922/40.



COUNTRY ROADS BOARD.

TWENTY-SEVENTH ANNUAL REPORT.

Exhibition Buildings,
Carlton, N.3,
18th November, 1940.

*The Honorable Sir George Goudie, K.B., M.L.C.,
Minister of Public Works,
Melbourne.*

SIR.

In accordance with the requirements of Section 96 of the Country Roads Act (No. 3662), the Board has the honour to submit to you, for presentation to Parliament, the report of its proceedings for the year ended 30th June, 1940, together with the report of the Chief Engineer on matters of technical interest. As a war economy the usual illustrations of works carried out have not been included in this Report.

FINANCE.

Owing to the outbreak of war in September, 1939, it was necessary to curtail State road works, consequently the total expenditure was £1,997,088, as compared with £2,098,784 during the previous twelve months.

In the early part of the year difficulties were encountered in obtaining supplies of bitumen to meet the demands of municipalities and the Board, resulting in the programme of sealing works being delayed.

Loan expenditure under Acts No. 4188, 4414, and 4498 on metropolitan roads was £2,235. Of the total authorization of £500,000 under the Acts referred to, a balance of £247,317 remained as at the 1st July, 1940.

The gross revenue derived from motor registration fees paid into the Country Roads Board Fund was £1,862,930, representing an increase of £62,355 over the amount received during the previous year. The cost of collection and refunds amounted to £115,906, so that the net revenue received was £1,747,024, a net increase of £56,062 on last year's figures.

Maintenance of State highways, main roads, tourists' roads and Murray River bridges involved an expenditure of £1,170,886 compared with £1,205,069 for the year ended 30th June, 1939, representing a decrease of £34,183.

An amount of £715,951 was received under the Federal-aid roads and works agreement, of which £184,896 was expended on main roads, £433,841 on works of a developmental character, £15,448 on construction of tourists' roads, and the balance of £124,264 on the maintenance of roads previously constructed from Federal-aid funds, restoring and rebuilding bridges and assisting municipalities in the maintenance of main and developmental roads constructed from loan and Federal funds, and unemployment relief funds provided by the Government.

For the maintenance and repair of public roads adjoining or approaching properties of the Commonwealth Government, within the State of Victoria, a sum of £11,130 was made available under the Federal-aid roads and works agreement, together with an amount of £4,366 brought forward from the previous year. £11,908 was expended during the year and £3,588 carried forward to the financial year 1940-41.

From unemployment relief funds provided by the State Government important works were completed and put in hand during the year. The amount provided by the Government was £50,600, which was supplemented by an amount of £18,566 from the Country Roads Board Fund and Federal-aid funds. The total amount expended during the twelve months was £72,176 and £5,670 was carried forward to the next financial year.

On works carried out by the Board on behalf of the Federal Government an expenditure of £74,396 was incurred to the 30th June. £93,758 was also expended for the same period from an unemployment relief grant provided by the Commonwealth Government, making a total expenditure of £168,154.

STATE HIGHWAYS.

The repairing, resurfacing and reconstruction of State highways was continued on the same lines as in previous years, but the planned programme of progressive improvement was considerably affected on account of the difficulty experienced in securing supplies of bitumen owing to the war. However, sealing of pavements was extended by a total mileage of 74·5 compared with 76 miles in 1938-39. Resealing was carried out over a total distance of 168·5 miles, as against 141 miles for the year ended 30th June, 1938, and 104·8 miles during the previous year.

During the year an expenditure of £34,125 was incurred in new construction on 51·8 miles of State highways and £472,426 in maintenance and reconstruction, and 61 per cent. of the total length is surfaced with bituminous materials.

Outstanding features of the work done during the year were an extensive deviation of the Princes Highway west over a distance of 6 miles at Laverton, and the straightening of the highway at a hazardous curve at Hovell's Creek, 6½ miles on the Melbourne side of Geelong. On the eastern section of the Princes Highway the erection of a new bridge over the Nicholson River between Bairnsdale and Lakes Entrance, which was commenced during the previous year, was almost completed.

An overhead railway bridge at Broadford on the Hume Highway was constructed by the Railways Department, the necessary approaches being constructed by the Board, by direct labour. Although the work was not completed till recently, traffic was allowed to use the new route during the year and so was freed from the dangers and delays of the old level crossing.

The Stawell West Road for a length of 2·4 miles connecting the Western Highway near the Sisters Rocks near Stawell was constructed throughout and a new single-span bridge was erected to replace the old structure. The new road forms a more direct route to Horsham and reduces the distance by 1·75 miles, as compared with the route through the town of Stawell. It has since been declared as part of the Western Highway.

Other important works included the construction of new roads on behalf of the Commonwealth Government as part of the Commonwealth defence scheme, the resealing and reconstruction of bitumen pavements, regrading to give better visibility, widening and straightening to provide increased safety, and the erection of bridges and culverts to replace worn-out structures.

By the employment of a trained organization and the operation of modern plant and machinery the work of reconstructing rough and worn-out sections of highways was effectively and economically carried out over a distance of 108 miles. To preserve these lightly constructed highways constant maintenance is a necessity, but with continuous wear reconditioning becomes necessary. General maintenance by constant patrolling was carried out over a distance of 2,637 miles at a cost of £130,297.

Details of the mileage, locality, &c., of highways reconstructed and maintained during the year, under the provisions of the *Country Roads Act 1928*, are set out in the statement in Appendix E.

It has been the custom of the Board to take a census of traffic on State highways and certain main roads, but owing to the exceptional circumstances existing, the census was not conducted during February last.

Resealing was carried out on pavements over lengths totalling 168·5 miles in order to preserve the original sealed surface.

The mileages treated by sealing and resealing on the several highways were as follows:—

Calder Highway between Essendon and the Henty Highway near Nunga	32·2	miles
Henty Highway between Portland and the Murray Valley Highway	23·0	,,
Hume Highway between Coburg and Albury	4·1	,,
Midland Highway between Geelong and Ballarat	8·0	,,
Midland Highway between Shepparton and Mansfield	17·1	,,
Murray Valley Highway between Corryong and Echuca	11·0	,,
Murray Valley Highway between Echuca and Swan Hill	39·0	,,
Omeo Highway between Bairnsdale and Tallangatta	5·3	,,
Princes Highway East between Oakleigh and the New South Wales border	32·2	,,
Princes Highway West between Footscray and the South Australian border	23·3	,,
South Gippsland Highway between Dandenong and Nyora	4·7	,,
South Gippsland Highway between Foster and Yarram	3·6	,

South Gippsland Highway between Sale and Orbost	4·8	miles
Western Highway between Footscray and the South Australian border	22·8	„
Northern Highway between Bendigo and Echuca	11·9	„
Total	<u>243·0</u>	„

Of the total length of 2,637 miles of State highways the total mileage surfaced with bitumen was 1,607 as at 30th June last.

Owing to the difficulty of securing adequate supplies of bitumen extensions of sealing will be considerably restricted during the present year.

The extension of the Murray Valley and Sturt Highways near Mildura and the gazettal of 1 mile of main road south-west of Geelong resulted in the length of State highways being increased from 2,621 miles to 2,637 miles.

Besides those already mentioned other works of improvement and restoration carried out on the several State highways under the supervision of the Board's District Engineers, apart from general maintenance, were as follow :—

BAIRNSDALE DISTRICT.

On the Princes Highway, between Rosedale and the New South Wales border, a distance of 209·36 miles, the most important works comprised the re-alignment at Bellbird over a length of 1·15 miles, which has eliminated a narrow and winding section of road.

Bitumen surfacing was carried out on the Omeo Highway over a length of 3·1 miles in the Omeo shire.

The Bonang Highway, from Orbost to the New South Wales border, extending over a length of 71·47 miles, was improved by widening, superelevating and top dressing.

Improvements effected to the South Gippsland Highway between Sale and Monkey Creek, consist of reconditioning and bitumen sealing over a length of 3·4 miles. An old timber bridge over the Longford Lagoon was replaced by a modern steel and timber bridge 180 feet in length.

BENALLA DISTRICT.

A section of the Hume Highway at South Wangaratta and North Wangaratta, totalling 1·49 miles, was reconstructed and sealed, and the bitumen widened to 21 feet between Warby Springs and South Wangaratta.

The work of checking erosion on the roadside was continued and a drag spread seal placed on a section 4 miles north of Seymour.

Two sharp curves between Wodonga and Bonegilla were reconstructed and sealed and a road-mix seal placed over a distance of 1·5 miles between Bonegilla and Ebden on the Murray Valley Highway. A section of 2·84 miles west of Rutherglen was resheeted with gravel, and 1·93 miles east of Cobram was reconstructed.

Sealing of ·58 mile through Yarrawonga was carried out and resealing of ·37 mile was completed in the township of Nathalia.

Under the supervision of the Shire of Towong the Murray Valley Highway was realigned and formation works completed from Flaggy Creek to the 58-mile post. On the Omeo Highway narrow rock side cuttings between Snowy Creek and Mitta Mitta were widened to provide passing places for vehicular traffic.

By placing 13·86 miles of road-mix seal and 4·1 miles of reseal between Benalla and Nalinga considerable improvement has resulted on that section of the Midland Highway.

BENDIGO DISTRICT.

On the Calder Highway, between Bendigo and Inglewood, south of Wedderburn and south of Charlton, work was carried out on scours to prevent extension and to restore, as far as possible, the surface to its natural condition. The interest displayed by many landowners indicated that they intend to carry out erosion control on their own properties.

A length of 8·50 miles of the Calder Highway north and south of Ouyen was sealed, thus extending the length of sealed pavement between Melbourne and Mildura to 254·5 miles of the total distance of 375·5 miles. In addition, a length of 19·51 miles of reseal was carried out on this highway between Harcourt and Bendigo and north of Wycheproof.

On the more northerly sections of the highway improvement in alignment was effected between Warne and Culgoa and north of Sea Lake. Regrading of sandhills was also completed to give increased visibility.

Considerable improvements were made to the Henty Highway between Lascelles and Nunga by scarifying and reshaping of all rough limestone lengths and forming of unconstructed sections. In the township of Lascelles the road was formed and surfaced. North of Ouyen a number of sandhills was regraded to give increased visibility.

Many short radius curves near Piangil, near Burra Swamp, and between Nyah and Swan Hill on the Murray Valley Highway were reconstructed to enable vehicles to travel at normal cruising speed without danger. Between Nowingi and Carwarp several sand hills were regraded to provide improved visibility and worn pavements with poor visibility over sandhills were sealed, the sealed pavements being widened to 22 feet to permit of the marking of double traffic lines.

East of Echuca 5·35 miles were resealed, and between Echuca and Kerang 21·16 miles were similarly treated.

On the Northern Highway the curve at Bagshot railway station at which accidents had occurred was improved. Between Avonmore and Elmore, south of Echuca, resealing was carried out and an excellent surface obtained.

CENTRAL DISTRICT.

On the Princes Highway west at Laverton the construction of a deviation 6 miles in length was commenced on behalf of the Department of the Interior. The work includes the erection of a bridge over the railway near Laverton station, which was put in hand by the Railways Department. Very satisfactory progress was made to the 30th June and the new road has since been opened to traffic.

East of Ballan on the Western Highway a section of road one mile in length was realigned and regraded, a dangerous curve being thereby eliminated.

On the South Gippsland Highway at Yallock Creek, in conjunction with the State Rivers and Water Supply Commission, improvements were carried out to the flood crossing and two reinforced concrete bridges with approaches were completed. Considerable improvement has been effected in alignment and the effects of flood waters have been localised.

STAWELL DISTRICT.

The Western Highway was considerably improved between Ballarat and Ararat by retreating with drag spread plant mixed material or by resealing over a length of 10·5 miles, and on a further length of 8·25 miles extensive pre-mixed patching improved the riding qualities of the pavement.

East of Horsham, where the natural soil is very slippery in winter, the pavement was widened in gravel to 20 feet over a length of 5·4 miles and resealing of 2·7 miles was completed near Deep Lead.

West of Dimboola and at Pimpinio two sections totalling 5·4 miles were resealed and 3·2 miles between Kaniva and the South Australian border were similarly treated.

On the Henty Highway 2·2 miles of bitumen pavement near Dooen were widened and resealed, the whole of the unmade section of 24·9 miles between Dooen North and Warracknabeal was formed by direct labour and under contract, and surfacing with crushed rock was commenced over 2·8 miles at Dooen North.

North of Warracknabeal the bitumen pavement was retreated over a length of 6 miles and at Brim, Galaquil, and Hopetoun a total of 4·9 miles of limestone pavement was widened and reconditioned. North of Hopetoun a new bitumen seal was applied over a distance of 1·5 miles and the limestone pavement was completed to Lascelles.

WARRNAMBOOL DISTRICT.

A section of the Princes Highway west through the Allansford township was widened and reconstructed in modified macadam. 1·57 miles of narrow pavement between Illowa and Tower Hill was widened and resurfaced, 5·76 miles of recently constructed pavement between Tyrendarra East and Tyrendarra were sealed and a commencement made with the elimination of the right-angled corner at Livingstone Hill. With the exception of this corner the highway is now continuously sealed from Melbourne to Heywood, a distance of 232·5 miles.

Beyond Heywood 5·98 miles of recently constructed gravel pavement were sealed and a further 4·6 miles widened and reconstructed, leaving only an unsealed pavement of 16·6 miles between Heywood and the South Australian border.

7·39 miles of the Henty Highway between Heywood and Branxholme were realigned, regraded where necessary, and reconstructed in buckshot gravel. At the end of the sealed road north of Cavendish 2·85 miles were reconstructed in buckshot gravel and the remaining 23·53 miles north to Cherrypool lightly resheeted with gravel.

The scarifying and light gravelling of the rough macadam section of the Henty Highway between Heywood and Branxholme and the gravelling north of Cavendish has resulted in considerable improvement.

The continuation of white traffic lines through Colac, Camperdown, Terang and Warrnambool to Dennington is much appreciated by the drivers of motor vehicles, particularly during foggy weather.

MAIN ROADS.

The work completed on main roads during the year ended 30th June, last consisted of reconstruction, reconditioning, sealing, resurfacing, widening and general maintenance and upkeep.

For the maintenance of 6,955 miles of declared main roads, municipal councils, which generally carry out the work, estimated an amount of £1,128,914 as necessary for the year. The amount available from the Country Roads Board Fund was, however, £711,499 only, and the Board, therefore, supplemented the allotment by an amount of £56,000 from Federal-aid road funds, making the total sum available for the purpose £767,499, or £361,415 short of estimated requirements.

Appendix "D" sets out details of maintenance works carried out on main roads during the year by municipal councils and the Board, those maintained by the Board being chiefly through roads carrying traffic not of local origin previously restored or reconstructed on behalf of the councils from either loan or Federal-aid road funds.

The expenditure incurred on the maintenance, improvement, and restoration of declared main roads amounted to £670,910 for the year from the Country Roads Board Fund and Federal-aid funds, compared with an expenditure of £769,162 from the same sources during the previous year, representing a decrease of £98,252. The decreased expenditure was primarily due to the difficulty in securing adequate supplies of bitumen and to the fact that some councils are reluctant to expend the full amount made available for maintenance, the amount they are prepared to expend depending on the amount of contribution they are required to make during the following year.

In addition, the sum of £215,911 was expended from Federal funds on roads which have not been declared as main roads under the provisions of the Country Roads Act.

It has been observed by the Board that main roads are being maintained by councils to a better standard than in former years, due, no doubt, to the discarding of obsolete methods, and the adoption of modern systems by the utilization of modern machinery such as power or pneumatic tyred graders drawn by a patrol motor truck.

It is gratifying to report that the majority of the councils are alive to the necessity of adequately maintaining main roads, and it is felt that the purchase by many municipal councils of power graders will effect considerable improvement in general maintenance, but several councils, in whose districts long lengths of roads have been constructed in recent years, have little or no plant for carrying out economical and satisfactory maintenance.

It is evident that resheeting and closer attention to maintenance is essential on many of the pavements of undeclared subsidiary roads, towards the construction of which material assistance has been given from Federal-aid funds.

More efficient maintenance is also needed on many miles of roads under municipal control, the foundation of which were not laid down for the traffic now using them, but with attention to maintenance by patching and the filling of potholes these roads can be cheaply restored and made suitable for some years.

A number of requests were made to the Board by municipal councils for the declaration of additional roads as main roads, but the funds at the disposal of the Board, after providing for commitments in respect of loan expenditure and liabilities for maintenance of State highways

and existing main roads, allowed only of the most urgent being declared. Recommendations were accordingly made to the Governor in Council that the following roads be declared and the necessary Orders in Council to give effect to the recommendations were passed:—

<i>Municipality.</i>		<i>Road.</i>		<i>Mileage.</i>
Alberton Shire	.. ..	Gelliondale	.. ..	7
Bright Shire	.. ..	Happy Valley	.. ..	15
Yackandandah Shire	.. ..	Running Creek	.. ..	6½
Cohuna Shire	.. ..	Pyramid-Leitchville	.. ..	3¾
Cohuna and Kerang Shires	.. ..	Kooroop	.. ..	15½
Glenelg Shire	.. ..	Merino-Coleraine	.. ..	8¼
" "	.. ..	Edenhope	.. ..	21¼
Glenlyon and Newstead and Mt. Alexander Shires	.. ..	Hepburn-Newstead	.. ..	18¼
Kerang Shire	.. ..	Murrabit	.. ..	16
Narracan Shire	.. ..	Moe-Willowgrove	.. ..	7
" "	.. ..	Thorpdale East	.. ..	½
Oakleigh City	.. ..	Warrigal	.. ..	1
Walpeup Shire	.. ..	Ouyen-Managatang	.. ..	16½
Wimmera and Dimboola Shires	.. ..	Warracknabeal-Dimboola	.. ..	8½
Woorayl Shire	.. ..	Nerrena	.. ..	18¼
Total				163¾

Owing to the declaration of sections of main roads as State highway extensions and the proclamation of a length of the Mansfield Road in the Shire of Mansfield as a tourists' road, involving a total length of 22·5 miles, the nett additional mileage of main roads is 140.

The total length of declared main roads throughout the State was 6,955 miles at the 30th June last.

Following the declaration of these new main roads provision will be made by the Board for their maintenance from year to year, and the Councils concerned will, in future, be required to contribute only one-third of the amount expended during the year following that in which the expenditure is incurred.

Under the direct supervision of the Board sealing works were carried out on main roads carrying traffic through and between the more important country towns. The mileage of sealing completed is as follows:—

<i>District.</i>	<i>Miles.</i>	
	<i>Sealing.</i>	<i>Resealing.</i>
Bairnsdale	1·0	..
Benalla	6·5	3·6
Bendigo	4·6	1·2
Central	9·5	6·8
Stawell	..	..
Warrnambool	..	..
Total		11·6

In addition, 124·5 miles of sealing, 93·8 miles of resealing, and 56·8 miles of road-mix sealing on main roads was done under the supervision of municipal Councils for which purpose the Board's plant was hired to the municipalities.

It has been observed that works carried out by municipal Councils with funds allotted by the Board on declared and undeclared main roads have effected a great improvement in the road system. In many instances long lengths of surfaced pavements have been linked up. It is now possible to reach every important township at any season of the year, and even smaller townships have some means of road communication, although in some cases it may be necessary to travel by a roundabout route.

Under the powers conferred on the Board under the Country Roads Act municipal contributions towards the cost of maintenance were reduced below one-third of the total cost in the case of declared main roads carrying traffic not of local origin, or timber traffic. The extent of the assistance given to Councils in this way amounted to £52,264 for the year.

Sixty-four new bridges were erected on main roads during the 12 months under review, 53 under the supervision of municipal councils and 11 under the direct supervision of the Board. Details of the more important structures are given under the heading of "Bridges" as well as in the appended report of the Chief Engineer. The total expenditure involved was approximately £103,790.

Major works of reconstruction and improvement carried out directly by the Board on main roads during the past year are described hereunder, those completed under municipal Councils being shown in Appendix D.

BENALLA DISTRICT.

Considerable improvement was made to the Upper Goulburn Valley Road by the construction and sealing of a deviation of McNallys Hill and resealing 5 mile in the township of Nagambie.

On the Murchison-Shepparton Road, in the Goulburn Shire, 3.45 miles of pavement between Murchison East and Muddy Creek were reconstructed and sealed. In the Euroa Shire 5.25 miles between Muddy Creek and Arcadia were resealed.

The rough section of .65 mile of the Beechworth Road in the Borough of Wangaratta was reconstructed with a view to sealing next summer.

The Sydney-road in the Shire of Violet Town was improved by resealing .8 mile, and in Wangaratta Borough the bridge over One Mile Creek near the sale yards was widened to provide improved facilities for traffic.

Continuous maintenance by a patrolman was carried out on the Yarrawonga road, and its general condition was improved by the reconstruction and gravelling of 1.23 miles between Wangaratta and Killawarra, and the sealing of floodways over a length of .28 mile.

On the Rutherglen Road in the Wangaratta Shire a reinforced concrete bridge was constructed over the Diddah Diddah Creek at Springhurst.

In the Seymour Shire the Seymour-Yea Road was improved by resealing 1.56 miles near Seymour.

A commencement was made with the construction of the Wangaratta-Thoona Road over a length of 1.9 mile by clearing and forming. This road will be of considerable benefit to settlers in the locality by providing them with a short route to the railway at Wangaratta.

The approach to the bridge over the Murray River at Tocumwal was widened and the alignment improved by the reconstruction of 1.68 mile of the embankment across the Murray River flats, and the approach to the punt at Barmah was improved by shaping and sanding 3.52 miles.

The stock route across the Yarrawonga weir was formed and gravelled for a distance of 1 mile. This will provide improved facilities for stock reaching the sale yard at Yarrawonga.

BENDIGO DISTRICT.

On the Goornong-Colbinabbin Road approaches were constructed to the bridge over the Campaspe River and the alignment and grade of the eastern approach was greatly improved.

The formation and pavement on the Shepparton-Tatura Road, known as the High Road, between Mooropna and Shepparton, were too narrow to carry the volume of traffic using the road, and it became necessary to widen the formation by 40 feet and to sheet with gravel to the full width. The formation was carried out by contract and sheeting done by direct labour under the Board's supervision.

Approaches were constructed to a new bridge erected on the Elphinstone-Harcourt Road at Elphinstone on a new alignment. With the completion of this work and the sealing of 4.04 miles the whole of the road has been placed in first-class condition.

On the Castlemaine-Maryborough Road scour prevention works were carried out in addition to general maintenance.

Sealing was completed over a distance of 6.42 miles on the Bendigo-Serpentine Road and the seal was extended northerly from Serpentine on the Loddon Valley Road for 1.25 mile. At Bears Lagoon 1 mile was sealed to reduce the dust nuisance in the township.

Resealing was also carried out on the Loddon Valley Road for 4.54 miles southerly from the Murray Valley Highway.

A total length of 6.62 miles was resealed on the Echuca-Cohuna Road and the Castlemaine-Maryborough Road.

CENTRAL DISTRICT.

With the sealing of 1·5 mile on the Castlemaine–Daylesford Road near Mount Franklin the surface sealing between those towns has been completed.

On the Main Warburton Road a section of 1·5 mile was realigned and widened with crushed rock preparatory to sealing.

On the Point Nepean Road two sections of protection wall were carried out by the Public Works Department on behalf of the Board with a view to arresting erosion on the foreshore at Frankston and Dromana.

DEVELOPMENTAL ROADS.

The construction, improvement and restoration of roads of a developmental character for the main purpose of serving settlements was continued last year. Many sections of roads on which works were commenced or extended during the previous years were linked up, and with the gradual extension of works on other roads, as far as funds available would permit, a noticeable improvement has been effected. Road access has been given to many areas of occupied land throughout the State, more particularly in those districts remote from the railways.

As many of these roads carry only light traffic a heavy expenditure is not justified, and for that reason only a small expenditure was considered necessary to make them passable at all seasons of the year. In other cases the roads have been placed in good condition by grading the surface and applying a coat of gravel or crushed rock of a thickness of 1½ to 2 inches.

A total sum of £510,438 was expended by the Board and municipalities on the construction, restoration and improvement of developmental roads over the twelve months, of which £367,414 was derived from Federal-aid funds, supplemented by £84,875 from municipal councils, and £42,234 from unemployment relief funds provided by the Government with contributions of £15,357 from Federal funds and £558 from municipal councils. This expenditure was distributed over 139 municipalities.

Following established practice the construction of developmental roads was carried out with suitable materials generally available in the district in which the works were situated, the result being the provision of adequate surfaces at a low cost.

The total amount for the year for which application was made by municipal Councils for the construction of developmental roads, comprising 1,263 separate projects, not including roads to isolated settler's properties, was £1,111,818. The amount available, however, was £482,482 only, so that only 43·4 per cent. of the amount applied for could be allocated. With municipal contributions totalling £106,986, the sum available was £589,468 of which £468,204 was expended to the 30th June, the unexpended balance representing commitments carried forward.

In order to assist Councils in the maintenance of developmental roads previously constructed from funds provided by the Board, the sum of £34,045 was allocated from Federal-aid funds and the expenditure to the 30th June was £27,820.

The Board feels compelled to again stress the necessity of maintaining roads constructed from funds provided by the Government and from Federal-aid sources, as many cases have come under notice where the Councils fail to give adequate and, in some cases, any attention to maintenance. Noticeable deterioration of the road occurs as a result of this neglect, which is both uneconomical and wasteful, as all these roads will subsequently need to be restored at a cost much greater than the total amount involved in regular maintenance.

It has been found, however, that in many instances Councils are unable to provide money from their own funds to carry out an efficient system of maintenance, and the Board is of opinion that, in order to ensure proper maintenance, additional assistance will have to be given from Federal-aid funds. As construction works must now be curtailed on account of the considerable decline in revenue from Federal funds on account of the rationing of petrol, it is felt that from the sum allotted a larger amount should be allocated for the extension of maintenance rather than on new construction works, apart from the roads to isolated settlers' properties, which are considered a very important part of the Board's programme. The Board now has this matter under consideration with a view to evolving a satisfactory scheme.

122 bridges were erected on developmental roads to replace old structures. The total cost for the year was £97,310. Reference to the larger projects is made under the heading of "Bridges."

Of the developmental roads completed or partially completed under the direct supervision of the Board the more important were in continuation of works commenced during previous years.

Construction work being carried out on behalf of the State Electricity Commission on the Upper Kiewa Valley Road to serve the Kiewa hydro-electric scheme was continued by clearing and forming an additional 9 miles and surfacing 12·8 miles with fine crushed rock.

Traffic on the Abbeyard Road in Oxley Shire was restored by the construction of seven bridges and 31 culverts which were destroyed by bush fires in January, 1939.

The clearing and forming of the Lower Gellibrand Road in the Shire of Otway was completed, enabling traffic during fine weather to traverse the road between the Ocean Road and Gellibrand.

In the Shire of Buln Buln the Noojee-Powelltown Road was completed by forming and gravelling a section between "The Bump," at Nayook West and Tub Creek, over a length of 6½ miles. The new road gives access to valuable timber supplies along the Latrobe River Valley and forms a very necessary connexion between Noojee and Powelltown.

The Lower Tarwin to Waratah Road was extended over a further length of 2¼ miles by forming and gravelling.

The construction and gravelling of the Cape Paterson-Eagle Nest Road was completed between Cape Paterson and Wreck Creek over a distance of 5 miles.

In the Heytesbury Shire the formation of the Naringal-South Ecklin Road was completed and 1·45 miles lightly gravelled; the Curdie's River-Digney's Bridge Road was completed by the forming and gravelling of 4·04 miles. In the Heytesbury Settlement a further 3·2 miles were formed, including 2·0 miles of extension of the Eastern Creek Road and 2·48 miles were gravelled.

Patrol maintenance was carried out over a length of 112 miles of settlement roads and 21 miles were strengthened by light resheeting with broken gravel.

With unemployment relief funds provided by the Government an additional length of drains totalling 2·78 miles were dug to drain flat swampy areas in the parish of Brucknell.

An additional 4·14 miles were cleared and formed on the Portland-Nelson Road, leaving only 8·66 miles to complete the formation. Money for this work was also provided by the Government from unemployment relief funds.

In the Shire of Maffra road works commenced during the previous year were continued on the Licola Road and consisted of widening and realigning. Besides making the road trafficable and safe at all seasons of the year, the road has already proved of economical benefit to the settlers as the Shire Engineer has reported that since the construction of the road cartage costs have been reduced from £3 per ton to 9s. per ton.

FEDERAL-AID FUNDS.

Under the Federal-aid roads and works agreement the sum of £715,951 was paid to the State during the year ended 30th June, 1940. An amount of £99,706 was brought forward from the previous year, so that the total amount available was £815,657.

An amount of £482,482 for the construction of roads of a developmental nature was allotted to municipal councils which carried out the works, and this was supplemented by them to the extent of £106,986. The total amount made available was, therefore, £589,468.

The total expenditure for the year was £433,841, which included an amount of £51,071 for constructing roads to isolated settlers, and £57,202 on the maintenance of roads previously constructed from Federal or loan funds. Added to the amount allotted for isolated settlers' roads was the sum of £5,635 contributed by municipal councils, or contributions by settlers in money or kind, valued at approximately £725, so that the total value of the work done during the twelve months on isolated settlers' roads was £57,431.

The number of projects was 1,897 of which 1,537 were on developmental roads, apart from roads to isolated settlers, and 360 on main roads. The work was distributed over various parts of the State in 154 municipalities.

Several main traffic roads carrying traffic from developmental and other roads were improved by constructing or reconditioning them with money provided from Federal funds, the total expenditure being £184,896. On the construction of tourists' roads £15,448 was expended.

In order to assist Councils in maintaining main and developmental roads previously constructed from loan funds or from money provided under the Federal-aid roads agreement an allotment of £65,100 was made, of which £28,782 was expended on main roads, £27,820 on developmental roads, and £600 on tourists' roads.

An amount of £90,410 was expended on 102 bridges, the more important of which are referred to under the heading of "Bridges."

£11,908 was expended on roads adjoining or abutting properties of the Commonwealth from the grant of 1/12th of the proceeds of the extra ½d. per gallon customs duty on petrol, which may be expended on the maintenance and repairing of such roads.

UNEMPLOYMENT RELIEF WORKS.

An amount of £50,600 was provided during the year for the relief of unemployment under Act No. 4097. Supplemented by the sum of £8,680 brought forward on the 30th June, 1939, and an amount of £18,566 from Federal aid funds and the Country Roads Board Fund for the purchase of materials, making surveys, &c., the total expended was £72,176.

Works carried out consisted mainly of clearing and forming on new projects and the completion of works commenced during the previous year. Such plant as was required was used on these works.

The new projects included the forming and surfacing of various sections of the Patchewollock-Speed-Nyarrin Road in the Shire of Karkaroc totalling 4·8 miles. The work done has effected considerable improvement to the east and west connexion between Patchewollock and the Calder Highway.

An additional length of 4·14 miles of the Portland-Nelson Road was cleared and formed from Johnston's Creek towards Kentbruck, leaving 8·66 miles to complete the forming of the road.

In the Heytesbury Shire a further 2·78 miles of drains were dug to drain the flat and swampy areas in the parish of Brucknell.

The work of erecting a new bridge between San Remo on the mainland and Newhaven on Phillip Island which was commenced last year proceeded satisfactorily during the year and it is anticipated that the bridge will be opened for traffic about the end of November next. Provision of £5,000 was made by the Government for this work from unemployment relief funds, and this amount was supplemented from Federal-aid funds. The amount expended during the financial year was £32,683.

DEFENCE WORKS.

Since the outbreak of war in September, 1939, a large number of road and other works was carried out by the Board on behalf of the Defence authorities, involving an expenditure of £74,396 to the 30th June. From an unemployment relief grant provided by the Commonwealth Government a total expenditure of £93,758 was also incurred during the same period, so that the aggregate expenditure was £168,154.

The works comprised the construction and sealing of roads leading to and inside training camps and aerodromes in various parts of the State, the levelling and preparation of areas of land, road widening, construction of footpaths, strengthening of bridges, deviations of certain highways, and the reconditioning of main roads to meet the requirements of Defence traffic.

A total length of 41·91 miles of roads was constructed during the year, 3·25 miles were widened, 12 miles of footpaths constructed and 9·5 miles of highways constructed and deviated.

In addition, several main roads under the Board's jurisdiction, which were of a strategic nature, were improved by reconditioning and sealing.

The following comprise the major road works carried out:—

On the Princes Highway West the road was realigned and a new bridge erected at Hovell's Creek and an extensive deviation was also constructed near Laverton involving a length of 6 miles. Included in the work was the erection by the Railways Department of a bridge over the railway at Laverton railway station. The new road will avoid the open railway crossing known as Hopper's Crossing on the original section of the highway part of which will be resumed by the Commonwealth Government.

The Stawell West road connecting the Western Highway at Sister Rocks with the same highway at Stawell West was constructed for a length of 2·4 miles.

On the Upper Goulburn main road a length of $1\frac{1}{4}$ miles was metalled and 5 miles of the Point Lonsdale–Ocean Grove Road was formed and gravelled.

On the Point Lonsdale–Ocean Grove Road, in the Shire of Bellarine, forming and surfacing was completed for a length of 5 miles and on the Beach Road, in the Shire of Mornington, the road was reconditioned. In the Shire of Orbost the Betka River Road was formed and surfaced for a length of 8.5 miles and the Prince's Highway East at Tonghi Hill was realigned and surfaced.

The Tallarook–Yea and Upper Goulburn Roads in the Shire of Seymour were widened and surfaced and the Dysart's Siding–Hildene Road was similarly treated in the same shire. A section of the Seymour–Yea Road was also widened and surfaced.

Portions of the Mount Martha Road in the Mornington Shire were constructed, reconditioned and sealed, thereby placing the road in suitable order for the heavy traffic now using it.

The Puckapunyal Road in the Shire of Seymour leading to the military camp was formed, gravelled and sealed for a distance of 6 miles and the roads inside the camp were also constructed and sealed.

In the Flinders Shire the Point Nepean Road leading to the fort was placed in good condition and sealed.

ROADS FOR ISOLATED SETTLERS.

An expenditure of £51,071 was incurred during last year in constructing roads to isolated farms as compared with £55,786 during the previous year. As the grant for each road was supplemented by a contribution either from the council or settlers, either in money, materials or work, the expenditure stated does not represent the full value of the work done, the actual value obtained being well in excess of 10 per cent. of the amount of the grant.

The money provided for the work was derived from Federal-aid funds. Local materials were used and local labour employed in carrying out the work. 803 roads were constructed or partially constructed as against 930 roads during the previous year.

The construction of these roads forms an important part of the road system, enabling settlers to gain access to constructed roads, railways and markets at any time of the year.

TOURISTS' ROADS.

The length of declared tourists' roads was extended during the year by the proclamation by the Governor in Council under Act No. 4405 of an additional 23 miles, the Mount Buller Road having been proclaimed for a length of $15\frac{1}{2}$ miles from the junction of the Howqua River Road to the Chalet on Mount Buller, and portions of the Marysville–Woods Point Road from Marysville to the Cumberland Creek, for a distance of $7\frac{3}{4}$ miles. The total length of tourists' roads proclaimed under Act No. 4405 is 373 miles.

The work done comprised reconstruction, improvement and maintenance, the total expenditure being £65,259.

Progressive improvements were made at a cost of £52,213 provided from the Country Roads Board Fund. £13,046 was expended from Federal-aid funds on construction over a length of 36.82 miles. Patrol maintenance was carried out over the full length of the declared roads.

The Alpine Road in the Shire of Bright was improved between Harrietville and Mount St. Bernard by widening 3.10 miles, which completes the widening of a section of 13 miles.

The Mount Buffalo Road in the Shire of Bright was continuously maintained by a truck patrol, the Mount Buller Road in the Mansfield Shire was maintained by a patrolman, and improvements were effected by gravelling 3.75 miles.

The Bright–Tawonga Road, in the Shire of Bright, was considerably improved by widening curves and narrow sections for a total length of 1.33 miles.

A section of the Ocean Road between Lorne and the Cumberland River was resurfaced and sealed with bitumen to provide adequately for the large amount of traffic using this road.

On the Otway Lighthouse Road, a section of $1\frac{1}{4}$ miles in length was resheeted with crushed rock in order to strengthen the road which was showing signs of weakness.

Continuous patrol and maintenance work was carried out on the roads in the Grampians and 2.2 miles of the Grampians Road and 3.6 miles of the Mount Victory Road were resheeted with gravel. The drainage of the Silverband Road was improved by the installation of culverts and the safety of the Wartook Road was improved by easing four sharp curves.

On the Grampians Road a further 2·2 miles was formed in the Wannan Valley, and clearing and forming of a 2-mile deviation near Horsham was commenced.

2·09 miles of the Dutton Way was formed and gravelled. This road forms an attractive approach to Portland and gives access to a fine beach and camping area.

OUTER METROPOLITAN ROADS.

The work carried out during last year consisted mainly of completing various works which had been in progress for some years. £2,235 was expended from loan funds on construction works, and £10,372 from the Country Roads Board Fund on maintenance. In addition, £2,090 was expended from Federal funds on widening and improvement works.

On Warrigal Road, an important north-south connexion, the section from Gardiner's Creek bridge to the Holmesglen railway station, was completed by the construction of a modified macadam pavement, primed and sealed. From there to the Prince's Highway, where funds did not permit the road to be reconstructed, greatly improved riding qualities were obtained by laying a drag spread bituminous surface over the old road. Further south, through the city of Oakleigh, a similar type of work improved the surface between the Prince's Highway and North Road, except on the short section between Atkinson Street and Oakleigh railway station. Here there was excessive cross fall, so the channels were lifted considerably and the pavement reconstructed at the edges so as to provide a more reasonable shape. It is hoped to surface this in the near future, and when that has been done the whole of Warrigal Road from Canterbury Road to Point Nepean Road, a distance of 10·86 miles, will be in reasonably good condition.

In Preston City, construction and reconstruction work which has been going on in Epping Road for some years is now virtually complete. The section between Dundas Street and Junction Street, a distance of ½ mile, was completed by constructing a drag spread hot mix bituminous surface on a rolled concrete base constructed in 1938. Further north, the section between Southernhay Street and the Reservoir railway crossing, which was commenced last financial year, was completed, the pavement being widened and new concrete kerbs and channels laid at such a level that the excessive cross fall could be taken out of the old pavement. This road is now in good order and is complete, except for drainage work required on the west side between Wild Street and Southernhay Street.

On Beach Road, Sandringham City, a drag spread bituminous surface was laid between Quiet Corner and Cromer Road, a length of 1·92 miles. In addition, the pavement was widened over several short lengths through Hampton and Sandringham in order to provide better facilities for holiday traffic.

BRIDGES.

Prior to the commencement of the year, 2,378 bridge projects had been carried out by the Board and municipal councils. During last financial year 269 bridges were erected or in course of erection—55 under the direct supervision of the Board and 214 by municipal councils. The total number of bridges completed and under construction since the Board's inception was therefore 2,647. Close co-operation was maintained between the municipal engineers and the Board's staff so that the accumulated experience of the municipalities and the Board was available for each project.

The widening of the bridge over the Broken River on the Hume Highway at Benalla, which was commenced during the previous year, was completed in May last under the supervision of the Shire Engineer. The structure was widened to 30 feet and provision was made for a footpath 6 feet wide at each side. The cost of the work was £7,782.

A new bridge over the Nicholson River and approaches on the Princes Highway between Bairnsdale and Lakes Entrance was completed during the year. The old structure, which was erected many years ago, became too weak and narrow to carry present-day traffic. The new structure consists of four spans each of 70 feet, with composite timber and concrete piles, whilst the superstructure is of composite "T" beam construction with welded steel girders for stems, and reinforced concrete decking. The total cost of the work was £18,735.

Full details of the construction are given in the appended report of the Chief Engineer.

The bridge over the channel between Newhaven, on Phillip Island, and the mainland at San Remo, which was commenced in February, 1939, has recently been completed. The structure spans the channel for a width of 1,800 feet, and consists of a suspension span of 550 feet over the deep water, with 24 relieving spans over the shallow waters.

Funds required for the work were provided by the Government from an unemployment relief grant of £5,000, and the balance derived from Federal-aid road funds.

Particulars of construction are set out in the report of the Chief Engineer.

The bridge over the estuary of the Barwon River at Barwon Heads, which was erected in 1927, required redecking and this work was put in hand during last year. The original timber decking was found to have decayed at its junction with the longitudinal running planks, and it was, therefore, necessary to reconstruct the decking, which work will, it is anticipated, be completed within the next few months. The expenditure incurred amounted to approximately £1,750.

On the Princes Highway at Euememmering Creek, about one mile east of Dandenong, the old timber bridge, which had been repaired from time to time, became dangerous through scouring of the creek.

The new structure was erected in its place at a cost of £1,355 and has a length of 80 feet with a roadway width of 24 feet and a footway of 4 feet on the upstream side.

On the South Gippsland Highway in the Shire of Alberton a new reinforced concrete bridge was commenced over the Tarra River, and a flat slab bridge was completed over the floodway nearby. When this work is completed this section of the highway should be free from flooding.

A new bridge over the Loddon River at Guildford, on the Castlemaine-Daylesford Road, was commenced last year. The bridge consists of six spans having a total length of 258 feet, with a width of 20 feet and a 4-ft. footway on one side. The estimated cost of the work is £1,650.

On the Hume Highway at Seymour it became necessary, owing to frequent flooding, to make better provision for traffic and arrangements were made for the erection of a bridge and a long flood channel. The structure is 80 feet in length and 30 feet wide between kerbs.

Details are given in the appended report of the Chief Engineer.

Further extensions to the bridge over the waterway on the South Gippsland Highway immediately south of Sale were made owing to the unprecedented flooding in the early part of the present year. Corrugated steel arches were used for the purpose, which is the first occasion on which such treatment has been used.

On the Brown Coal Mine Road a bridge was erected over the Latrobe River on behalf of the State Electricity Commission. This bridge will enable all traffic to be by-passed clear of the works. The cost was £2,750.

In Woorayl Shire a new bridge was completed over the Tarwin River on the Main South Gippsland Road. The structure consists of eleven spans of a total length of 440 feet and a width of 22 feet. Owing to flooding on several occasions the road became impassable and the new bridge was erected to obviate the blocking of traffic. The cost of the work was £3,750. Technical details of the work are set out in the Chief Engineer's Report.

Consequent on the deviation of the Princes Highway West at Laverton, two bridges and two culverts were constructed on the new route. The deviation, together with the construction of the bridges and culverts, was carried out by the Board at the request of the defence authorities.

SAFETY OF THE ROAD.

In previous reports the Board has referred to the measures taken for making the roads safer for traffic. To this end a considerable amount of work was carried out during last year, by straightening dangerous bends, widening pavements, extending traffic lanes by placing white lines on the pavement, flattening curves, and by close attention to edge maintenance. The erection of special danger and curve signs along the roadsides was also extended at points where considered necessary on highways and main roads.

With the increase in the number of men employed on maintenance works, the safety of road employees has now become a problem which cannot be overlooked, and with a view to reducing accidents amongst its own workers the Board has issued instructions to be observed by overseers and workmen under all circumstances.

In the marking of traffic lines on State highways and main roads the Board has adopted, as a general policy, the following decisions in the case of roads carrying a heavy volume of traffic :—

1. Where the road pavement is not less than 20 feet nor more than 30 feet in width, two traffic lanes to be provided by a white line down the centre of the pavement.
2. Where the road pavement is not less than 30 feet and not more than 40 feet in width, three traffic lanes to be provided by two white lines on the pavement.
3. Where the road pavement is 40 feet or more in width, four traffic lanes to be provided by three white lines on the pavement.

In the case of the three-lane roadway, the centre lane is used for overtaking a vehicle proceeding in the same direction.

A large number of standard warning and direction signs were erected where considered necessary on main roads and State highways, but on roads under the jurisdiction of municipal councils, signs not in accordance with the standard adopted by all States of the Commonwealth have been erected, with the result that some confusion is likely to arise. When different types of signs are placed on roads the signs cannot be classed as efficient, as the road user is apt to be left in doubt as to the danger ahead or the route to be followed.

It has been observed by the Board that direction signs erected on several roads under municipal control have advertisements attached to them, which not only constitute a misuse of the public highway, but detracts considerably from the effectiveness of the signs.

The Board's records show that during the past year 474 accidents occurred on State highways, of which 79 were fatal. Thirty-one accidents were due to collisions with wandering stock, resulting in one person being killed and six injured.

Information obtained from the Government Statist indicates that during the year ended 30th June, 1940, there were 4,670 accidents on roads outside the city and suburban radius, resulting in injury to 2,612 persons; 222 persons sustained fatal injuries as against 194 last year. Comparing these figures with the corresponding period of last year, it is observed that there was an increase of 847 accidents, or 22 per cent., and the number of fatalities increased by 28, equivalent to 14 per cent.

The following statement prepared by the Government Statist of traffic accidents which occurred on public thoroughfares throughout the State during the twelve months ended 30th June last is of interest :—

Place of Occurrence.	Number of Accidents in which Persons were Killed or Injured.	Number of Persons Killed.	Number of Persons Injured.	Number of Accidents in which no Person was Killed or Injured.	Total Number of Accidents.
City of Melbourne	1,571	71	1,669	3,895	5,466
Metropolitan Area (excluding City of Melbourne)	4,042	222	4,442	5,942	9,984
Total Metropolitan Area	5,613	293	6,111	9,837	15,450
Remainder of State	1,948	222	2,612	2,722	4,670
Grand Total	7,561	515	8,723	12,559	20,120

Under the powers conferred under Act No. 4332, the Board is empowered to impound cattle grazing or found wandering on State highways without the consent in writing of the Board and without some person being in attendance. The number of offences reported to the Board by its ranger was 145, and 702 cattle, horses, and sheep were impounded during the year; 42 persons were cautioned by letter and a large number of offenders was personally warned by the ranger. 103 persons who ignored the caution were prosecuted. The action taken to rid the highways of unattended stock has had the effect of greatly diminishing danger to traffic, but the ranger is required to exercise constant watch to prevent stock owners grazing their cattle on the highways, particularly during the night.

The co-operation of municipal councils and their officers has been of great assistance to the Board's officer in carrying out his work.

TREE PLANTING OF ROADSIDES.

Planting of trees on roadsides was considerably curtailed last year on account of the outbreak of war. Only such trees as had been secured, and for which the necessary guards had been obtained or fencing erected, were planted.

The amount expended in erecting tree guards, fencing, &c., on State highways and main roads was £10,095, whilst an expenditure of £2,103 was incurred in maintaining trees already planted on State highways, such work being carried out under the supervision of the Board's patrolmen. A total amount of £9,199 was expended from the Country Roads Board Fund and £896 from unemployment relief funds.

The following statement sets out the trees planted on State highways and main roads during 1940 :—

	Number of Trees Planted.	Approximate Mileage Planted.
<i>State Highways—</i>		
Princes Highway West	307	5·0
Princes Highway East	452	4·4
Western Highway	484	2·8
Calder Highway	678	7·1
Hume Highway	186	6·3
Omeo Highway	293	0·2
Murray Valley Highway	1,276	10·8
South Gippsland Highway	7	0·1
Midland Highway	719	9·2
Northern Highway	368	4·5
Henty Highway	14	·5
<i>Main Roads</i>	3,780	45·0
Total	8,564	95·9

The total number of trees planted shows a diminution on last year's total of 10,082.

From the proceeds derived from the sale of dead timber on main roads and State highways additional trees were planted, and trees which had been removed on account of their interference with telephone or electric transmission lines were replaced. The amount collected from the sale of timber was £56.

RESEARCH WORK.

Owing to the absence of some members of the staff on military duties and other wartime service, it has been necessary to limit the amount of research work undertaken. On the other hand, changes in the sources of supply of bituminous materials have made it necessary to study the properties of the new materials to determine what changes in field practice are required to enable the best use to be made of them. This has involved more extensive investigation of the properties of the bituminous materials and mixtures than is usually undertaken.

The Board's laboratory facilities for the examination of soils and gravels have been made available to certain Commonwealth Departments, and samples both from Victoria and from other States have been tested for these Departments.

The Board has experienced in many instances serious deterioration of pavement surfaces owing to slow settlement of the underlying fillings. As this results in costly pavement repair, particular attention is now being paid to the compaction of soils in earthworks being carried out by the Board, and an apparatus has been designed which facilitates the determination of the compacted density of soils, and enables a check to be made of the efficiency of the methods of compaction being employed.

Details of this and other new testing apparatus obtained during the year are set out in the Chief Engineer's report.

The following summary gives the number of laboratory tests carried out during the year :—

	Number of Samples.	Number of Tests.
Soil, gravel, concrete aggregates	1,042	1,600 (approx.)
Bituminous and tarry materials	265	930
Lubricating oil	12	26
Traffic marking lacquer	63	151
Miscellaneous	7	35
Totals	1,389	2,742

CONFERENCE OF ENGINEERS.

In August last a conference of the Board's District Engineers was held at the Head Office in Melbourne, when matters appertaining to the construction and maintenance of roads and bridges, testing of materials, scouring and soil erosion on roads, supply of stores, utilization of plant and other subjects relating to the Board's work were discussed. After the conference an opportunity was taken to inspect works in progress in and around the central district.

A conference of the Board's Engineers and municipal Engineers supervising works carried out under the provisions of the Country Roads Act has been convened by the Board during the present month with a view to discussing road problems of mutual interest to the Board and Municipal Councils.

OFFENCES UNDER ACTS AFFECTING THE BOARD.

A number of offenders was proceeded against under the provisions of the Motor Car Act for exceeding weight and speed limits for motor cars carrying goods for hire or in the course of trade on State highways and main roads. Fines were inflicted in 356 cases for travelling at speeds in excess of the limits allowed and in 213 cases for carrying excessive weights.

Action was taken against 243 drivers of motor vehicles for carrying loads in excess of the carrying capacity of the vehicle as shown by the certificate of registration, and fines and costs were imposed. Four drivers were convicted for carrying loads on their vehicles in excess of the legal width.

The total number of prosecutions during the year was 969, the total fines imposed amounted to £2,618 10s. and costs to £225 16s. 9d.

Particulars of the cases dealt with are given in the following table:—

LIST OF OFFENCES REPORTED AND PARTICULARS OF ACTION TAKEN.

Nature of Offence.	Warned.	Convicted and Fined.	Fines Imposed.			Costs.		
			£	s.	d.	£	s.	d.
Motor Car Acts—								
Speeding (freight)	2	355	1,190	10	0	83	13	8
Speeding (passenger) .. .. .	..	1	5	0	0	0	2	6
Exceeding 6 tons	18	37	118	0	0	17	2	9
Exceeding 8 tons	14	31	75	0	0	3	17	6
Exceeding 13 tons	7	145	405	10	0	21	13	4
Exceeding carrying capacity	6	243	584	15	0	48	14	6
Exceeding 8 feet in width	2	4	9	0	0	0	17	6
Exceeding 3 tons on one axle of trailer .. .. .	..	3	4	10	0	0	7	6
Failing to comply with conditions of special permit	3	2	6	0	0	0	5	0
Using trailer with metal tyres .. .. .	..	1	5	0	0	0	2	6
Exceeding length limit	1	..	..	..	..	..	..	..
Tare not marked on vehicle .. .. .	..	2	1	0	0	0	2	6
Total	53	824	2,404	5	0	176	19	3
Country Roads Act—								
Destroying or removing timber	2	1	2	0	0	0	14	6
Using trailer on closed road without permit .. .. .	..	1	5	0	0	0	2	6
Removing soil from road .. .. .	..	1	0	10	0	2	3	6
Carting on closed road without permit .. .. .	..	..	..	..	..	..	..	..
Exceeding 4½-ton limit	4	12	30	0	0	3	1	6
Total	6	15	37	10	0	6	2	0
Damage to Roads, By-law No. 3—								
Traction engines with bars or projections on wheels used without permit .. .. .	..	3	6	0	0	0	10	0
Traffic Line Regulations 1938 .. .. .	..	18	35	0	0	2	12	6
Country Roads (Impounding of Cattle Act)	42	103	124	5	0	37	19	0
Justices Act—								
Aiding and abetting .. .. .	..	6	11	10	0	1	13	0
Grand Total	101	969	2,618	10	0	225	15	0

GAS PRODUCER VEHICLES.

In view of the growing interest in producer gas for motor vehicles due to the necessity of conserving petrol and fuel oil supplies, the Board at the request of the State Government fitted a number of its motor vehicles with producer gas units.

The question of the safety of the vehicles fitted with gas producers and the effect on the stability of the vehicle brought about by the redistribution of the load has also been investigated by the Board's Engineers, but so far no very definite statement can be made. In general, however, it is considered that the vehicle will not be greatly affected.

In August, 1939, the Board fitted a gas producer to one of its motor trucks used in the vicinity of Melbourne. The unit is of the cross draught type mounted behind the cab on a tray body truck. Early trials showed the importance of using only a good quality of charcoal, and of having effective gas cleaners. On long runs the unit proved fairly satisfactory. About 50 per cent. loss of power is inevitable with producer gas, and the more frequent use of lower gears is necessary than with petrol fuel. Where light or moderate duty is called for the gas producer unit is quite satisfactory, but if very heavy loads must be hauled an additional source of power is required, which may be supplied by a supplementary petrol intake.

In December, 1939, a second producer gas unit was obtained and fitted to a Fordson roller. This also is of the cross draught type. As the roller operates well within the maximum output of the Fordson engine this application of the gas producer is quite a suitable one, and the roller operated satisfactorily during the year. An additional Fordson roller recently purchased was therefore similarly equipped.

At a display of this type of equipment last winter it was noted that in order to add the necessary gas producer, cleaners, cooler, &c., to a motor truck chassis some rather clumsy vehicles resulted. In one type the producer is mounted on the near side step against the cabin door, which is permanently closed. This obstructs to some extent the driver's view towards the rear on the near side, and also since the projecting portion extended more than 4 feet from the centre line of the vehicle, some element of danger in negotiating the vehicle in traffic might be expected. In another type the producer and its appurtenances are mounted in front of the radiator, resulting in some reduction of the normal visibility ahead of the driver. The Board has drawn the attention of the proper authorities to these factors.

In the third type the producer is mounted behind the cabin where it is out of the way as far as the driver's vision and other traffic are concerned, but of course some interference with working space results. A separate mounting as a semi-trailer unit offers some advantages, e.g., there is little interference with the operation of the vehicle unless tipping is one of its normal functions. A cheap unit of this type was purchased by the Board for use with a utility truck operating from the workshop on field repair of plant units. This producer is of the cross draught type. Two typical journeys from Melbourne with this unit attached to a utility truck gave the following results :—

Trip	..	..	..	Melbourne to Kilmore and return	Melbourne to Ballarat and return
Distance	..	..	..	80 miles	.. 147 miles
Charcoal used	..	..	..	90 lb.	.. 140 lb.
Water used	..	..	..	Not measured	.. 28 pints
Average speed including stops for refuelling, &c.				21·3 m.p.h.	.. 24·8 m.p.h.
Average speed on State high- ways				28 m.p.h.	.. 25 m.p.h.
Cruising speed on the level	..			36 m.p.h.	.. 32-34 m.p.h.
Maximum speed on the level	..			42 m.p.h.	.. 38 m.p.h.
Lowest gear used	..			Second	.. Second
Cost of charcoal for trip at £8 per ton				6s. 6d.	.. 10s.

Unfortunately a large amount of trouble has been caused through distortion of the air inlet tuyere on this producer, but it is expected when a refractory tuyere which is being obtained is fitted, that the unit will operate satisfactorily.

The Board is also obtaining for use with a motor car another trailer unit of a type recommended by the car manufacturers. This unit is of the vertical draught type with a grate at the bottom, and will give a comparison with the previous units, which are all of the cross draught type.

STORES AND WORKSHOP.

The amount of work carried out at the Board's central storeyard during the past year was slightly greater than that of the previous year.

Increased efficiency and economy have been secured by the installation of a high-speed drilling machine, capable of dealing with small jobs, such as carburettor parts, and of a large valve grinding machine on which nearly all valves used by the Board can be ground.

General maintenance included painting of the stores building and patching of the sealed pavement in the No. 1 store yard. In addition, shelves for the storage of machine parts, scrap, &c., were erected and part of the building previously used by the stores branch was converted into a spray booth for use when spray painting road signs, cars, &c.

The following new plant was purchased during the year :—

- 7 tender trucks
- 2 roller transports
- 2 road graders
- 3 road cabins
- 1 portable roller
- 3 600-gallon heaters.

In addition, one 600-gallon sprayer was constructed in the workshops.

Gas producer units were fitted to two of the Board's motor trucks, and are now in regular use, giving satisfactory service.

A number of plant drivers and storeyard employees enlisted for military service, and some difficulty is being experienced in finding suitable men to replace them. The war has also created difficulties in obtaining spare parts, steel plate and rolled steel sections.

AMENDED LEGISLATION.

During the year the following Acts affecting the Board were passed by Parliament :—

COUNTRY ROADS BOARD FUND ACT 1939 (No. 4649).

Provision is made in this Act for :—

1. Fees for licences to drive motor cars paid under the Motor Car Act during the financial year 1939–40 not to be paid into the Country Roads Board Fund.

Similar provision was made in previous enactments in respect of the years 1933–34, 1934–35, 1935–36, 1936–37, 1937–38, and 1938–39.

2. Suspension of annual payment of £50,000 from Consolidated Revenue into the Country Roads Board Fund for the year 1939–40.

In the original Act, £10,000 of the above amount was to be used for the maintenance of main roads and State highways, and £40,000 for distribution amongst certain municipalities towards the construction, renewal, and maintenance, &c. of streets or roads.

MOTOR CAR (FEES) ACT (No. 4642).

This Act provides that the registration fee payable in the case of a motor car propelled by an internal combustion engine ordinarily using fuel oil the fee shall be double the fee otherwise payable under the Motor Car Act.

The provision was made with a view to vehicles fitted with engines of the above type being more equitably taxed in comparison with the motor vehicle using petrol which is subject to heavy customs duty.

SUPPLIES OF BITUMEN.

During the five-year period 1934–35 to 1938–39 the average mileage of bituminous surface treatment work carried out by the Board through the State was 769 miles per annum, but during the three-year period ended 30th June, 1939 the average annual mileage increased to 840.

Owing to the difficulty in obtaining bitumen during the last financial year, on account of the war, the mileage treated was reduced to 753, a reduction of 87 miles on the average for the three previous years.

Between June and October, 1939, five contracts were let by the Board for the supply and delivery of bitumen for the financial year, the amount contracted for being 8,000 tons, sufficient to carry out approximately 800 miles of work. The actual quantity delivered was 6,425 tons, or 1,450 tons short of requirements.

STATEMENT OF ACCOUNTS.

Statement of accounts for the year ended 30th June, 1940, of the Country Roads Board Fund and balance as at that date appear in Appendix "A."

The statement shows that the gross revenue of the Fund amounted to £1,862,930, including fines totalling £20,829 imposed under the Motor Car Act, whilst the cost of collection and refunds totalled £115,906, made up as follows:—

	£	£
Motor Registration Branch—		
Salaries and wages	36,875	
Number plates, &c.	4,733	
Rent of offices	1,246	
Office equipment	173	
Miscellaneous	1,639	
	<hr/>	44,666
Police Patrol—		
Wages and travelling allowances	26,511	
Motor expenses and purchase of motor cars and cycles	9,594	
	<hr/>	36,105
Postage, printing, and stationery		12,322
Registration fees and fines refunded		22,813
		<hr/>
Total cost of collection and refunds		115,906
		<hr/>
The net revenue under the Motor Car Act was, therefore		1,747,024
Add amount contributed by municipalities towards maintenance and sundry receipts from other sources		190,567
		<hr/>
Leaving the total amount available for meeting interest and sinking fund charges and maintenance of State highways, main roads and tourists' roads of		1,937,591

The following statement sets out the payments made from the Country Roads Board Fund during the financial year ended 30th June, 1940, to meet interest and sinking fund charges, including an amount of £234,790 by the municipalities who were relieved in respect of loan expenditure of £11,219,625 on declared main and developmental roads:—

	£	s. d.	£	s. d.
Main Roads—				
Interest	193,050	18 9		
Sinking Fund contribution	10,273	18 2		
Exchange	17,604	12 5		
Loan Conversion	796	15 6		
Recoup to National Debt Sinking Fund	433	18 9		
	<hr/>		222,160	3 7
Developmental Roads—				
Interest	282,050	7 9		
Sinking Fund contribution	14,454	15 11		
Exchange	23,484	9 5		
Loan Conversion	1,069	1 1		
Recoup to National Debt Sinking Fund	582	4 5		
	<hr/>		321,640	18 7
State Loan Repayments Fund			28,818	19 7
Developmental Railways Account, Section 83 of Act 3662			2,107	14 5
			<hr/>	
			574,727	16 2

After meeting the above payments and making provision for plant, administration and other expenses, the amount available for maintenance, improvement and restoration of main roads, State highways, tourists' roads and Murray River bridges and approaches was £1,214,194, of which £1,170,886 was expended during the year. The balance of £43,308 represents commitments carried forward to the current year. In addition, the sum of £124,264 was expended from funds available under the Federal-aid roads and works agreement for the maintenance and reconstruction of roads, making a total expenditure on maintenance, &c., of £1,295,150.

For the maintenance, improvement and restoration of main roads and State highways, the estimated requirements total £1,830,054 for the year, but as the municipal contribution is governed by the amount expended, the expenditure incurred by certain Councils on main roads was insufficient to meet requirements. On the basis of the estimates submitted the funds fell short of requirements by £491,596.

The total amount expended during last year from loan funds was £2,235, which was spent on declared main roads in the metropolitan area; the proportion of interest and redemption charges to the 30th June last totalled £4,429.

The relief granted to country municipalities under Act 4415 on account of interest and sinking fund payments in respect of main and developmental roads for the year was £234,790.

The municipal liability in the metropolitan area on account of expenditure incurred out of loan on the construction and reconstruction of main roads and bridges was £126,341 as at the 30th June last, to which the Councils will be required to contribute 6 per cent. per annum, including 4½ per cent. interest and the balance sinking fund over a term of 31½ years.

Statement of expenditure on road construction and maintenance, from funds provided by the Government and from moneys at the disposal of the Board, including expenditure under special appropriations is set out in summarized form, from which it will be noted that the total for the year was £2,090,846 7s. 2d.

	Under Board's Supervision.			Under Council's Supervision.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.
1. State Highways—									
Maintenance, construction and reconditioning ..	423,766	10	3	82,784	18	8	506,551	8	11
2. Main Roads—									
Construction and restoration .. 187,130 2 4									
Maintenance and reconditioning .. 699,691 2 8	163,683	0	9	723,138	4	3	886,821	5	0
3. Developmental Roads—									
Construction, maintenance, &c. .. 410,590 8 2									
Roads for Isolated settlers .. 51,070 18 1	52,554	5	5	409,107	0	10	461,661	6	3
4. State Unemployment Relief Works—									
Main and Developmental Roads, &c.	39,582	14	9	14,026	19	8	53,609	14	5
5. Tourists' Roads—									
Construction, &c. 15,448 11 5									
Maintenance and reconditioning .. 52,812 19 3	56,173	6	5	12,088	4	3	68,261	10	8
6. Murray River Bridges and Punts—									
Maintenance	8,102	2	3	172	15	10	8,274	18	1
7. Roads adjoining Commonwealth Properties—									
Maintenance	5,849	10	4	6,058	7	9	11,907	18	1
8. Commonwealth Defence Works (Unemployment Relief)—									
Construction and reconstruction	92,059	12	5	1,698	13	4	93,758	5	9
Totals	841,771	2	7	1,249,075	4	7	2,090,846	7	2

In addition to the above expenditure municipal Councils expended a total amount of £112,828 during the year as their contribution.

Towards the expenditure on the construction, reconstruction, maintenance, &c., of main and developmental roads an amount of £770,357 was expended under the provisions of the *Federal-aid Roads Act 1931* and the *Federal-aid Roads and Works Act 1937*.

The expenditure on roads constructed and reconstructed on behalf of the Commonwealth Government was £168,154 for the year, an amount of £93,758 being expended out of a Federal Unemployment Relief Grant of £116,072, and the balance of £74,396 from funds provided directly by the Commonwealth Government as the works progressed. The total amount available from the Unemployment Relief Grant at the 30th June was, therefore, £22,314.

As grants from the State Unemployment Relief Funds can only be used for labour, it was necessary for the Board to contribute the sum of £18,566 from the Country Roads Board Fund and from funds provided under the Federal-aid roads and works agreement for the supply of equipment, pipes, making of surveys, &c., in order to make the work effective.

APPORTIONMENT OF COSTS.

In accordance with the provisions of Section 287 of the *Country Roads Act 1928*, the cost of permanent works and maintenance was apportioned for the year ended 30th June, 1939; £47,623 was apportioned to municipalities in respect of permanent works and £187,072 on account of maintenance.

There were no arrears of contributions at the 30th June last, every Council having paid the amount owing by it.

MOTOR REGISTRATION.

During the year 272,029 motor cars were registered, the following classes of vehicles being included in the total:—

Private cars	..	..	..	..	..	153,979
Commercial motor vehicles	..	..	..	..	..	34,591
Primary producers' vehicles	..	..	..	..	..	49,549
Hire cars	..	..	..	..	..	2,358
Licensed under Omnibus Acts	..	..	..	..	..	435
Trailers	..	..	..	..	..	5,132
Traction engines, &c.	..	..	..	..	..	220
						246,264
Motor cycles	..	..	..	..	..	25,765
						25,765
Total	..	..	..	..	..	272,029

Registrations for the year increased by 5,167 in comparison with those of the previous year, equivalent to 1.94 per cent. as compared with an increase of 4.65 per cent. during the previous year.

The number of registered private cars increased by 2,849, equivalent to 1.89 per cent.; commercial motor vehicles by 690, equivalent to 2.04 per cent.; whilst the number of primary producers' vehicles shows an increase of 2,122 or 4.47 per cent.

Motor cycles decreased in number by 933 equal to 3.49 per cent. and hire cars increased by 97, or 4.29 per cent.

The total amount allowed on account of payment of concessional registration fees on primary producers' vehicles under Act 4285 was approximately £100,293 for the year.

The number of trailers used for the carriage of goods increased by 464 during the financial year, equivalent to 9.94 per cent.

The nett revenue from motor registrations was £1,747,024 as compared with £1,690,962 for the year ended 30th June, 1939.

Under Act No. 4570 an amount of £102,251 representing fees for licences to drive motor cars was paid into consolidated revenue instead of being credited to the Country Roads Board Fund as was done prior to July, 1932, when the amount was used for maintaining main roads and State highways.

The revenue collected from the weighbridge installed in the vicinity of the Motor Registration Branch at the Exhibition Building during the past year was £487 as against £556 for the previous year. The cost of operating and supervision was £300 so that the nett amount received was £187 for the twelve months.

ENLISTMENTS AND WAR WORK.

Up to the 30th June, 1940, 133 officers and employees of the Board had enlisted for service abroad with the 2nd A.I.F. or the R.A.A.F. and 3 had enlisted with the Naval Forces.

For home service 6 officers and employees were called up for limited periods or for the duration of the war, and 12 members of the staff were loaned to the Commonwealth Government to assist in carrying through urgent works.

A number of officers attached to the Engineering and Accountant's staffs have, in addition, done a large amount of voluntary overtime work for the Defence authorities. The work performed has involved close and undivided attention owing to its nature and urgency, and necessitated the exercising of great care.

RETIREMENT OF MR. FRICKE.

The retirement of Mr. F. W. Fricke, Chairman of the Board, on the 30th June last, terminated a long period of public service with the State Government extending over 55 years, including his association with the Country Roads Board since its inception.

In 1913 Mr. Fricke was appointed a Member of the Board and held that position until 1938, when he was appointed Chairman of the Board following the death of Mr. W. T. B. McCormack.

Mr. Fricke's intimate knowledge of the State, his foresight and ability contributed in no small degree to the laying down of a well planned system of roads throughout the State.

APPENDICES.

The following statements appear in the appendices :—

- (a) Showing amounts received and expended during the year under the Country Roads Acts.
- (b) Apportionment of expenditure in connexion with the construction and maintenance of main roads for the year ended 30th June, 1939.
- (c) Expenditure on the construction and maintenance of main roads, tourists' roads and State highways during the year ended 30th June, 1940.
- (d) Mileage, locality, &c., of main roads constructed and maintained during the past year.
- (e) Mileage, locality, &c., of State highways reconstructed and maintained.
- (f) Mileage, locality, &c., of tourists' roads reconstructed and maintained.

We have the honor to be, Sir,

Your Obedient Servants,

L. F. LODER, Chairman.

W. L. DALE, Member.

F. M. CORRIGAN, Member.

R. JANSEN,
Secretary.

CHIEF ENGINEER'S REPORT.

Country Roads Board,
Exhibition Buildings,
Carlton, N.3,
4th November, 1940.

The Chairman,
Sir,

I have the honour to submit details of engineering interest arising during the work carried out in the year ended 30th June, 1940.

PROGRAMME AND STAFF.

Owing to the outbreak of war early in the financial year, considerable delay arose in establishing or adjusting programmes of works to be executed. Special difficulties arose in securing supplies of materials, e.g., bitumen, and in supervising spraying operations.

Military duties, either with the militia or on active service (or other special duties), have removed a high percentage of the engineering staff, including several senior officers. Besides many necessary and essential normal road works, a large volume of work has been undertaken for Commonwealth Departments, so that the available staff and plant have been fully taxed. In addition, much voluntary overtime work, arranged through the Institution of Engineers, Australia, has been done by members of the engineering staff. A wide variety of urgent work has thus been dealt with, the whole engineering personnel displaying exceptional keenness, and their duties being performed with great speed and efficiency in the face of considerable difficulties.

GRADE SEPARATIONS.

Two major projects in progress during the year included re-alignment on inner sections of State Highways which have eliminated railway level crossings. The alignment and visibility in each case have been

designed so as to enable vehicles to maintain the safe speed adopted for the particular section of road. In each project quite heavy earthworks were therefore necessary, with long embankments approaching the new bridges, so as to secure the necessary visibility.

In one case scoops of 6 cubic yards and 9 cubic yards capacity were used for portion of the work where material was moved from cutting to filling; some particulars of their operation were given in the previous year's report. For the remaining portion of the work where it was necessary to borrow filling, large hoppers were used, fed by trailbuilders with assistance from a scoop, the bins emptying into motor trucks which transported the earth to the new embankment and spread it there. A scoop was also used to assist and complete the spreading.

The consolidation was effected by the tractors and scoops or motor vehicles traversing the material, which was spread in layers as thin as possible.

On the other project the whole work is filling, which was obtained by contract. Alternative materials offered included quarry waste ("salamander") which was obtainable at about 6 miles lead, and fine sand, available within 2 miles. Hydrometer grading and compaction tests of the sand showed that it would be quite satisfactory if consolidated at a suitable moisture content, and as it was considerably cheaper, its use was adopted. The contractor used a small power shovel to excavate the sand, and, after slight initial troubles, the motor trucks which carted and dumped the filling were always able to negotiate the partly-consolidated bank. Water was applied when necessary to aid compaction, and a tractor and scoop, or a bulldozer, assisted in spreading, a pneumatic-tired roller being used to complete the consolidation. Particulars of the quantities and costs of these jobs are shown in Table A.

TABLE A.—EARTHWORKS COSTS.

Locality.	Equipment.	Average Lead.	Cubic yards consolidated.	Cost (not including overhead).	Overhead (per cent.).
Broadford (cut to filling)	Tractor and scoop	1,200 feet	24,400 (9,200 cubic yards rock)	1s. 8d.	15
Broadford (borrow pit to bins) ..	Bulldozer and scoop	200 feet	44,620	8d.	15
Broadford (bins to filling)	Motor trucks	1,000 feet	44,620	7½d.	15
Laverton (winning and carting) ..	Power shovel and motor trucks ..	2 miles	28,500	3s. 3d.*	—
Laverton (spreading and consolidation)	Scoop or bulldozer and pneumatic-tired roller	—	28,500	6·7d.	6

* Includes Contractor's overhead and profit.

Works such as these would have involved prohibitive cost were it not for the use of various types of modern earth-moving and consolidating plant, and it may be anticipated that when funds for such purposes are again available, further similar projects will be put in hand, thus increasing the safety of important highways, or eliminating serious delays to traffic. Additional plant of this type obtained by the Board has included one 5 cubic yard hydraulic scoop, of Australian manufacture, one 4000-lb. ripper, and two pneumatic-tired rollers. Plate 1 shows the new scoop.

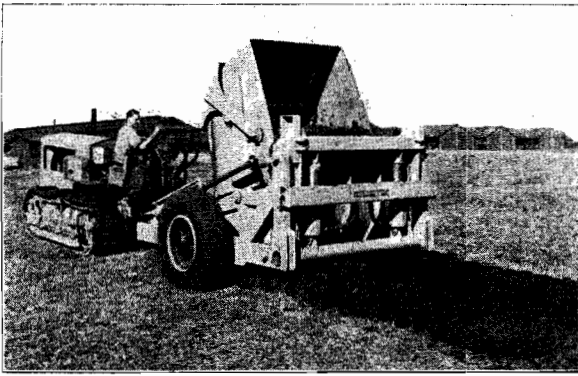


PLATE 1.—Hydraulic Scoop.

CURVE DESIGN.

The type of transition curve used by the Board has been described in previous reports. To assist in selection of suitable length of transition curve and to reduce calculations, charts have been prepared and made available to municipal engineers.

For each speed there is a separate chart, on which are two distinct sets of curves, one set showing tangent distances as ordinates, and the other secant distances, the intersection angles being the common abscissae. In each set the separate curves are drawn for the particular length of transition shown thereon, the corresponding superelevation being also shown. The scale is such that for the tangent or secant distance available in a given case the necessary or desirable transition length can readily be ascertained. The lengths shown correspond with those in the tables previously issued (they are multiples of 25 feet), so that the exact curve properties can be obtained without further trial. Moreover, in designs or trial surveys where commonly only the principal points of the curve are required, the whole curves may be sketched or set out in most cases with sufficient accuracy without any calculation whatever.

DIVIDED HIGHWAYS.

Melbourne is fortunate in having many sections of arterial streets laid out with a width of 3 chains. Advantage has been taken of this in the past in several instances to devote the central portion of the reserve to "nature strips" or plantations, thus dividing traffic in one direction from that in the other. This design has proved very beneficial with modern dense motor traffic, since it eliminates risks of head-on collisions and of accidents due to glare of opposing headlights. Moreover, traffic in minor streets crossing a divided highway can await an opportunity of crossing one traffic stream and can then wait again in a safe location before crossing the other stream.

In conjunction with Braybrook Shire, the Board has widened a 1-chain section of the Ballarat-road at Sunshine, continuous with the commencement of the Western Highway, to give a road reserve 2 chains wide. This section, over a mile long, has now been recon-

structed by the council with divided traffic lanes, each pavement being 20 feet wide, with space for a plantation 30 feet wide between them.

Hitherto, the design adopted by the Board on rural arterial roads of 3-chain width has generally provided only one central pavement, wide enough for two lanes of traffic, this being well within the traffic capacities required. However, in designing a new deviation of the Princes Highway on an inlying section, it was deemed prudent to recognize the rapid growth of traffic and to place the two-lane pavement now being constructed on one side of the reserve, so that in the future, when additional pavement width becomes necessary, the divided pavement design can be adopted. The pavement is constructed of fine crushed rock, the base course being spread 24 feet wide in a drained boxing, and the top course 36 feet wide with a tapered edge on the shoulders. A bituminous seal coat has been applied for a width of 22 feet, thus leaving quite sound and readily maintained shoulders for passing. The present formation width is 40 feet, with the centre line 30 feet from the centre of the road reserve. Care was taken to keep the formation appreciably above the natural surface, since the soil is a plastic clay-silt, prone to instability if waterproofing becomes defective. However, where borrowing within the reserve was necessary, the pits were kept as shallow as possible, and located entirely between the formation and the nearer boundary, thus reserving the remaining area for future duplication.

During the year, resumption of land was continued so as to widen certain sections of State Highways where a reserve of only 1 chain width exists; this action assists immediately in the segregation of stock traffic from increasing motor traffic, and also will give room for future duplication of the pavement in the manner described.

CONSOLIDATION.

In a previous report reference was made to "Proctor" compaction tests, for which the special apparatus required was first used in checking the desirable amount of moisture and the degree of consolidation of high fillings placed in the approaches to the bridge over Latrobe River at Rosedale. This apparatus has been further used for a similar purpose in several works where various methods of consolidating fillings were in use. It has been noted that in America, where special consolidating equipment and methods are commonly used, some highway authorities now specify the degree of consolidation by comparison with the density obtained for the particular material in the laboratory at "optimum" moisture content using the Proctor apparatus. It is anticipated that engineers will soon become familiar with this procedure, and that as increasing reliance is placed on it and on the use of the special consolidating equipment, road fillings will be found to retain their initial shape indefinitely and that the practice of dumping fillings in a more or less loose condition and relying on climatic factors to provide consolidation over a long period of years will be less general. Maintenance costs and smoothness of travel should be correspondingly improved.

Special apparatus has therefore been obtained during the year to assist in checking the field density of placed fillings of fine grained material. It consists of a steel cylindrical punch of 1/30 cubic foot capacity driven by a hand operated rammer dropping upon a diaphragm inside a follower which rests on the upper rim of the punch. An outer cylinder guide is provided to keep the punch and the follower at right angles to the

ground (see Fig. A.). The weight of the struck-off sample is determined at once in the field, and the moisture content of portion of the sample may be measured later in the laboratory.

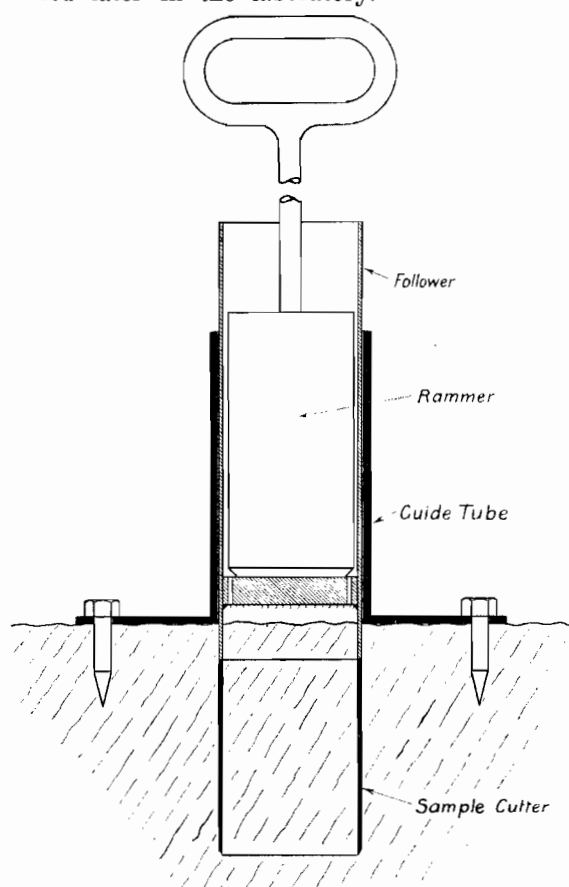


FIG. A.—Field Density Apparatus.

Table B. gives some typical results of compaction tests. It may be noted that a specification adopted in Ohio would require 100 per cent. compaction for conditions at Laverton, and 95 per cent. for conditions at Broadford. It is proposed to continue measurements of density on certain construction works, and as far as possible to observe closely the behaviour of the fillings concerned over a long period. In Table B. the beneficial effects of special consolidating equipment used at Braybrook are clearly indicated. No special field moisture control was used here or at the other localities.

The value of watering pavement materials as well as loamy fillings during consolidation was again demonstrated during an exceptionally dry winter. Some of the older bitumen sprayers have been used on this work in preference to the cheaper type of plant commonly used in the summer. This cheaper plant consists of cubical iron tanks mounted on motor trucks and filled generally by independent small portable motor pumps. With the sprayer the pump mounted on it is available to discharge the water under pressure, so that in partly consolidated materials better penetration is secured than with gravity flow.

Where possible, the amount and cost of watering have been reduced by use of salt obtainable from salt lakes, or waste liquor from sea water process salt works, where the latter are within a few miles of the road. As found for previous work there has been a marked acceleration of rate of consolidation following applications of these chemicals.

GRAVEL SUPPLIES.

On certain works where quite large outputs of gravel were required, some reduction of costs has been achieved by use of special plant in the pits. In one instance a $\frac{3}{4}$ cubic yard power shovel was hired. This reduced the loading time of 4 cubic yard motor trucks from 20 minutes to 5 minutes as compared with hand loading. The sand was quarried and loaded at a cost of 6½d. per cubic yard. In another pit a power grader was used working on a bench, loosening the gravel and moving it across into a windrow at the edge of the bench, whence it was very readily loaded by hand into motor trucks brought in on a lower bench.

The aggregate loader mounted on a truck chassis designed by the Board's staff to handle covering aggregate during the spraying season (summer) has also been used to very good effect to reduce costs of loading gravel for re-sheeting during autumn and winter. In recent construction of an aerodrome apron with a sealed gravel surface, the gravel was carted to rail siding from the pits by motor trucks, which tipped from the platform directly into railway trucks as far as possible. The railway trucks were however "topped up" with material lifted from the ground, and the high output of the aggregate loader made it particularly effective in this work. The general usefulness of this plant has contributed to the Board's decision to purchase four new units of similar design.

TABLE B.—COMPACTION TESTS. (Figures refer to dry weight.)

Location.	Optimum Moisture (per cent.).	Density at Optimum Moisture (lb. per cubic foot).	Method of Compaction.	Field Density (lb. per cubic foot).	Percentage Compaction.
Shepparton	14.6	113.6	Motor trucks only	103	90.8
Braybrook	14 to 18	118 to 106.5	Truck and scoop traffic; sheep's-foot roller	97 to 113	89 to 94
Braybrook	15	113	Truck and scoop traffic only	88	78
Laverton (high sandy filling)	14	107	Watering, truck traffic, scoop, and pneumatic-tired roller, plus traffic	{ 102 107 102	{ 95 100 95
Laverton (clay formation)	24.9	92.8	Motor truck and pneumatic-tired roller	{ 80.6 74.6	{ 87.0 80.4
Laverton (clay formation)	23.5	93.5	Motor truck and pneumatic-tired roller, plus traffic	96.0	103.0
Broadford (stony clay filling)*	14	118	Little tractor and scoop traffic .. .. .	..	77.5 approx.
	14	118	Much tractor and scoop traffic	98	83 —
	14	118	Heaviest tractor and scoop traffic	103	87 —
	14	118	Tractors and scoop or trucks, plus traffic 6 to 12 months	104 to 108	88 — to 92 —

* In the laboratory tests on Broadford soil the portion retained on $\frac{3}{8}$ " sieve, being approx. 25 per cent., was discarded, so that the percentage compaction shown in last column will be less than the figures given.

CRUSHING PLANTS.

In the supply of crushed aggregates for sealing work and of fine crushed rock for pavement construction, considerable use of portable crushing plants is required, the plants being owned chiefly by contractors, although a few are owned by the Board and by Municipalities. It has been noted that where old plants were still transported on steel tires, severe damage was frequently caused to the road systems traversed. A clause has therefore been added to specifications requiring tenderers to state the type of transport they propose to use and giving a specified preference to pneumatic tired transport. The cost of providing the more modern type of equipment is not great, and most contractors have now discarded the mutilative steel tires and re-arranged their plants to enable them to be transported by motor trucks. Similar steps have been taken by Municipal Councils.

In the production of aggregates for sealing work it is generally very desirable to eliminate a film of dust from the particles, since dust tends to prevent the binder from making proper contact with the surface of each particle, resulting in ravelling. The specification has therefore been amended to require means to be provided at crushing plants to wash off the dust or remove it by air blower.

The Board has improved one of its crushing plants by substituting a gyrating cone crusher for a small worn out drum crusher.

VISCOMETERS.

In its specifications and instructions the Board has for several years abandoned the various arbitrary measures of viscosity in favour of absolute units. Two principal types of viscometer are used, the upward

flow capillary viscometer (suitable for viscosities from 0.01 to 50 poises) and the sinker viscometer (used between 1 and 100,000 poises).

To calibrate these instruments it is necessary to use some standard fluid, but it is difficult to ensure that the fluid used has exactly the correct physical properties, e.g., an oil may slowly change its viscosity when stored. A new viscometer has therefore been obtained in which water is the standard fluid; with this instrument the viscosities of calibrating oils can be standardized or checked as required. This viscometer is of the gravity flow U tube type, similar to a design of M. R. Fenske, of Pennsylvania, its range being 1 to 30 centistokes.

For checking viscosities of lubricating oils (25 to 175 centistokes), a smaller U tube has been obtained in accordance with A.S.T.M. specification D445—39.T, No. 300 Modified Ostwald Viscometer.

CONCRETE PRODUCTS.

An electric muffle furnace has been installed to facilitate the analysis of set concrete. By subjecting the concrete to a preliminary heating process, it is possible to determine the grading of the aggregates employed, and in addition, the chemical analysis for determining the cement content is made easier.

The need for analysis of precast concrete products as a method of control arises since these materials are supplied under contract to a certain specification for strength and amount of cement. The durability of such products depends largely on the cement content and waterproofness of the concrete.

The test results shown in Table C are typical of those obtained during the year, and illustrate the need for this type of supervision.

TABLE C.—TESTS ON PRECAST CONCRETE PRODUCTS.

Manufacturer	2	1	1	3	4	5	4	2	5	4	4	Spec.
Product (pre-cast)	B.C.	B.C.	P.	P.	N.R.P.	N.R.P.	P.	N.R.P.	P.	P.	P.	=
Cement content per cent.	22.4	21.0	14.1	21.1	20.0	20.2	24.0	..	..	..	..	—
Bags of cement per cubic yard	9.2	8.4	6.0	8.4	9.0	9.0	9.3	..	..	..	..	9.0
Absorption by weight per cent.	6.2	8.8	7.1	7.0	3.0	2.8	9.4	3.5	5.3	5.22	3.85	..
Specific gravity	2.30	2.23	2.36	2.21	2.49	..	..	2.45	2.38	..	..	..
Weight per cubic foot dry	143.8	139.4	147.5	138.2	155.3	156.0	135.0	153.0	148.5	(a)	(b)	..

Aggregate used by manufacturer (3) is quartz, hence weights per cubic foot tend to be slightly lower than where basalt is used.

(a) Porous basalt used as coarse aggregate.

(b) Less porous stone (dacite) used as coarse aggregate.

B.C.—Box culvert. P.—Pipe, reinforced. N.R.P.—Non reinforced pipe.

BITUMINOUS SURFACE TREATMENT.

1. TYPE OF WORK CARRIED OUT DURING THE SEASON OF 1939-40.

(a) FIRST SEALS.

The classes of work, gradings of aggregate, and the types of primers reported in the twenty-fifth annual report were again used.

Variations were made in the types of binder and in their viscosities to meet the following conditions:—

- (i) The northern half of the State of Victoria has a higher average mean maximum and mean minimum temperature than the southern half.

- (ii) If a road oil having a viscosity much lower than 300 poises at 122°F. was used to permit the incorporation of aggregate under low temperature conditions, considerable loss of aggregate was often encountered during the first few hot days in the life of the treatment as road oils "set up" slowly.

After a study of certain meteorological data, the State was divided into two areas by a line roughly along the northern edge of the Central and North-East Highlands, and the year divided into two periods, September to March inclusive, and April to August inclusive.

It was then decided to use a road oil binder only when the shade temperature at the time of application was 65° F. or higher. For work done when the air temperature was below 65° F., a medium curing cutback was adopted. The viscosities adopted are shown in Tables D and E.

TABLE D.—VISCOSITY OF ROAD OILS USED.

Area.	Time of the Year.	Viscosity in poises at 122° F.
Southern ..	All the year ..	300-400
Northern ..	September to March ..	600-800
Northern ..	April to August ..	300-400

TABLE E.—VISCOSITY OF MEDIUM CURING CUTBACKS USED.

Area	Time of the Year.	Shade Temperature in deg. F.	Viscosity in poises at 122° F.
Southern ..	All the year ..	60-65	150-200
		55-60	90-110
		50-55	60-70
Northern ..	September to March ..	Below 50	35-45
		60-65	300-400
		55-60	175-225
		50-55	100-125
Northern ..	April to August ..	Below 50	65-75
		60-65	150-200
		55-60	90-110
		50-55	60-70
		Below 50	35-45

(b) RETREATMENTS.

(i) *General.*—From the tables setting out the nature of the work carried out, it will be seen that the use of the roadmix sealing method of retreatment was considerably restricted. This was done to reduce the quantity of “non-sterling” material used, and to carry out the maximum area of retreatment with the funds allotted for this type of work.

(ii) *Roadmix Sealing.*—In all roadmix sealing work other than 1 inch and ¾ inch in loose thickness, using either screenings or gravel as the aggregate, the procedure reported in the twenty-sixth annual report was continued. For the thicker seals containing more binder, the process involving three applications of binder as described in the latter report was adopted following the success of the experimental work. Accordingly, roadmix seals of 1 inch and ¾ inch in loose thickness using screenings or gravel as the aggregate were given a seal coat, using a road oil binder at the rate of 0.1 gallon per square yard, covered with fine aggregate applied at the rate of 1 cubic yard to 130 square yards.

The rates of application of binder used for roadmix work carried out under normal conditions during the season, were as set out below:—

Aggregate.—Screenings or gravel.

Work.	Binder (Gallon per square yard).			
	Cutback		Road Oil.	Total Binder Cutback and Road Oil.
	Tack Coat.	Mixing.	Seal Coat.	
1	0.10	0.20	0.10	0.40
¾	0.10	0.13	0.10	0.33
½	0.10	0.15	..	0.25

Aggregate.—Scoria.

Work.	Binder (Gallon per square yard).				
	Loose thickness of Aggregate in inches.	Cutback.		Road Oil	Total Binder Cutback.
		Tack Coat.	Mixing.	Seal Coat.	
1	0.10	0.27	..	0.37	
¾	0.10	0.20	..	0.30	
½	0.10	0.15	..	0.25	

(iii) *Reseals.*—When a reseal was the method of retreatment adopted, the binder was applied at a rate of 0.25 gallon per square yard.

The types of aggregate used and their rates of application were those set out in the twenty-fifth annual report. (Aggregates No. 1, No. 2, and No. 3A for first seals.)

The types and viscosities of binders used on this work were those set out above as binders for first seals. (Tables D and E.)

(iv) *Plantmix Seals.*—On certain of the inner sections of the State Highways, and in special cases on rural roads, retreatments were applied using the coldmix, cold laid, drag spread, plantmix method.

In every case a tack coat of a medium curing cutback was used. (Viscosity of the cutback 3 to 3.5 poises at 122° F.)

The binder for premixing with a shade temperature of 50 to 60° F. was a medium curing cutback, 100 — 8½ — 15 parts by volume of 80/100 penetration residual bitumen, asphaltic oil and power kerosene respectively (viscosity 30-40 poises at 122° F.) used at the rate of 11 gallons per cubic yard of aggregate.

When native asphalt was used, the rate of application of cutback was 12 gallons per cubic yard of aggregate.

(c) AGGREGATES.

The gradings of the aggregates used are as set out in Table F, and the aggregates used for various types of work are as follows:—

(i) Aggregates for First Seals. No. 1, No. 2, and No. 3A.

(ii) Aggregates for Roadmix Seals.

Work.	Grading.
Coarse aggregate for work 1-in. or ¾-in. in loose thickness	3B
Coarse aggregate for work of ½-in. in loose thickness	3C
Fine aggregate for use with 3B	4
Fine aggregate for use with 3C	5

(iii) Aggregates for coldmix, drag spread Plantmix Work.

Work.	Grading.
Coarse aggregate for work of 1-in. in loose thickness laid in one application ..	7
Fine aggregate for use with Aggregate No. 7	Commercial Grit Mixed in the field in gauge boxes at the mixer two parts of No. 9 and one part of No. 11
Coarse aggregate for work of ¾" and ½" in loose thickness or 1" work laid in two applications when the top coat is not less than ¼" in loose thickness	
Fine aggregate for use with the mixture of two parts of No. 9 and one part of No. 11	

TABLE F.—GRADING OF AGGREGATES 1939-40.

Aggregate No.	Percentage Passing Square Screens or Sieves (By Weight).										
	$\frac{1}{8}$ inch.	$\frac{1}{4}$ inch.	$\frac{3}{8}$ inch.	$\frac{1}{2}$ inch.	$\frac{3}{4}$ inch.	1 inch.	$\frac{1 1}{8}$ inch.	No. 8 B.S.I.	No. 18 B.S.I.	No. 36 B.S.I.	No. 200.
1 ..	100	..	0-50	0-10	..	0-5	..	..	..	..	..
2	100	90-100	..	0-30	0-7	..	0-1	..	..	..
3A	100	..	30-70	10-40	..	0-2	0-1	0-0.5	..
3B	100	75-90	50-70	20-40	10-25	0-2	0-1	0-0.5	..
3C	100	95-100	75-90	45-65	25-45	0-5	0-2	0-0.5	..
4	100	98-100	85-95	70-90	20-40	0-10	0-3	..
5	Toppings Sand ..	100	90-100	30-60	0-10	0-5	..
						100	90-100	30-60	0-20	0-10	..
7	100	85-100	70-85	45-60	20-30	10-15	0-2	..	..	..
9	100	90-100	50-80	0-10	0-3	0-0.5	..
11	100	65-90	0-20	0-5	0-2

2. PLANT DEVELOPMENT.

(a) SPRAYER—600-GALLON.

The 600-gallon sprayer mentioned in the twenty-sixth annual report was put into service and has proved satisfactory under field conditions. The unit is capable of spraying a 30-ft. width in one traverse at rates of application between 0.1 and 0.4 gallon per square yard. The tare weight of the unit is 7 tons 12 cwt., and the gross weight, loaded and manned, 10 tons 9 cwt. The truck is fitted with ten 32 in. x 6 in. tyres. (See Plate 2).

(b) HEATERS—600-GALLON.

Three 600-gallon oil-fired bitumen heaters were constructed and put into service. The design follows closely that of the Board's 400-gallon heaters. The new heaters are mounted on eight 32 in. x 6 in. tyres, and have Major high-pressure steam atomizing fuel oil burners of Type C fitted. (Rating 6 gallons of oil per hour. Actual $5\frac{1}{2}$ gallons per hour.) The time of heating a load with these heaters is the same as that for the 400-gallon units.

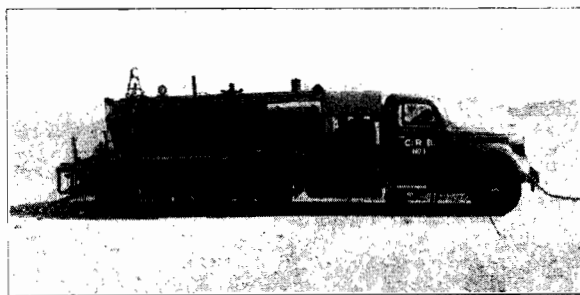


Plate 2.—600-Gallon Sprayer.

(c) AGGREGATE LOADER.

The Aggregate Loader illustrated in the twenty-sixth annual report having given good service and the demand for this type of plant increased, a contract has been placed for a further four. The design has been modified only in minor details. Field experience has shown that with plant of this type special truck engine air cleaners must be fitted.

(d) CHARCOAL GAS PRODUCERS.

A Fordson Roller fitted with a Charcoal Gas Producer Unit has given satisfactory service, after certain preliminary troubles were overcome. A second roller has now been fitted with a Gas Producer Unit.

(e) PORTABLE COOKHOUSES.

As a fire prevention device and to improve the living conditions of the men working with mobile units, a portable cookhouse, capable of providing meals for 25 men, has been designed. (See Plate 3). The unit can be safely towed up to a speed of 30 miles per hour. It is proposed to equip each mobile bituminous surface treatment unit with a portable cookhouse.

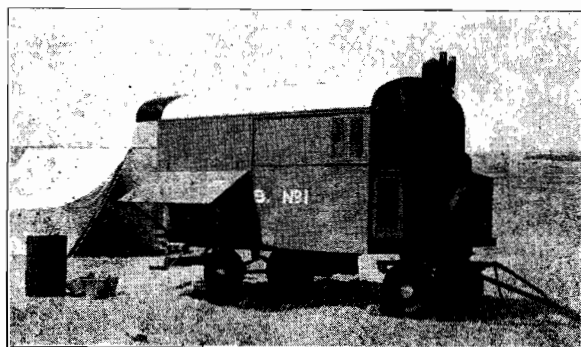


Plate 3.—Portable Cookhouse.

(f) DRAG SPREADERS FOR COLD MIX, COLD LAID, PREMIXED DRAG SPREAD WORK.

The design of the drag spreader illustrated in the twenty-fourth annual report has been amended to enable the width of the spreader to be varied by six-inch increments from six feet to eleven feet.

3. PLANT USED.

The under-mentioned C.R.B. Plant was in operation for the whole or part of the season.

(a) FOR FIRST SEALS AND RE-TREATMENT BY THE ROAD-MIX SEAL PROCESS:—

400-Gallon Sprayers—9

(b) FOR RE-TREATMENT BY THE PLANTMIX PROCESS:—
Cold laid, drag spread, plantmix units—4.

4. WORK EXECUTED.

(a) WORK CARRIED OUT BY THE C.R.B. PLANT.

(i) In 1939-40 the total work executed on C.R.B. and Commonwealth roads was 754 miles. The average for the five-year period 1935-36 to 1939-40 was 804 miles per season.

The total work on all roads was divided as follows:—

	Miles.	Miles.
C.R.B. plant on C.R.B. roads ..	646	
Municipal plant on C.R.B. roads	83	
C.R.B. plant on Commonwealth roads	25	
Total work on C.R.B. and Commonwealth roads		754
C.R.B. plant on Municipal roads ..		17
Grand total		771

Details of the length of jobs, &c.

C.R.B. Plant.—First Seals and Retirements by the Roadmix Seal process.

All Sprayers.	Season.		
	1937-38.	1938-39.	1939-40.
Number of jobs	527	520	391
Longest job—miles	23·7	14·3	14·3
Shortest job—miles	0·02	0·03	0·03
Average job—miles	1·64	1·60	1·8
Total number of spraying dumps ..	279	241	213
Miles of work done from each dump (average)	3·1	3·5	3·2

(ii) Nature of the work carried out by C.R.B. plant on C.R.B. and Commonwealth roads.

Type of Plant.	Length in Miles.				
	Nature of the Work.				
	First Seals.		Retirements.		
	DC.	SS.	RS.	RMS.	PMS.
400-gallon sprayers	296·5	10·4	235·8	95·8	..
	306·9		331·6		
Plantmix Units .. .. .	..	..	..	..	32·2
Total	306·9		363·8		
Grand Total	670·7				

(b) WORK CARRIED OUT ON C.R.B. ROADS BY MUNICIPALY OWNED PLANT.

Length in Miles.					
Nature of the Work.					
First Seals.		Retirements.			Construction.
DC.	SS.	RS.	RMS.	PMS.	Modified Macadam.
43·4	6·8	16·5	9·4	5·4	1·1
50·2		31·3			1·1
81·5					1·1
82·6					

(c) TOTAL MILEAGE OF EACH CLASS OF WORK CARRIED OUT BY ALL PLANT ON C.R.B. AND COMMONWEALTH ROADS.

Length in Miles.					
Nature of the Work.					
First Seals.		Retirements.			Construction.
D C.	SS.	RS.	RMS.	PMS.	Modified Macadam.
339·8	17·2	252·3	105·2	37·6	1·1
357·1		395·1			1·1
752·2					1·1
753·3					

5. ANALYSIS OF OPERATIONS.

The following tables show for C.R.B. 400-gallon sprayers the proportion of the time spent in various operations or in idleness.

(Work:—5-day, 44-hour week.)

Daily Rating.

RATED DAILY OUTPUT FOR AN 8¼ HOUR DAY.

Work.	Number of Loads.
Primer	12
Binder for First Seals	10
Binder for Roadmix Seals	8

(a) ANALYSIS OF THE OPERATIONS OF EACH UNIT.

Operation.	400-gallon Sprayer No.—										Average	
	11.	12.	13.	14.	15.	20.	21.	22.	23.	1939-40.	1938-39.	
Spraying	37·38	44·85	40·48	48·95	41·51	53·94	40·28	33·39	38·13	42·1	43·6	
Moving	16·43	14·43	17·67	14·62	16·55	16·90	19·85	16·60	18·72	16·9	16·3	
Weather	15·27	8·33	15·35	11·76	18·57	10·27	12·95	18·52	14·00	13·9	11·9	
Holidays	8·09	6·55	8·27	5·14	4·85	9·59	7·01	7·94	8·20	7·3	7·6	
Mechanical Delays	0·24	1·78	0·87	1·95	2·26	0·91	0·37	2·38	0·87	1·3	2·0	
Avoidable Delays	22·59	24·06	17·36	17·58	16·50	9·24	20·23	21·23	20·08	18·8	19·0	
	100	100	100	100	100·24	100·85	100·69	100·06	100	100·3	100·4	

(b) AVOIDABLE DELAYS SET OUT IN (a) ABOVE FOR 1939-40 ARE GIVEN IN DETAIL ON THE TABLE BELOW.

Delay.	400-gallon Sprayer No.—										Average.	
	11.	12.	13.	14.	15.	20.	21.	22.	23.	1939-40.	1938-39.	
Poor Organization	2·02	1·09	2·25	1·76	1·42	1·14	0·96	1·85	6·40	2·10	1·0	
Long Leads	1·64	1·59	2·20	2·25	2·79	1·65	4·83	0·86	0·87	2·1	2·5	
Short Sections	12·67	15·33	9·40	9·81	8·37	5·37	9·98	11·04	10·70	10·3	7·1	
Road not ready	4·33	1·14	1·70	1·38	1·74	0·80	2·18	2·78	0·80	1·9	6·4	
No aggregate	0·24	1·54	1·56	1·86	1·09	0·17	1·80	1·59	1·06	1·2	0·5	
No Bituminous Materials .. .. .	..	..	..	..	0·12	..	..	..	..	..	0·1
Special Conditions .. .. .	..	..	..	..	..	..	..	..	..	..	0·5
Insufficient Labour	1·69	3·37	0·25	0·52	0·97	0·11	0·48	3·11	0·25	1·2	0·9	
Total	22·59	24·06	17·36	17·58	16·50	9·24	20·23	21·23	20·08	18·8	19·0	

6. COSTS.

(a) BINDER.

Purpose.	Material.	Supplier.	Contract Number.	Tons.	Basic Price per Ton Net— Bitumen, f.o.w.; all other ex Store, Melbourne.		
					Including Drums.	Excluding Returnable Drums.	
					£ s. d.	£ s. d.	
Basic	Bitumen	Neuchatel Asphalte Co.	00/578B ..	498	8 5 0	..	
		Shell Co. Ltd. ..	00/578C ..	1,195	8 5 0	..	
		Vacuum Oil Co. ..	00/578D ..	515	8 5 0	..	
		Shell Co. Ltd. ..	00/578E ..	4,019	10 4 0	..	
		W. B. Carr ..	00/578F ..	198	10 7 0	..	
		Albion Quarrying Co. ..	A/c C. of A...	17	9 7 3	..	
				26	9 19 0	..	
			Vacuum Oil Co. ..	A/c C. of A...	30	8 15 0	..
				75	9 16 0	..	
				17	10 10 0	..	
				11	10 12 6	..	
				50	11 0 6	..	
		Heavy Flux ..	Dehydrated Tar ..	Albion Quarrying Co. ..	00/585A ..	96	5 13 9	4 9 9
Jas. Forbes Pty. Ltd. ..	00/585B ..			275	5 13 9	4 9 9	
Duratar Pty. Ltd. ..	00/585C ..			138	5 13 9	4 9 9	
Atlantic Union Co. Ltd.	00/581 ..			627	5 17 0	3 7 0	
Patching ..	Asphaltic Oil ..	Atlantic Union Co. Ltd.	00/581 ..	627	5 17 0	3 7 0	
		Asphalt Cold Mix ..	00/583 ..	648A	9 12 6	7 15 0	
	Bitumen Emulsion ..		71B	10 10 10	8 13 4		
Cutback Bitumen ..	Shell Co. Ltd. ..	Shell Co. Ltd. ..	00/579—R.C.1	173	9 9 6	..	
				to			
				11 12 6			
				R.C.2	195	9 9 0	..
Light Flux Oil ..	Power Kerosene ..	Various Oil Companies	00/588B ..	172	11 12 0	10½d. per gallon	
				
				

(b) PRIMER.

Purpose.	Material.	Supplier.	Contract Number.	Tons.	Basic Price per Ton Net— Bitumen, f.o.w.; all other ex Store, Melbourne.	
					Including Drums.	Excluding Returnable Drums.
					£ s. d.	£ s. d.
Light Grade Primer	Cold Tar	Metropolitan Gas Co. ..	00/577A ..	3,287	4 5 9	3 4 3
		Duratar Pty. Ltd. ..	00/577B ..	386	4 5 9	3 5 0
		Coates and Co. ..	00/577C ..	89	4 11 1	3 6 9

(c) MISCELLANEOUS.

Purpose.	Material.	Supplier.	Contract Number.	Tons.	Basic Price per Ton Net— delivered ex Store, Melbourne.	
					Including Drums.	Excluding Returnable Drums.
					£ s. d.	£ s. d.
Oil Fuel ..	Fuel Oil ..	Atlantic Union Oil Co.	00/584 ..	183	8 11 9	5 16 0
Cleaning Sprayers	Cleaning Oil ..	Albion Quarrying Co. ..	00/582 ..	73	8 2 6	6 16 0
Timber preserving	Creosote ..	Albion Quarrying Co. ..	00/586 ..	47	9 15 0	8 10 0

(d) TOTAL MATERIALS USED.

Nature of Material.	Tons.	
	Petroleum Products.	Tar Products.
Binder	8,537	509
Primer .. ..	..	3,762
Miscellaneous	183	120
	8,720	4,391
Percentage	66·5%	33·5%
Total	13,111	

(e) TOTAL MATERIALS USED PER ANNUM SINCE 1936-37.

Season.	Tons.		
	Petroleum Products.	Tar Products.	Total.
1936-37	8,463	7,340	15,803
1937-38	11,833	7,174	19,007
1938-39	13,541	8,352	21,893
1939-40	8,720	4,391	13,111

(f) WORK.

COST IN PENCE PER SQUARE YARD.

	First Seals. (D.C. Method.)		Reseals. (Roadmix Seal Method.)		
	1939-40.	1938-39	1939-40.		
Area costed (sq. yds.) ..	2,649,735	4,446,662	153,600	765,307	14,000
Loose thick- ness of Aggregate	..	..	$\frac{1}{2}$ -in.	$\frac{3}{4}$ -in.	1-in.
	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>
Materials ..	6.62	5.94	5.83	8.43	12.86
Labour ..	1.37	1.33	1.42	1.80	2.80
Stores ..	0.25	0.23	0.21	0.30	0.73
Plant ..	0.96	0.97	0.65	1.19	1.94
Total ..	9.20	8.47	8.11	11.72	18.33
Totals for Roadmix Seals—					
1938-39 ..	..	..	9.76	10.40	14.50
1937-38 ..	..	..	7.87	9.96	12.92

(g) AGGREGATE.

AVERAGE COST PER CUBIC YARD FOR THE FOUR-YEAR PERIOD FROM 1936-37.

	Year.			
	1936-37.	1937-38.	1938-39.	1939-40.
Quantity costed (cubic yards) ..	130,250	148,394	127,182	112,513
Average cost per cubic yard ..	<i>s. d.</i> 12 3	<i>s. d.</i> 13 5	<i>s. d.</i> 12 10	<i>s. d.</i> 13 10

7. SPRAYERS.

(Operation figures C.R.B. 400-gallon sprayers only).

(a) GENERAL.

Number in operation ..	..	9
Total number of working days ..	1,317	
Total miles run ..	65,050	
Total number of loads sprayed ..	6,014	

(b) TRUCK ENGINES.

Miles run per gallon of petrol ..	7.5
Miles run per load sprayed ..	10.8
Miles run per working day ..	49.4
Miles per gallon of lubricating oil	520

(c) PUMPING ENGINES.

(i) Ford 10 horse-power—	
Loads sprayed per gallon of petrol	3.13
Loads sprayed per pint of lubricating oil ..	12.17
(ii) Ford Model B 25 horse-power—	
Loads sprayed per gallon of petrol	1.56
Loads sprayed per pint of lubricating oil ..	14

(d) CLEANING OIL.

Gallons per load sprayed ..	1.6
-----------------------------	-----

(e) HEATING.

Gallons of oil fuel per load ..	7.1
For size of load and ratio of primer to binder see (f) below.	

(f) GALLONAGE, ETC., OF LOADS.

(All sprayers 400-gallon capacity.)

Total gallons of primer ..	538,065
Gallons per load of primer ..	390
Total gallons of binder ..	1,711,257
Gallons per load of binder ..	369
Total gallons, primer and binder ..	2,249,322

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BRIDGES.

NICHOLSON RIVER BRIDGE.

A bridge of four spans of 70 feet each was completed during the year on the Princes Highway East, and is illustrated in Plate No. 4. This structure is interesting in the use of a number of different construction features which have been gathered from the experience of various Australian public bodies and also from overseas.

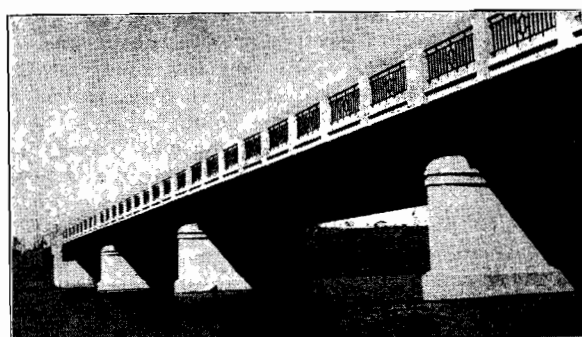


Plate 4.—Nicholson River Bridge.

The Nicholson River is tidal at the site, and over the greater portion of the bridge length there are deep deposits of soft silt overlying limestone. In some parts the silt is so soft that temporary piles driven to the limestone had such little lateral stability that they could be permanently displaced by a man pulling sideways at the top. For a pier in this position, cylinders sunk to rock were used, adopting the practice developed by the Railway Construction Branch of successively casting sections of a concrete cylinder from staging directly over its final position and lowering the cylinder on screwed rods. The tops of the cylinders were kept slightly below the murky water of the stream so as not to conflict with the arrangement of the other piers. Where the substrata were sufficiently firm to give reasonable stability to driven piles, composite timber and concrete piles as developed by the Melbourne Harbour Trust were used. The concrete piles extend through the water and 10 feet into the underlying silt, from which point to rock, timber piles were used. The piers, which are bonded to the tops of the piles, consist of elliptical ends with parallel sides having a width over all of $4\frac{3}{4}$ feet, and a length of $25\frac{1}{2}$ feet. To minimize weight, the piers were cast hollow and the girder loads are transferred to the driven piles mainly by transverse diaphragm walls.

The superstructure consists of the composite T beam construction developed largely by the Public Works Department of Tasmania, using welded steel girders for stems and a reinforced concrete deck, connected to the girders with diagonal square steel stirrups, welded to the deck and looped into the concrete. Prior to casting the deck, the girders were relieved of all dead load deflection and were set up slightly by wedging from steel trusses carried between piers. As the deck concrete was placed, the added load was all taken by the trusses by continuous wedging up between the truss and the girder which was kept up to its initial level throughout.

Parapets consist of welded steel grills, supported by concrete posts with heavier posts to accentuate pier positions. The parapet, which consists of welded steel grillages supported by concrete posts, has been developed by the Board from a design originally published in a European technical magazine. The regularity of vertical bars is broken by a simple rearrangement in the centre of each panel. The strength of the supporting concrete posts is emphasized over the piers only to a slight extent, while a considerable enlargement is made at the ends of the structure, where the post is boldly carried down outside the abutment to ground level.

Painting of steel grillages in handrails plays an important part in the architectural treatment of such bridges. Where the bridge is in open country, and at some height above the stream, light-coloured pigments cause the handrails to disappear against the sky background. Conversely, dark-coloured pigments should not be used where a bridge is below the general level of the surrounding features. When viewed from a low position outside the bridge, dark-coloured rails show up well against a sky background, but when viewed from normal eye level on the roadway, they appear drab against natural yellow-brown backgrounds. It seems desirable, therefore, to vary the colour treatment of parapets to suit each particular case, rather than to standardize on some definite colour scheme.

When the approach embankment was placed at the eastern end of the structure, it was found that a general lateral flow of the soft foundation took place, and the lightly-piled abutment moved as a whole towards the river. At the Swan Reach bridge on the same highway, where a similar soft substratum was covered with a bank, the abutment similarly supported moved backward against the earth bank for a distance of over 6 inches during the first three years, but then became stable. At the Maribyrnong River bridge, on Ballarat-road, where conditions were almost identical with those at the Nicholson, no lateral movement at all took place, though the embankment settled vertically up to 2 feet. Considering these three different effects, it appears that where approach banks must be placed over bad ground adjacent to a bridge, it would be very desirable to place the embankment preferably a year in advance of the construction of the bridge, as it is in that period that the major earth adjustment takes place. Frequently, the construction of a bridge requires so much more time and cost than the embankments that abutments must be one of the first portions built, rendering them liable to be displaced by these earth movements. To build the approaches first would need a longer planning period than is usually feasible, and it may often be necessary, where deep soft silt is encountered in and adjacent to the stream, to lengthen the bridge by relieving spans at some extra cost.

PHILLIP ISLAND BRIDGE.

This structure, which was commenced in February, 1939, was referred to in the Twenty-sixth Annual Report, and its general nature was described and illustrated with a number of Plates in pages 72-73 of that Report. At 30th June, 1939, one anchor had been completed and the temporary trestle for construction purposes had been advanced for half the length of the Newhaven approach spans. Eight piers in this approach span were in course of construction. During the year ending 30th June, 1940, all plans were completed and this involved 75 sheets of plans. Construction work proceeded to the stage of completing all anchorages, piers, suspension span towers, and most of the decking on the approach spans on the Newhaven approach spans.

Total expenditure to 30th June, 1939, amounted to £9,652, while at 30th June, 1940, £42,335 had been spent, a total of £52,000 for the year.

During the year, all pile driving, the anchorages and the piers were completed. Steel joists for the girder approach spans were placed and the steel towers were fabricated, galvanized, and erected. A commencement was made in placing the timber crossbearers and decking on the approach spans. A start was made in preparing the main suspension cables for erection. The steel towers were guyed with cables across the main span and also back to the approach spans. This was necessary because the towers move by up to 1½ feet at the tops from their initial position until the main cables are finally loaded with the dead weight of the suspension span. This movement required the provision of rocker bases for the towers, and in consequence, support of a substantial nature was necessary until the main cables were erected.

The clay into which the piles were driven is an extremely fine-grained material with a slightly honey-combed structure and of apparently uniform characteristics to a great depth. During the driving of piles it was found that after driving 15 feet into this clay bed, resistance to driving remained relatively constant. Experiments were therefore made to determine whether the clay was such that, having been displaced laterally by the toe of the pile, it remained in a constant state or showed appreciable change in state with the lapse of time. The former condition would prevent friction on the sides of the pile from developing, and resistance to driving would all be concentrated at the toe. Practically no alteration occurred when piles were left for several days, and the penetration per blow was similar to that when driving previously ceased. Some piles were therefore made with sides tapering 2 inches per side in 20 feet, i.e., 14 inches by 14 inches, toe section increasing to 18 inches by 18 inches. Such piles would be effective in resisting further penetration over their full length, as no settlement could occur unless the section of the hole in the clay was increased uniformly over the full driven length of the pile. The load would then be distributed through the full depth of penetration. Tests on such piles clearly indicated that a considerable improvement, at least in dynamic resistance, resulted, the resistance of the tapered piles being approximately 40 per cent. greater than for piles with parallel sides. This phenomenon does not mean that all concrete piles should have tapered sides, and where piles are driven through relatively soft strata on to, or a very short distance into, a hard base, the normal parallel-sided pile would be better. It should, however, be applicable to many conditions where skin friction is an important factor.

TARRA RIVER, YARRAM, SOUTH GIPPSLAND HIGHWAY.

The old crossing consisted of a timber bridge over the summer channel, and a long floodway section towards Sale over the approach flats. During the year,

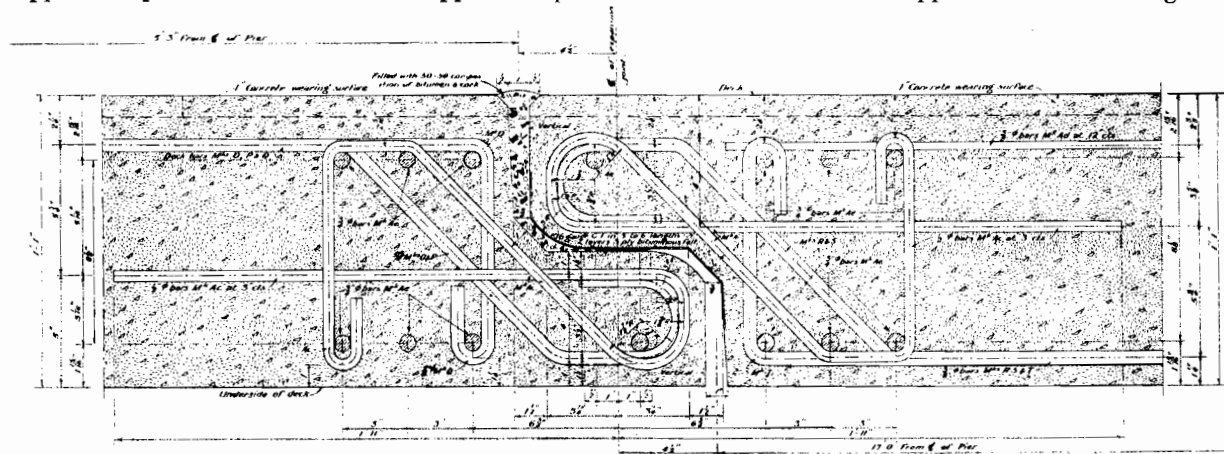


Fig. B.—Expansion Joint Detail.

a reinforced concrete flat slab bridge was constructed on a downstream alignment to obviate the floodway, and tenders were advertised for a new reinforced concrete bridge over the channel. The thin decks of flat slab bridges are dependent on continuity to distribute the bending moments over the piers as well as in the spans. Where the length of such bridges exceeds 100 feet, provision for expansion must be made. This can be done by means of a small cantilevered span, and the type of detail in use is shown in Fig. B. Great care must be taken to ensure freedom of movement in such joints, as the shrinkage in casting adjacent sections of the work is sufficient to cause cracking in the concrete at the joints if any trace of binding occurs.

STRUCTURES ON PRINCES HIGHWAY WEST, SECTION 1.

Two bridges, two large box culverts and several smaller drainage structures were constructed on the Laverton deviation. At the crossing over the railway, an overhead bridge 64 feet long and 24 feet wide was constructed by the Railways Department on behalf of the Board.

A considerable amount of traffic crosses the highway near the Kororoit Creek-road junction. To eliminate the danger to highway traffic from this source, a new reinforced concrete subway to carry this traffic under the highway was provided. This subway is 90 feet long and 25 feet wide, and provides two 11½-ft. clear openings, with a headroom of 10 feet. The roads cross at an acute angle, and it was necessary to construct the subway on a skew of 60 degrees. To clear stormwater from the subway an automatic ejector pump housed in a reinforced concrete pump-house was required.

At Skeleton Creek, and also at Hovell's Creek, where there were floodways, new concrete structures have been provided, and the highway raised above flood levels.

BROKEN RIVER BRIDGE, BENALLA.

The concrete bridge which was built 30 years ago on the Sydney-road was widened in reinforced concrete to provide a 30-ft. roadway and two pedestrian footways. The piers were widened in the same style as the older substructure, and ten spans each 40 feet were constructed with simply supported spans. The defective beam stems in the old bridge were removed, main reinforcement in the stems properly re-spaced, and the necessary additional shear stirrups added. The old concrete broken out was tested in the laboratory by complete disintegration, and cement content and aggregate gradings were checked. It was found that cement content was approximately 470 lb. per cubic yard of finished concrete, but as the aggregate used had a maximum size of ¼ inch, the concrete was virtually a 1:7 mortar, and under the circumstances the bridge stood up very well. It is an indication that properly designed and constructed reinforced concrete bridges should give very good service. The widened bridge, in which provision was made also for easing a sharp curve at the Post Office end, was officially opened in May, 1940.

LAANECOORIE BRIDGE.

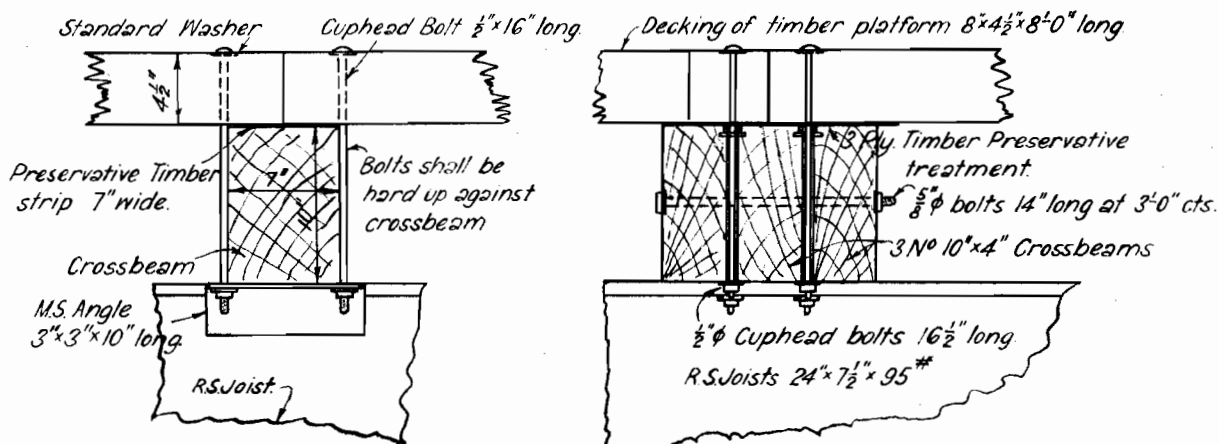
In the T beam constructed about 30 years ago, insufficient shear reinforcement was placed in the beam stems, and usually the central half of the stems was unreinforced for shear. In a bridge over the Loddon River near Laanecoorie, between the shires of Bet Bet and Marong, extensive cracking of the stems had resulted, and the bridge was unsafe for normal wheat traffic. The beams were strengthened by cutting chases down the sides of the beams and placing U stirrups projecting up through holes in the deck and tightened by bolts screwed into the thread ends. The chases were filled with cement mortar which was well cured by wet hessian for a week. The total cost of the work was £700 for a bridge length of 420 feet or £1 13s. 4d. per foot. The value of the bridge would be approximately £5,000, and this expenditure, which should give it a life of at least twenty years, was therefore thoroughly justified.

BARWON RIVER BRIDGE, BARWON HEADS.

This timber bridge was constructed in 1927 at a cost of £11,500, and consists of 33 spans with a total overall length of 1,009 feet. The design followed the standard practice at that time, the timber decking being placed transversely to the direction of traffic and secured to spiking planks resting directly on the stringers. To provide a smooth running surface for traffic, longitudinal running planks were provided over the central 10 feet. By 1933, traffic had greatly increased and was quickly wearing down the running planks. In addition, there was danger to traffic as vehicles were reluctant to leave the smooth running planks to give way to approaching vehicles. To overcome these troubles, running planks were continued for the full width of the bridge and the surface was then sealed with bitumen.

This treatment, whilst satisfactory for traffic, greatly reduces the life of a structure. The very wide area of timbers in contact which cannot readily dry out after rain produces ideal conditions for the development of decay.

An inspection late in 1939 showed that considerable decay had taken place in the running planks and the transverse decking. Experience has shown that it is almost impossible to eliminate fungus once it is so firmly established, unless the conditions which promote its growth are removed. In any event, it was doubtful if even very heavy applications of creosote would penetrate under the running planks. The removal of the running planks to expose the top of the decking to the beneficial effects of sunlight and air was not feasible as the running surface for traffic would have been extremely rough. Under these conditions, some other solution than the treatment of the existing timbers in place had to be found, as if nothing were done it would probably have been necessary to replace the whole of the decking within a few years. The difficulty of replacing individual deck planks which failed, underneath the running planks, was also a factor.



Figs. C (left) and D (right).—Details of Deck Fastening.

To replace the decking and running planks in new material would have cost approximately £3,000, and would have meant a recurrence of the present troubles. It was therefore decided to convert the existing deck system to longitudinal decking laid on transverse crossbeams in conformity with the Board's present standard practice. It is anticipated that the cost of this work will be £1,750.

In this reconstructed deck the only new timber is in the crossbeams, all other timber being the best material salvaged from the old deck and heavily treated with creosote. Timber to timber crossings are reduced to a minimum, and where they occur, precautions are taken. Between the longitudinal decking and the crossbeams, strips of three-ply timber heavily treated with timber preservatives are placed. The crossbeams are separated from the stringers by strips of bituminous felt. Another danger point for decay is removed by the elimination of bolts passing through the deck and crossbeams. Deck bolts pass down the sides of the crossbeams to angles underneath the latter. (See Fig. C.)

The method of construction outlined allows a free circulation of air round all the timbers so that any portions that become damp tend to dry out quickly without initiating decay. It is considered that the old timbers re-used, properly treated with creosote and placed under these favorable conditions, will have a further long lease of life.

The work of reconstruction will be carried out in half widths over short lengths of approximately 100 feet, and will be done between June and December to avoid interference with summer traffic.

WOORAYL SHIRE, MAIN SOUTH GIPPSLAND ROAD.

During the year, the bridge referred to in the Twenty-sixth Annual Report (pp. 73-74) was completed. Due to inability to provide funds for a bridge on a high standard of alignment, the bridge was constructed near the old bridge, and the alignment adjusted to give improved curves on to the bridge. This necessitated the extension of the curves on to the bridge. The longitudinal decking was constructed in chords of 16 feet and the joints of all planks meet on one transverse line. The detail for fastening the planks is shown in Fig. D, which indicates that a triple crossbeam under the deck junctions is used. The bolts securing the deck pass between the three elements and a tight joint is made without any boring of the crossbeam. The three elements of the crossbeam are bolted through transversely.

With this fastening, special consideration of the conditions at the ends of deck planks was necessary. One great difficulty in all timber joints is the provision of a detail which will be in accordance with the design assumptions. If no fixing moment is considered to be present, the fastening must allow rotation. If, however, rotation is prevented, a moment is developed and unless the joint is strong enough to resist this moment, local failure such as compression of the timber under the washers will result. This causes a loosening of the joint, and the characteristic of silent decking may not be realized. Standard details in general use provide for a bolt passing through the deck plank at the side of the crossbeam (Fig. C), and the deflected deck plank is thereby enabled to rotate freely. This type of joint, however, requires the use of metal plates, which consist of heavy flats or of light angles under the crossbeam, and with the increasing difficulty of obtaining structural steel during war-time conditions, the triple crossbearer type is advantageous, but involves a considerable degree of restraint at the ends of deck planks. In materials having shrinkages of from 10 to 22 per cent. of the original green section, accurate mathematics may only be misleading in computing the strength of this partially fixed joint. The maximum end fixing moment without failure of the bolts is the stress on two bolts $\frac{1}{2}$ -in. diameter, and having net

sections at the root of the thread of 0.243 square inch multiplied by the lever arm between the bolts and the bearing. This is approximately equal to 30,000 inch lb. If the plank were completely fixed, the maximum moment caused in the joint from a wheel load on the plank would be approximately 50,000 inch lb. As the elastic stretch in the bolt, 15 inches long, and the compression in the timber would allow a rotation of a sufficient amount to reduce the actual end fixing moment to less than half this figure, such joints are just theoretically adequate, and (subject to reasonable maintenance in keeping the bolts tight) work very well.

The continuous slot between the elements of the triple crossbeam also enables planks to be wedged together as shrinkage proceeds, and extra filler pieces can be readily inserted.

EUMEMMERING CREEK, PRINCES HIGHWAY EAST, SECTION 1.

The old timber bridge here, which had been repaired from time to time, gave constant trouble as the result of scour in the creek. It was replaced during the year by a timber and steel joist bridge constructed in half widths by contract.

As the width is 24 feet, 12 feet was available for traffic, and during construction one-way traffic was necessary. In spite of the fact that the bridge is on a straight section of level road and was surrounded during reconstruction by large notices and well lit at night, five accidents to vehicles were noted. Each of these occurred at high speed and may have resulted in severe casualties. During the period of ten weeks during which the bridge was under construction, probably 50,000 vehicles negotiated the crossing safely, and the five vehicles involved in the accidents is a small percentage of the total traffic. These accidents, however, are large for any one location on State highways, and are about 30 times as frequent as for any other place. They draw attention to the necessity of very great care in locating warning signs and suggest that there is a small percentage of drivers who are unable to derive from fixed signs an adequate impression of variations in driving conditions. Considerably greater expense would be incurred in providing flashing signs as an additional protection to unobservant, tired, or foolish drivers, and this is not a warrantable expenditure.

DURABILITY OF TIMBER.

Examination of old bridges clearly shows the importance of very close inspection of timber supplied for bridge construction. Specifications are explicit in the tolerances allowed, and only by rigid adherence to these limits will satisfactory structures be provided. Squared timber containing heartwood is not only valueless, but a source of future expense, as the cost of subsequent removal is usually considerable. Sapwood will always rot in a few years, and in accepting timber having waney edges and with sapwood, the engineer should visualize the piece of timber with such sapwood removed. If it would be satisfactory when the sapwood is removed—and removal should be done before placing—it will be found that it would easily comply with the standard specifications. Inferior species which may also be a serious cause of early rotting, can now be detected by microscopic examination, and when in doubt, samples should be referred to the laboratory for test.

BRIDGE MAINTENANCE.

The State of Victoria has passed through so many vicissitudes in its relatively short history that there may have been reasonably sound excuse for the almost universal lack of bridge maintenance. However, it should not be necessary to give reasons why the policy of the past should be radically altered.

The necessity to develop the State as rapidly as possible without incurring huge burdens of debt and ever-increasing interest charges, has required that all work should be done as cheaply as possible. The costly cut stonework bridges of the middle ages could be neglected for centuries, but the light timber and steel bridges of this State cannot be safely neglected for one year. Timber commences to decay while still in most growing trees, and the forces of nature are greatly accelerated when the tree is killed. Fungus and insect attack are necessary in our forests to remove the dead and fallen timber, and these same agencies of decay operate on timbers used for bridges just as they do in the forests. Steel which is produced from iron ore by a de-oxidizing or reducing process readily absorbs oxygen from the air, and gradually reverts to its original condition. Mortars and concretes are entirely dependent for their stability on chemical changes, and under adverse chemical conditions become unstable and deteriorate. All these agencies of destruction operate at varying rates of speed with varying conditions.

In considering the use of timber for bridge purposes, considerable information can be obtained by an examination of a hardwood paling fence. The palings which are usually of a relatively inferior species will usually last for 30 years in good condition, except where they are secured to the horizontal bearers. Bearers usually rot away at their attachment to the posts, and the posts rot at the bearer joints and at ground level. The reasons for this is that fungus can thrive only under certain moisture conditions, and develops most rapidly where dampness persists, and where air is excluded. The remedy is to design timber structures so as to allow a free circulation of air wherever possible, and to protect the joints initially and subsequently. Where accumulations of dirt and manure are allowed on bridge decks, air is prevented from access to the timber, and the dirt keeps the timbers in the ideal condition for development of fungus growth. Fungus spreads quite readily, and will attack timbers which are normally in healthy positions by a rotting action on adjacent timbers, and the creation of spongy areas which are highly retentive of moisture. It is, therefore, essential that bridges should be kept clean.

Joints are unavoidable, and air is necessarily excluded while moisture may be present for extended periods from capillarity. They are the most difficult portions of the bridge to maintain, and are also the most vulnerable. In new timber construction, and in maintenance work, all joints should be made antiseptic by a softwood pad impregnated with creosote. In older

structures holes may be bored diagonally downwards toward joints and filled with creosote, which not only kills fungus infection, but when present in joints retains its effectiveness for a year or two. Shrinkage of timbers, which commences at the outer skin, causes surface cracks, which gradually deepen as the timber dries out. Such cracks provide very fine conditions for fungus development. A spray coat of creosote will usually find its way into most of these cracks and is very effective in killing and preventing fungus, and at the same time making conditions for insect life unbearable. Shrinkage in timbers goes on for up to ten years, with consequent steady reduction in section. If joints are left loose by neglecting to tighten bolts, the conditions allowed for in the design are absent. Water is drawn into joints with the passage of traffic, causing further assistance to decay. Sapwood in many species rots within a few years, and in those species should be trimmed off to allow the inner true wood to be kept dry.

Steel bridges must be kept properly painted to prevent rust. Rust is thought to be an electro-chemical phenomenon, and bare areas of steel corrode by very small electric currents passing between molecules of slightly dissimilar composition in the steel. The remedy is to keep the steel dry by painting. Paint must be applied in dry weather, and when the surface of the steel has been thoroughly cleaned free of rust, scale, dirt, &c.

It must be remembered that Australian timber resources are being depleted, and apart from the waste the replacement of bridges will become increasingly difficult because of the absence of suitable timber. Even now, it has become necessary to reduce the standard of quality of timber accepted, and species are being used now which are far less durable than those available even 25 years ago. The deposits of iron ore are limited, and in 30 years inferior deposits causing higher costs of steel will be all that is left at the present rate of consumption.

Bridge maintenance is not a job for casual labourers, and it is very desirable that an organization should be established in municipalities whereby a few men can be trained to this work, and equipped with the proper tools and equipment for doing the work. In some cases this may involve co-operation between councils, but most municipalities have sufficient structures to retain a few men on this work alone.

Yours obediently,

D. V. DARWIN.

APPENDIX "A"—continued.

COUNTRY ROADS BOARD LOAN ACCOUNT, ACT No. 3662.

RECEIPTS.		PAYMENTS.	
	£	s.	d.
1939.			
July 1. To Balance.	159	18	10
1940.			
June 30. State Loans Repayment Fund ..	2,074	11	11
	2,234	10	9
	<hr/>		
	2,234	10	9
	<hr/>		

BALANCE-SHEET AT 30TH JUNE, 1940.

LIABILITIES.		ASSETS.	
	£	s.	d.
Interest on Permanent Works ..	18,729	0	7
Loan Securities Issued ..	4,859,950	1	4
Less Amount Repaid ..	80,000	6	0
	4,779,950	1	4
Deduct Discount and Expenses ..	71,082	5	6
	4,708,867	15	10
Less Securities re-purchased and Cancelled from National Debt Sinking Fund ..	278,614	10	5
	4,430,253	5	5
Less—			
Redemption Funds ..	85,219	1	1
Main Roads Sinking Fund ..	285,688	7	7
Repaid to State Loans Repayment Fund ..	432,114	13	1
	803,022	1	9
State Loans Repayment Fund ..	3,627,231	3	8
Contributions to National Debt Sinking Fund ..	337,683	1	0
Less Net Loss on Repurchase of Securities (including Exchange)	304,221	1	6
	11,979	13	6
Loan Redemption as Itemized above ..	292,241	8	0
	803,022	1	9
	5,078,906	15	0
	<hr/>		
	5,078,906	15	0
	<hr/>		

APPENDIX "A"—continued.

DEVELOPMENTAL ROADS LOAN ACCOUNT, ACT NO. 3662.

BALANCE-SHEET AT 30TH JUNE, 1940.

LIABILITIES.		ASSETS.	
	£ s. d.		£ s. d.
Loan Securities Issued	6,297,881 10 8	Permanent Works Expenditure	6,426,767 10 11
Deduct Discount and Expenses	112,020 5 10	National Debt Sinking Fund (Cash in Hand)	20,585 18 0
	6,185,861 4 10	Contributions Payable by Municipalities, Act 3662 (Sec. 83/16 Sec. 84/17) (Subject to Relief)	8,250 0 0
Less Repurchased and Cancelled from National Debt Sinking Fund	420,898 6 1	Contributions Payable by Municipalities, Act 3662 (Sec. 86/1) (subject to Relief)	94,028 17 5
	5,764,962 18 9		
Redemption Funds	646,386 7 4		
Developmental Roads Sinking Fund	55,083 0 2		
	701,469 7 6		
State Loans Repayment Fund	5,063,493 11 3		
Contributions to National Debt Sinking Fund	239,896 6 1		
Less Net Loss on Repurchase of Securities (including Exchange)	459,581 14 0		
	18,097 9 11		
Loan Redemption itemized above	441,484 4 1		
Treasury Developmental Railways Act No. 3662 (Sec. 83/16)	701,469 7 6		
Consolidated Revenue Act No. 3662 (Sec. 84/17)	1,375 0 0		
	6,875 0 0		
Interest Act 3662 (Sec. 86/1)	77,372 3 10		
Contributions Postponed	16,656 13 7		
	94,028 17 5		
	£8,548,622 6 4		£8,548,622 6 4

DEVELOPMENTAL ROADS INTEREST—ACT NO. 3662—(SECTIONS 83/16, 84/17, AND 86/1.)

RECEIPTS.		PAYMENTS.	
	£ s. d.		£ s. d.
1940.		1940.	
June 30. To Interest on account of Municipalities provided by Relief (Acts Nos. 4140 and 4415)—		June 30. By Payments to Treasury (Relief)	
Act No. 3662—83/16	2,750 0 0		
84/17	11,000 0 0		
86/1	77,372 3 10		
	91,122 3 10		
	£91,122 3 10		£91,122 3 10

AUDITOR-GENERAL'S CERTIFICATE.

The accounts have been audited and compared with the books with which they agree. Reconciliations have also been made with the books of the Treasury. Subject to the qualification that the Balance Sheets do not include as assets Permanent Works and improvements resulting from expenditure from Revenue Moneys and extraneous Funds, the several statements, in my opinion exhibit a correct view of the affairs of the Board at the 30th June, 1940.

F. A. PEVERILL,

Auditor-General.

26th November, 1940.

E. J. HICKS,

Accountant.

11th November, 1940.

APPENDIX "B."

COUNTRY ROADS BOARD.

STATEMENT OF APPORTIONMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE OF MAIN ROADS FOR THE YEAR ENDED 30TH JUNE, 1939.

Name of Municipality.	Permanent Works.		Maintenance.	Name of Municipality.	Permanent Works.		Maintenance.
	Principal.	Interest.	Amount.		Principal.	Interest.	Amount.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.
				Brought forward	3,850 13 2	101 6 2	52,226 6 5
Alberton Shire	2,575 4 0	Essendon City ..	..	..	71 1 2
Alexandra Shire	1,666 1 11	Euroa Shire ..	..	..	2,184 16 8
Arapiles Shire	265 0 0	Ferntree Gully Shire..	..	..	2,261 9 3
Ararat Shire	2,739 2 8	Flinders Shire ..	..	..	3,121 0 4
Ararat Town	192 14 3	Footscray City ..	13 18 8	0 11 5	2,925 10 3
Avoca Shire	1,158 7 8	Frankston and Hastings Shire ..	..	..	2,094 13 1
Avon Shire	912 10 2	Gisborne Shire ..	..	..	622 19 4
Bacchus Marsh Shire	1,483 7 3	Glenelg Shire ..	..	..	3,393 10 0
Bairnsdale Shire	953 7 7	Glenlyon Shire ..	..	..	1,295 19 4
Ballan Shire	745 15 6	Gordon Shire ..	..	..	500 19 2
Ballarat Shire	551 16 3	Goulburn Shire ..	..	..	541 8 6
Ballaarat City	70 7 4	Grenville Shire ..	..	..	1,078 6 4
Bannockburn Shire	601 12 3	Hamilton Town ..	..	..	60 9 4
Barrabool Shire	1,030 17 1	Hampden Shire ..	..	..	3,141 15 3
Bass Shire	1,394 5 9	Healesville Shire ..	..	..	707 19 5
Beechworth Shire	1,462 9 4	*Heidelberg City	9 6 0	0 6 3	1,158 13 8
Belfast Shire	943 1 2	Heytesbury Shire ..	..	..	1,591 19 10
Bellarine Shire	1,240 10 2	Horsham Town ..	..	..	2,342 2 6
Benalla Shire	751 4 6	Huntly Shire ..	..	..	88 15 0
Berwick Shire	1,814 16 9	Inglewood Borough	..	..	12 10 5
Bet Bet Shire	661 8 5	Kaniva Shire ..	..	..	1,020 0 6
Birchip Shire	393 7 10	Kara Kara Shire ..	..	..	1,161 1 4
Blackburn and Mitcham Shire	813 15 4	Karkaroc Shire ..	..	..	1,184 11 0
Box Hill City ..	614 15 11	16 16 5	664 17 3	Keilor Shire ..	..	..	230 13 7
Braybrook Shire	82 11 1	Kerang Shire ..	..	..	66 7 4
Bright Shire	1,078 16 10	Kilmore Shire ..	..	..	313 3 9
Brighton City	Koroit Borough ..	..	..	548 11 10
Broadford Shire	41 16 9	Korong Shire ..	..	..	408 3 1
Broadmeadows Shire	220 4 9	Korumburra Shire ..	..	..	3,966 16 10
Bulla Shire	654 0 6	Kowree Shire ..	..	..	2,399 8 1
Buln Buln Shire	2,341 15 5	Kyneton Shire ..	..	..	1,125 15 5
Bungaree Shire	79 13 2	Leigh Shire ..	..	..	1,284 16 4
Buninyong Shire	604 9 4	Lexton Shire ..	..	..	752 1 8
Camberwell City ..	3,226 11 3	84 3 6	402 9 6	Lillydale Shire ..	..	..	1,287 2 1
Castlemaine Borough	447 2 0	Lowan Shire ..	..	..	874 15 6
Charlton Shire	804 16 11	Maffra Shire ..	..	..	3,082 9 9
Chelsea City	280 11 4	Maldon Shire ..	..	..	923 14 4
Chiltern Shire	548 8 5	Malvern City ..	769 6 6	19 16 10	6 6 6
Clunes Borough	147 13 9	Mansfield Shire ..	..	..	2,963 19 8
Coburg City	Marong Shire ..	..	..	656 9 1
Cohuna Shire	726 10 3	Maryborough Borough ..	..	..	495 6 10
Colac Shire	2,109 2 11	*Melbourne City	38,242 4 6	..	2 11 2
Colac Borough	9 12 4	Melton Shire ..	..	..	292 4 7
*Collingwood City	9 6 0	0 6 3	85 12 8	Metcalfe Shire ..	..	..	525 6 11
Corio Shire	91 1 10	Mildura Shire ..	..	..	1,028 1 3
Cranbourne Shire	1,654 4 0	Mildura City ..	..	..	51 19 0
Creswick Shire	1,875 8 3	Minhamite Shire ..	..	..	2,384 3 4
Dandenong Shire	1,479 17 8	Mirboo Shire ..	..	..	1,893 19 3
Daylesford Borough	26 11 1	Moorabbin City ..	88 4 10	3 4 0	531 3 2
Deakin Shire	802 7 10	Mordialloc City ..	..	..	455 19 1
Dimboola Shire	2,002 7 3	Mornington Shire ..	..	..	543 0 6
Donald Shire	1,689 10 0	Mortlake Shire ..	..	..	2,008 11 11
Doncaster and Templestowe Shire	462 7 6	Morwell Shire ..	..	..	1,448 0 3
Dundas Shire	1,669 16 6	Mount Rouse Shire ..	..	..	1,678 4 1
Dunmunkle Shire	2,748 6 11	Mulgrave Shire ..	2,636 5 8	65 9 4	446 10 8
Eaglehawk Borough	221 7 8	McIvor Shire ..	..	..	803 19 4
East Loddon Shire	300 19 1	Narracan Shire ..	..	..	3,419 3 9
Echuca Borough	590 9 8	Newham and Woodend Shire ..	..	..	683 18 3
Eltham Shire	860 2 10	Newstead and Mount Alexander Shire ..	..	..	727 0 5
Carried forward	3,850 13 2	101 6 2	52,226 6 5	Carried forward	45,609 19 4	190 14 0	125,097 16 8

* Liability paid in full.

* Liability paid in full.

**STATEMENT OF APPORTIONMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION OF MAIN
ROADS, ETC.—continued.**

Name of Municipality.	Permanent Works.		Maintenance.	Name of Municipality.	Permanent Works.		Maintenance.				
	Principal.		Amount.		Principal.		Amount.				
	£	s. d.	£		s. d.	£	s. d.				
Brought forward	45,609	19 4	190 14 0	125,097	16 8	Brought forward	47,622	13 6	238 2 8	151,179	13 7
Newtown and Chilwell Town	85 18 0	..	Strathfieldsaye Shire ..	..	..	..	932 19 9	..
Numurkah Shire	1,228 9 7	..	Swan Hill Shire ..	..	..	..	1,118 14 10	..
Oakleigh City ..	113	19 1	3 16 1	188 8 3	..	Talbot Shire ..	..	..	..	566 18 5	..
Omeo Shire	1,289 8 8	..	Tambo Shire ..	..	..	..	831 2 9	..
Orbost Shire	742 15 11	..	Towong Shire ..	..	..	..	212 16 7	..
Otway Shire	1,889 9 5	..	Traralgon Shire ..	..	..	..	985 5 7	..
Oxley Shire	1,929 9 6	..	Tullaroop Shire ..	..	..	..	2,258 12 9	..
Phillip Island Shire Port Fairy	142 2 1	..	Tungamah Shire ..	..	..	..	1,061 18 4	..
Borough	Upper Murray Shire ..	..	..	..	559 6 5	..
Portland Shire	2,152 13 9	..	Upper Yarra Shire ..	..	..	..	638 15 2	..
Preston City	908 6 10	..	Violet Town Shire ..	..	..	..	182 8 2	..
Pyalong Shire	350 0 7	..	Walpeup Shire ..	..	..	..	952 16 8	..
Queenscliffe Borough	168 8 1	..	Wangaratta Shire ..	..	..	..	804 16 0	..
Ringwood Borough	661 5 10	..	Wangaratta Borough ..	..	..	..	68 7 3	..
Ripon Shire	1,583 9 7	..	Wannon Shire ..	..	..	..	1,245 9 10	..
Rochester Shire	1,616 14 0	..	Waranga Shire ..	..	..	..	2,343 12 11	..
Rodney Shire	1,808 14 5	..	Warracknabeal Shire ..	..	..	..	2,963 5 10	..
Romsey Shire	700 6 0	..	Warragul Shire ..	..	..	..	1,138 14 5	..
Rosedale Shire	1,093 6 4	..	Warrnambool Shire ..	..	..	..	2,500 10 3	..
Rutherglen Shire	633 6 7	..	Warrnambool City ..	..	..	..	332 14 1	..
Sale Town	8 4 2	..	Werribee Shire ..	..	..	..	733 14 8	..
Sandringham City	1,898	15 1	43 12 7	206 2 6	..	Whittlesea Shire ..	..	..	..	1,550 11 4	..
Sebastopol Borough	26 13 3	..	Wimmera Shire ..	..	..	..	1,648 14 1	..
Seymour Shire	784 9 2	..	Winchelsea Shire ..	..	..	..	623 8 0	..
St. Arnaud Borough	124 1 8	..	Wodonga Shire ..	..	..	..	540 5 0	..
Shepparton Shire	1,214 9 3	..	Wonthaggi Borough ..	..	..	..	93 18 3	..
Shepparton Borough	92 0 4	..	Woorayl Shire ..	..	..	..	4,753 6 2	..
South Barwon Shire	638 0 1	..	Wycheproof Shire ..	..	..	..	713 8 1	..
South Gippsland Shire	1,764 8 6	..	Yackandandah Shire ..	..	..	..	1,950 15 1	..
Stawell Shire	1,888 16 0	..	Yarrowonga Shire ..	..	..	..	223 17 9	..
Stawell Borough	161 18 7	..	Yea Shire ..	..	..	..	1,361 1 9	..
Carried forward	47,622	13 6	238 2 8	151,179	13 7	Totals ..	47,622	13 6	238 2 8	187,071	19 9

APPENDIX C.

COUNTRY ROADS BOARD.

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE OF MAIN ROADS, TOURISTS' ROADS, AND STATE HIGHWAYS FOR YEAR ENDING 30th JUNE, 1940.

Municipality and Road.	Permanent Works (Loan).		Maintenance Works (Country Roads Board Fund).	
	Amount.	Total.	Amount.	Total.
MAIN ROADS UNDER MUNICIPALITIES.				
ALBERTON SHIRE—	£	s. d.	£	s. d.
Albert River Road	771	16 6
Albert River-Welshpool Road	669	18 5
Balook-Yarram Road	686	13 7
Carrajung-Gormandale Road	2,035	6 4
Gelliondale Road	483	4 0
Tarra Valley Road	895	6 6
Yarram-Boolarra Road	913	12 11
Yarram-Port Albert Road	677	19 7
Yarram-Won Wron Road	277	14 6
				7,411 12 4
ALEXANDRA SHIRE—				
Cathkin-Mansfield Road	661	18 9
Cathkin-Mansfield Road (Tree Planting)	29	0 5
Healesville-Alexandra Road	1,907	12 7
Healesville-Alexandra Road (Tree Planting)	23	19 7
Terip Terip Road	113	8 6
Upper Goulburn Road	2,466	17 7
Yarck Road	317	13 0
				5,520 10 5
ARAPILES SHIRE—				
Harrow-Miga Lake Road
Horsham-Natimuk-Edenhope Road	1,032	13 3
Horsham-Natimuk-Edenhope Road (Tree Planting)	46	19 2
				1,079 12 5
ARARAT TOWN—				
Avoca Road	4	7 1
Ballarat-Stawell Road	1,351	13 3
Port Fairy Road	17	13 1
				1,373 13 5
ARARAT SHIRE—				
Ararat-Elmhurst Road	3,078	14 10
Ararat-St. Arnaud Road	48	16 9
Ararat-Warrnambool Road	1,123	18 7
Ballarat-Hamilton Road	491	13 0
Ballarat-Hamilton Road (Tree Planting)	32	9 1
Maroona-Glenhompson Road	3,456	17 4
				8,232 9 7
AVOCA SHIRE—				
Ararat Road	984	18 9
Ararat-St. Arnaud Road	422	15 8
Ballarat-St. Arnaud Road	2,622	15 3
Ballarat-St. Arnaud Road (Tree Planting)	9	11 11
Bealiba Road	494	5 8
Landsborough Road	36	5 9
Maryborough Road	94	8 2
Maryborough-Natte Yallock Road	262	0 5
Moonambel Road	677	9 11
				5,604 11 6
AVOCA AND BET BET SHIRES (Joint Works)—				
Maryborough-Natte Yallock Road	263	14 4
				263 14 4
AVOCA AND KARA KARA SHIRES (Joint Works)—				
Navarre Road	11	9 11
				11 9 11
AVOCA AND STAWELL SHIRES (Joint Works)—				
Ararat-St. Arnaud Road	148	11 0
				148 11 0
AVON SHIRE—				
Bengworden Road	439	9 1
Bengworden Road (Tree Planting)	13	17 11
Briagolong-Stratford Road	57	6 5
Dargo Road—Sec. A., £898 6s. 5d.; Sec. B., £988 8s. 4d.	1,886	14 9
Dargo Road (Tree Planting)	10	9 11
Maffra-Sale Road	63	5 3
Maffra-Stratford Road	10	16 9
Maffra-Stratford Road (Tree Planting)	13	18 0
				2,495 18 1
Carried forward	32,142 3 0

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—*continued.*

Municipality and Road.	Permanent Works (Loan).		Maintenance Work (Country Roads Board Fund).	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	32,142 3 0
BACCHUS MARSH SHIRE—				
Bacchus Marsh-Ballieng Road	1,132 1 9	
Ballarat Road	18 12 7	
Geelong-Bacchus Marsh Road	1,484 15 0	
Geelong-Bacchus Marsh Road (Tree Planting)..	75 0 0	
Gisborne Road	1,213 5 8	
Gisborne Road (Tree Planting)	40 0 0	
				3,963 15 0
BACCHUS MARSH AND CORIO SHIRES (Joint Works)—				
Bacchus Marsh-Ballieng Road	789 0 10	
				789 0 10
BAIRNSDALE SHIRE—				
Bairnsdale-Lindenow Road	319 9 9	
Bairnsdale-Lindenow Road (Tree Planting)	10 0 0	
Bairnsdale-Paynesville Road	268 4 6	
Bairnsdale-Paynesville Road (Tree Planting)	4 6 7	
Bengworden Road	368 12 7	
Bullumwaal-Tabberabbera Road	869 16 1	
Bullumwaal-Tabberabbera Road (Tree Planting)	10 0 0	
Princes Highway	269 0 0	
Princes Highway (Tree Planting)	8 11 4	
				2,128 0 10
BALLAN SHIRE—				
Ballarat Road (Tree Planting)	10 0 0	
Daylesford Road	1,057 19 10	
Gordon-Meredith Road	346 7 3	
Mount Wallace Road	657 10 2	
Spargo Creek Road	13 19 5	
				2,085 16 8
BALLAN AND BUNINYONG SHIRES (Joint Works)—				
Gordon-Meredith Road	17 19 10	
				17 19 10
BALLARAT SHIRE—				
Ballarat-Lexton Road	2,215 19 0	
Ballarat-Lexton Road (Tree Planting)	86 10 9	
Clunes-Creswick Road	99 2 5	
Maryborough-Ballararat Road	1,574 7 4	
Maryborough-Ballararat Road (Tree Planting)	49 5 7	
				4,025 5 1
BALLAARAT CITY—				
Melbourne Road	1,231 16 9	
				1,231 16 9
BALLAARAT CITY AND BALLARAT SHIRE (Joint Works)—				
Ballarat-Creswick Road	243 13 2	
				243 13 2
BANNOCKBURN SHIRE—				
Gordon-Meredith Road	12 11 11	
Inverleigh Road	1,566 11 8	
Shelford-Bannockburn Road	448 10 8	
				2,027 14 3
BARRABOOL SHIRE—				
Anglesea Road	1,888 9 8	
Hendy Main Road	1,881 7 0	
				3,769 16 8
BASS SHIRE—				
Almurta Road	188 19 6	
Almurta-Grantville Road	270 3 8	
Anderson-Dalyston Road	1,017 4 7	
Dalyston-Glen Forbes Road	622 16 6	
Dalyston-Wonthaggi Road	186 4 2	
Inverloch-Wonthaggi Road	116 5 9	
Korumburra-Wonthaggi Road	165 16 9	
Main Coast Road	1,166 1 5	
Wonthaggi Loch Road	1,501 18 5	
				5,235 10 9
BASS SHIRE AND WONTHAGGI BOROUGH (Joint Works)—				
Loch-Wonthaggi Road	11 9 9	
				11 9 9
BEECHWORTH SHIRE—				
Beechworth Road	2,039 11 1	
Bright Road	169 5 7	
Chiltern-Beechworth Road	168 8 6	
Evertton-Myrtleford Road	1,283 19 6	
Myrtleford-Yackandandah Road	142 14 5	
Stanley Road	513 15 10	
				4,317 14 11
BEECHWORTH, CHILTERN, AND YACKANDANDAH SHIRES (Joint Works)—				
Beechworth-Wodonga Road	210 5 4	
				210 5 4
BEECHWORTH AND WANGARATTA SHIRES (Joint Works)—				
Beechworth Road	48 0 2	
				48 0 2
Carried forward	62,248 3 0

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—*continued.*

Municipality and Road.	Permanent Works (Loan).				Maintenance Works (Country Roads Board Fund).			
	Amount.		Total.		Amount.		Total.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Brought forward	88,322	14 10
BULN BULN SHIRE—								
Bloomfield Road	3	4 2		
Drouin-Poowong Road	192	6 5		
Fumina Road	258	11 7		
Kooweerup-Longwarry Road	33	15 10		
Loch Valley Road	126	2 1		
Longwarry-Drouin Road	504	15 10		
Main Neerim Road	806	5 2		
Main South Road	986	1 10		
Neerim East Road	63	15 6		
Neerim North-Noojee Road	72	16 5		
Princes Highway	104	15 6		
Westernport Road	190	6 11		
							3,342	17 3
BULN BULN AND BERWICK SHIRES (Joint Works)—								
Kooweerup-Longwarry Road	190	10 3		
							190	10 3
BUNGAREE SHIRE—								
Daylesford-Ballararat Road	612	10 10		
							612	10 10
BUNINYONG SHIRE—								
Ballarat-Rokewood Road	727	7 0		
Elaine-Mount Mercer Road	76	14 1		
Navigators Road	166	12 11		
							970	14 0
CAMBERWELL CITY—								
Doncaster Road (O.M.)	1,122	10 0		
							1,122	10 0
CAMBERWELL CITY AND DONCASTER AND TEMPLESTOWE SHIRE (Joint Works)—								
Doncaster Road (O.M.)	4	10 0		
							4	10 0
CAMBERWELL CITY AND MULGRAVE SHIRE (Joint Works)—								
Warrigal Road (O.M.)	145	7 11		
							145	7 11
CASTLEMAINE BOROUGH—								
Castlemaine-Maryborough Road	611	4 3		
Melbourne-Bendigo Road	1,196	1 10		
							1,807	6 1
CHARLTON SHIRE—								
Bendigo Road	60	9 2		
Charton-Durham Ox Road	973	4 7		
Charton-Durham Ox Road (Tree Planting)	100	6 9		
Donald Road	774	16 2		
Donald Road (Tree Planting)	25	1 8		
St. Arnaud Road	1,860	7 8		
St. Arnaud Road (Tree Planting)	100	6 4		
Wycheproof-Wooroonook Road	1,042	7 9		
							4,937	0 1
CHELSEA CITY—								
Edithvale-Springvale Road	1,105	4 8		
Point Nepean Road	1,599	8 8		
							2,704	13 4
CHILTERN SHIRE—								
Barnawartha-Howlong Road	167	10 3		
Chiltern-Beechworth Road	218	19 3		
Chiltern-Howlong Road	227	10 1		
Chiltern-Rutherglen Road	175	4 0		
Sydney Road	7	8 11		
							796	12 6
CLUNES BOROUGH—								
Ballarat-Maryborough Road	11	15 10		
Ballarat-Maryborough Road (Tree Planting)	7	3 9		
							18	19 7
COHUNA SHIRE—								
Cohuna-Koondrook Road	476	4 1		
Cohuna-Koondrook Road (Tree Planting)	36	7 8		
Cohuna-McMillans Road	267	5 7		
Korooop Road	95	13 10		
Leitchville Road	2,390	7 10		
Pyramid-Leitchville Road	81	17 4		
							3,347	16 4
COLAC SHIRE—								
Colac-Ballararat Road	1,810	7 8		
Colac-Beech Forest Road	752	2 3		
Colac-Cororooke Road	238	18 5		
Colac-Forrest Road	2,467	12 11		
Cressy-Inverleigh Road	1,863	5 1		
Swan Marsh Road	1,822	9 11		
							8,954	16 3
COLAC SHIRE AND COLAC BOROUGH (Joint Works)—								
Colac-Forrest Road	5	0 9		
							5	0 9
Carried forward	117,284	0 0

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—continued.

Municipality and Road.	Permanent Works (Loan).		Maintenance Works (Country Roads Board Fund).	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	117,284 0 0
COLAC BOROUGH—				
Princes Highway	728 2 8	
Princes Highway (Tree Planting)	46 17 10	775 0 6
CORIO SHIRE—				
Geelong-Bacchus Marsh Road	768 8 8	768 8 8
CRANBOURNE SHIRE—				
Baxter-Tooradin Road	337 12 5	
Cranbourne-Frankston Road	856 9 6	
Kooweerup-Longwarry Road	1,295 12 4	
Kooweerup-Pakenham Road	200 19 11	
Main Coast Road	328 0 1	
Westernport Road	502 0 1	3,520 14 4
CRESWICK SHIRE—				
Castlemaine-Ballarat Road	2,733 10 5	
Castlemaine-Ballarat Road (Tree Planting)	13 3 5	
Clunes-Creswick Road	33 14 11	
Clunes-Creswick Road (Tree Planting)	14 19 2	
Creswick-Smeaton Road	750 5 4	
Daylesford-Ballarat Road	795 19 7	
Daylesford-Ballarat Road (Tree Planting)	15 14 9	4,357 7 7
DANDENONG SHIRE—				
Cheltenham Road	684 9 3	
Princes Highway	800 2 9	
Springvale Road	234 19 7	1,719 11 7
DANDENONG AND CRANBOURNE SHIRES (Joint Works)—				
Dandenong-Frankston Road	214 0 7	214 0 7
DAYLESFORD BOROUGH—				
Ballan Road	57 16 8	
Ballarat Road	46 3 5	
Castlemaine Road	18 3 9	
Daylesford-Hepburn Road	596 18 3	
Daylesford-Trentham Road	11 10 0	
Malmsbury-Daylesford Road	33 7 6	763 19 7
DEAKIN SHIRE—				
Echuca-Cornella Road	66 0 6	
Echuca-Picola Road	15 4 3	
Kyabram-Nathalia Road	251 7 4	
Kyabram-Tongala Road	130 13 7	
Kyabram Tongala Road (Tree Planting)	14 6 9	
Rochester-Kyabram Road	998 13 6	
Undera-Wyuna Road	5 6 3	1,481 12 2
DEAKIN AND NUMURKAH SHIRES (Joint Works)—				
Echuca-Picola Road	1,180 14 3	1,180 14 3
DEAKIN AND RODNEY SHIRES (Joint Works)—				
Rochester-Kyabram Road	187 14 2	187 14 2
DIMBOOLA SHIRE—				
Hopetoun-Rainbow Road	30 7 8	
Horsham Road	0 7 6	
Rainbow Road	3,662 7 8	
Rainbow-Beulah-Birchip Road	1,062 12 3	
Rainbow Rises Road	380 3 5	
Warracknabeal Road	1,801 4 4	6,937 2 10
DIMBOOLA AND KARKAROC SHIRES (Joint Works)—				
Hopetoun-Rainbow Road	64 2 0	64 2 0
DONALD SHIRE—				
Donald-Charlton Road	1,022 17 6	
Marnoo-Donald Road	411 7 3	
St. Arnaud-Birchip Road	2,160 0 7	
St. Arnaud-Birchip Road (Tree Planting)	0 1 8	3,594 7 0
DONCASTER AND TEMPLESTOWE SHIRE—				
Doncaster Road	961 6 0	
Heidelberg-Warrandyte Road	737 8 7	
Warrandyte-Ringwood Road	168 9 0	1,867 3 7
DUNDAS SHIRE—				
Hamilton-Dunkeld Road	1,068 3 3	
Hamilton-Mount Gambier Road	1,221 1 1	
Hamilton-Port Fairy Road	1,349 5 7	
Hamilton-Warrnambool Road	1,167 11 8	4,806 1 7
Carried forward	149,522 0 5

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—*continued.*

Municipality and Road.	Permanent Works (Loan).		Maintenance Works (Country Roads Board Fund).	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	149,522 0 5
DUNMUNKLE SHIRE—				
Horsham-Murtoa Road		938 19 3	
Marnoo-Donald Road		87 2 9	
Marnoo-Rupanyup Road		2,086 10 8	
Minyip-Donald Road		1,179 19 3	
Minyip-Donald Road (Tree Planting)		9 15 4	
Rupanyup-Murtoa Road		270 6 4	
Rupanyup-Murtoa Road (Tree Planting)		9 17 1	
Stawell-Warracknabeal Road		3,062 5 6	
Stawell-Warracknabeal Road (Tree Planting)		60 7 4	
				7,705 3 6
EAGLEHAWK BOROUGH—				
Mount Korong Road		59 3 3	
				59 3 3
EAST LODDON SHIRE—				
Borong-Prairie Road		20 11 4	
Borong-Prairie Road (Tree Planting)		9 3 9	
Dingee Road		260 15 8	
Dingee Road (Tree Planting)		35 0 0	
Mitiamo Road		427 6 2	
Prairie Road		242 13 10	
				995 10 9
ELTHAM SHIRE—				
Eltham-Yarra Glen Road		1,794 3 7	
Hurstbridge-Kinglake Road		2,249 9 10	
Kangaroo Ground-Warrandyte Road		322 16 7	
Yarra Glen-Glenburn Road		688 6 2	
				5,054 16 2
EUROA SHIRE—				
Arcadia Road		119 1 6	
Avenel-Longwood Road		10 1 4	
Euroa-Arcadia Road		781 13 7	
Euroa-Mansfield Road		903 18 4	
Euroa-Strathbogie Road		1,551 4 6	
Murchison-Violet Town Road		221 4 7	
				3,587 3 10
FERN TREE GULLY SHIRE—				
Beaconsfield-Emerald Road		1 16 5	
Belgrave-Emerald Road		891 10 4	
Burwood Road		2,414 4 6	
Emerald Road		1,174 10 2	
Main Fern tree Gully Road		4,950 17 8	
Monbulk Road		2,096 0 7	
Olinda Road		994 19 2	
				12,523 18 10
FLINDERS SHIRE—				
Bittern-Dromana Road		1,334 16 1	
Hastings-Flinders Road		1,429 13 5	
Hastings-Flinders Road (Tree Planting)		82 9 11	
Mornington-Dromana Road		352 6 8	
Mornington-Flinders Road		767 8 8	
Point Nepean Road		1,492 9 6	
Point Nepean Road (Tree Planting)		50 0 1	
Red Hill Road		103 15 3	
Rosebud-Flinders Road		2,451 16 9	
Rosebud-Flinders Road (Tree Planting)		28 4 8	
Stony Point Road		83 7 8	
Stony Point Road (Tree Planting)		33 4 1	
				8,209 12 9
FOOTSCRAY CITY—				
Ballarat Road (O.M.)		829 18 2	
Napier Street (O.M.)		338 11 10	
Princes Highway (O.M.)		2 17 1	
				1,171 7 1
FRANKSTON AND HASTINGS SHIRE—				
Baxter-Tooradin Road		307 12 7	
Cranbourne-Frankston Road		438 8 10	
Frankston-Dandenong Road		314 15 2	
Frankston-Flinders Road		4,849 14 9	
Moorooduc Road		297 6 10	
Point Nepean Road		1,222 10 11	
Tyabb-Mornington Road		949 8 1	
				8,379 17 2
GISBORNE SHIRE—				
Bacchus Marsh Road		118 13 4	
Gisborne Station Road		17 5 9	
Mount Macedon Road		338 14 11	
				474 14 0
GEE LONG CITY AND SOUTH BARWON SHIRE (Joint Works)—				
Barwon River Bridge, Princes Highway		100 0 0	
				100 0 0
Carried forward	197,783 7 9

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—*continued.*

Municipality and Road.	Permanent Works (Loan).				Maintenance Works (Country Roads Board Fund)			
	Amount.		Total.		Amount.		Total.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Brought forward	197,783	7 9
GLENELG SHIRE—								
Casterton—Penola Road	1,638	3 2		
Coleraine—Casterton Road	1,938	19 10		
Coleraine—Casterton Road (Tree Planting)	26	15 11		
Coleraine—Merino Road	1,158	14 4		
Dergholm Road	2,008	13 2		
Edenhope Road	1,356	18 7		
Edenhope Road (Tree Planting)	17	5 6		
Mount Gambier Road	1,747	5 6		
Mount Gambier Road (Tree Planting)	15	0 0		
Portland—Casterton Road	1,337	0 0		
Portland—Casterton Road (Tree Planting)	23	17 7		
							11,268	13 7
GLENLYON SHIRE—								
Ballan Road	199	3 8		
Ballarat Road	247	17 1		
Castlemaine—Daylesford Road	290	16 8		
Daylesford—Hepburn Road	79	19 11		
Daylesford—Trentham Road	427	4 10		
Hepburn—Newstead Road	185	18 1		
Malmsbury—Daylesford Road	842	2 7		
							2,273	2 10
GORDON SHIRE—								
Charlton—Durham Ox Road	470	15 11		
Charlton—Durham Ox Road (Tree Planting)	51	6 7		
							522	2 6
GOULBURN SHIRE—								
Avenel—Longwood Road	301	15 2		
Vickers Road	253	15 10		
							555	11 0
GRENVILLE SHIRE—								
Ballarat—Hamilton Road	4,249	11 6		
Ballarat—Hamilton Road (Tree Planting)	16	0 5		
Cressy Road	272	18 0		
Lismore Road	354	3 2		
Lismore—Pittong Road	394	7 0		
Pitfield Road	74	3 10		
							5,361	3 11
HAMILTON TOWN—								
Ararat Road	6	11 6		
Coleraine Road	18	12 2		
Hamilton—Warrnambool Road	7	6 6		
Portland Road	1	1 11		
							33	12 1
HAMILTON TOWN AND DUNDAS SHIRE (Joint Works)—								
Hamilton—Warrnambool Road	9	18 0		
							9	18 0
HAMPDEN SHIRE—								
Ayersford Road	757	9 11		
Camperdown—Ballarat Road (Section between Grenville Shire Boundary and Skipton)	1,109	16 5		
Camperdown—Ballarat Road (Section from Skipton to Camperdown)	3,456	0 8		
Camperdown—Cobden Road	58	12 11		
Caramut—Lismore Road	2,757	19 3		
Cobden—Terang Road	1,014	14 7		
Darlington—Terang Road	277	5 6		
Lismore Road	197	2 0		
Lismore—Cressy Road	2,234	7 6		
Lismore—Pittong Road	433	16 10		
McKinnon's Bridge—Noorat Road	323	0 0		
Princes Highway	230	8 7		
Terang—Framlingham Road	19	4 10		
Terang—Mortlake Road	306	15 3		
							13,176	14 3
HAMPDEN AND HEYTESBURY SHIRES (Joint Works)—								
Cobden Terang Road	768	17 10		
							768	17 10
HEALESVILLE SHIRE—								
Healesville—Alexandra Road	102	10 3		
Healesville—Alexandra Road (Tree Planting)	19	10 1		
Healesville—Kinglake Road	19	6 7		
Healesville—Woori Yallock Road	650	10 8		
							791	17 7
HEIDELBERG CITY—								
Greensborough—Hurstbridge Road	816	8 1		
Heidelberg—Warrandyte Road	4	5 5		
Main Heidelberg—Eltham Road	1,857	5 1		
Main Whittlesea Road	16	1 2		
							2,693	19 9
Carried forward	235,239	1 1

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—*continued.*

Municipality and Road.	Permanent Works (Loan.)		Maintenance Works (Country Roads Board Fund).					
	Amount.		Total.		Amount.		Total.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Brought forward	235,239	1 1
HEYTESBURY SHIRE—								
Camperdown-Cobden Road	359	1 1		
Camperdown-Cobden Road (Tree Planting)	4	10 0		
Cobden-Port Campbell-Prinetown Road	2,557	9 5		
Cobden-Port Campbell-Prinetown Road (Tree Planting)	11	5 0		
Cobden-Scott's Creek Road	314	4 10		
Cobden-Scott's Creek Road (Tree Planting)	7	13 0		
Cobden-Terang Road	176	0 10		
Cobden-Terang Road (Tree Planting)	22	14 2		
Timboon-Nirranda Road	317	7 3		
Timboon-Port Campbell Road	1,008	18 6		
							4,779	4 1
HORSHAM TOWN—								
Dimboola-Horsham Road	21	1 8		
Dooen Road	418	12 6		
Hamilton Road	210	1 6		
Natimuk Road	19	10 5		
Western Highway	33	19 3		
							703	5 4
HUNTLY SHIRE—								
Goornong-Colbinabbin Road	888	19 5		
							888	19 5
KANIVA SHIRE—								
Broughton Road	594	6 11		
Kaniva-Edenhope Road	1,199	6 5		
Nhill-Kaniva Border Road	30	14 1		
South Lillimur Road	599	1 11		
South Lillimur Road (Tree Planting)	14	11 3		
Yearinga Road	716	9 6		
							3,154	10 1
KARA KARA SHIRE—								
Avoca-St. Arnaud Road	5,643	19 11		
Charlton Road	265	0 10		
Marnoo Road	505	4 6		
Navarre Road	489	16 0		
St. Arnaud-Donald Road	93	7 11		
St. Arnaud-Donald Road (Tree Planting)	30	4 11		
St. Arnaud-Marnoo Road	989	7 4		
							8,017	1 5
KARKAROOC SHIRE—								
Hopetoun-Ouyen Road	3	8 9		
Hopetoun-Rainbow Road	798	7 5		
Hopetoun-Rainbow Road (Tree Planting)	13	16 7		
Hopetoun-Woomelang-Sealake Road	897	17 4		
Rainbow-Beulah-Birchip Road	1,091	17 5		
Rainbow-Beulah-Birchip Road (Tree Planting)	19	2 1		
							2,824	9 7
KERANG SHIRE—								
Cohuna-Koondrook Road	123	6 10		
Kerang-Koroop Road	202	10 0		
Kerang-Murrabit Road	75	0 0		
Koondrook Road	9	7 6		
							410	4 4
KILMORE SHIRE—								
Heathcote Road	83	8 6		
Heathcote Road (Tree Planting)	20	0 0		
Kilmore-Kilmore East Road	58	3 1		
Lancefield-Kilmore Road	27	1 5		
Lancefield-Kilmore Road (Tree Planting)	8	3 7		
							196	16 7
KILMORE AND PYALONG SHIRES (Joint Works)—								
Heathcote Road	226	19 11		
							226	19 11
KILMORE AND ROMSEY SHIRES (Joint Works)—								
Lancefield-Kilmore Road	34	5 5		
Lancefield-Kilmore Road (Tree Planting)	8	0 4		
							42	5 9
KOROIT BOROUGH—								
Koroit-Warrnambool Road	1,651	18 7		
Koroit-Warrnambool Road (Tree Planting)	12	12 6		
							1,664	11 1
KOROIT BOROUGH AND WARRNAMBOOL SHIRE (Joint Works)—								
Koroit-Warrnambool Road	461	16 1		
							461	16 1
Carried forward	258,609	4 9

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—continued.

Municipality and Road.	Permanent Works (Loan).				Maintenance Works (Country Roads Board Fund).			
	Amount.		Total.		Amount.		Total.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Brought forward	258,609	4 9
KORONG SHIRE—								
Borong-Hurstwood Road	353	2 0		
Bridgewater-Dunolly Road	130	0 7		
Bridgewater-Dunolly Road (Tree Planting)	6	5 0		
Charlton-Bendigo Road	205	12 2		
Serpentine Road	228	0 10		
							923	0 7
KORUMBURRA SHIRE—								
Bena-Kongwak Road	1,971	13 1		
Bena-Korumburra Road	457	3 2		
Bena-Poowong Road	170	13 9		
Fairbank Road	2,167	9 5		
Fairbank Road (Tree Planting)	12	1 6		
Jeetho West Road	370	8 5		
Kongwak-Inverloch Road	1,417	7 2		
Korumburra-Drouin Road	50	14 1		
Korumburra-Leongatha Road	220	4 6		
Korumburra-Warragul Road	2,244	3 11		
Korumburra-Wonthaggi Road	1,254	17 5		
Lang Lang-Nyora Road	9	4 1		
Loch-Bena Road	519	15 9		
Loch-Nyora Road	392	17 9		
Loch-Nyora Road (Tree Planting)	10	0 0		
Loch-Wonthaggi Road	508	18 9		
Nyora-Poowong Road	718	17 1		
Nyora-Poowong Road (Tree Planting)	10	0 0		
Poowong-Drouin Road	1,303	5 0		
Poowong-Ranceby Road	160	13 4		
Poowong-Ranceby Road (Tree Planting)	20	1 5		
							13,990	9 7
KORUMBURRA AND BASS SHIRES (Joint Works)—								
Loch-Nyora Road	170	16 6		
							170	16 6
KOWREE SHIRE—								
Boorookpi Road	772	15 5		
Boorookpi-Frances Road	737	10 8		
Edenhope-Goroke Road	1,031	8 6		
Hamilton-Edenhope-Apsley Road	7,063	6 4		
Hamilton-Edenhope-Apsley Road (Tree Planting)	75	0 6		
Harrow-Horsham Road	561	12 7		
Kaniva-Edenhope Road	492	16 6		
Minimay-Apsley Road	554	14 4		
Wombelano Road	697	17 6		
							11,987	2 4
KYNETON SHIRE—								
Daylesford Road	3	8 7		
Daylesford-Trentham Road	70	15 1		
Melbourne-Bendigo Road	65	1 8		
Redesdale Road	181	11 0		
Trentham Road	3,067	5 11		
Trentham Road (Tree Planting)	24	13 2		
Tylden-Woodend Road	124	16 3		
							3,537	11 8
KYNETON AND GLENLYON SHIRES (Joint Works)—								
Daylesford-Trentham Road	49	9 10		
							49	9 10
LEIGH SHIRE—								
Ballarat-Rokewood Road	1,350	15 1		
Bannockburn-Shelford Road	41	11 7		
Bannockburn-Shelford Road (Tree Planting)	43	16 1		
Inverleigh-Cressy Road	627	14 1		
Rokewood-Cressy Road	1,348	16 10		
Shelford-Inverleigh Road	167	17 10		
Shelford-Rokewood Road	1,881	10 2		
Werneth Road	92	8 11		
							5,554	10 7
LEIGH AND COLAC SHIRES (Joint Works)—								
Cressy-Inverleigh Road	32	19 9		
							32	19 9
LEXTON SHIRE—								
Avoca-Ararat Road	1,138	16 11		
Avoca-Ballarat Road	1,671	18 1		
							2,810	15 0
LILLYDALE SHIRE—								
Evelyn-Lilydale Road	1,099	9 3		
Main Healesville Road	240	16 11		
Main Healesville Road (Tree Planting)	43	13 3		
Monbulk Road	314	0 0		
Mount Dandenong Road	1,552	13 10		
Yarra Glen Road	1,929	14 10		
							5,180	8 1
Carried forward	302,846	8 8

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—continued.

Municipality and Road.	Permanent Works (Loan).				Maintenance Works (Country Roads Board Fund).			
	Amount.		Total.		Amount.		Total.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Brought forward	302,846	8 8
LOWAN SHIRE—								
Dimboola-Kaniva Road	250	17 10		
Goroke Road	179	12 2		
Gorcke Road (Tree Planting)	19	11 3		
Lorquon Road	133	15 7		
Lorquon West Road	852	16 0		
Yanac Road	440	1 2		
Yanac Road (Tree Planting)	19	11 3		
							1,896	5 3
MAFFRA SHIRE—								
Boisdale-Briagolong Road	304	16 0		
Briagolong-Dargo Road	330	0 8		
Briagolong-Stratford Road	91	5 0		
Bushy Park-Valencia Creek Road	1,143	9 10		
Licola Road	1,084	17 1		
Maffra-Newry Road	895	2 7		
Maffra-Sale Road	632	3 5		
Maffra-Sale Road (Tree Planting)	28	16 4		
Maffra-Stratford Road	68	5 11		
Tinamba-Boisdale Road	515	15 3		
Tinamba-Boisdale Road (Tree Planting)	16	0 0		
Tinamba-Newry Road	684	16 10		
Traralgon-Maffra Road	814	4 0		
							6,609	12 11
MAFFRA AND AVON SHIRES (Joint Works)—								
Maffra-Stratford Road	1	0 0		
							1	0 0
MALDON SHIRE—								
Baringhup Road	216	13 5		
Castlemaine-Maldon Road	1,612	2 0		
Maldon-Eddington Road	927	10 4		
Newstead-Maldon Road	378	11 1		
							3,134	16 10
MALDON AND MARONG SHIRES (Joint Works)—								
Maldon-Eddington Road	447	19 4		
							447	19 4
MALVERN CITY AND MULGRAVE SHIRE (Joint Works)—								
Warrigal Road (O.M.)	1,185	5 3		
							1,185	5 3
MALVERN AND OAKLEIGH CITIES (Joint Works)—								
Warrigal Road (O.M.)	172	9 4		
							172	9 4
MALVERN CITY AND MULGRAVE SHIRE (Joint Works)—								
Warrigal Road (O.M.)	149	17 5		
							149	17 5
MANSFIELD SHIRE—								
Benalla-Mansfield Road	1,523	4 8		
Euroa-Merton Road	25	1 1		
Maindample-Benalla Road	241	4 3		
Mansfield Road	5,004	12 9		
Mansfield Road (Tree Planting)	10	7 7		
Mansfield-Tolmie Road	922	6 10		
Mansfield-Woods Point Road	1,972	19 6		
Mansfield-Woods Point Road (Tree Planting)	4	9 0		
Merton-Strathbogie Road	18	17 6		
							9,723	3 2
MARONG SHIRE—								
Bendigo-Eddington Road	828	13 8		
Bendigo-Eddington Road (Tree Planting)	8	9 9		
Loddon-Valley Road	241	0 4		
Loddon-Valley Road (Tree Planting)	11	8 7		
							1,089	12 4
MARYBOROUGH BOROUGH—								
Avoca Road	15	12 5		
Ballarat Road	408	11 4		
Castlemaine Road	248	19 4		
Castlemaine Road (Tree Planting)	45	10 8		
Eddington Road	14	1 2		
Natte-Yallock Road	12	6 11		
							745	1 10
MELBOURNE CITY—								
Hoddle Bridge Road (O.M.)	141	15 2		
							141	15 2
MELBOURNE AND FOOTSCRAY CITIES (Joint Works)—								
Ballarat Road (O.M.) (Lynch's Bridge)	10	18 8		
							10	18 8
MELTON SHIRE—								
The Gap Road	517	1 6		
Toolern Road	720	19 11		
							1,238	1 5
Carried forward	1,185	5 3	..	328,207 2 4

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—*continued.*

Municipality and Road.	Permanent Works (Loan).		Maintenance Works (Country Roads Board Fund).			
	Amount.		Total.		Total.	
	£	s. d.	£	s. d.	£	s. d.
Brought forward	1,185	5 3	..	328,207 2 4
METCALFE SHIRE—						
Elphinstone-Harcourt Road	746	2 6
Elphinstone-Harcourt Road (Tree Planting)	29	4 10
Kyneton-Redesdale Road	1,092	12 0
Kyneton-Redesdale Road (Tree Planting)	30	0 0
						1,897 19 4
MILDURA SHIRE—						
Deakin Avenue	228	6 8
Irymple Road	694	8 7
Melbourne Road	163	16 11
Wentworth Road	873	6 2
						1,959 18 4
MILDURA CITY—						
Bridge Road	594	19 4
Deakin Avenue	932	19 0
Langtree Avenue	549	19 11
Tenth Street	40	2 2
						2,118 0 5
MINHAMITE SHIRE—						
Hamilton-Macarthur-Port Fairy Road	1,576	14 4
Warrnambool-Hawkesdale-Penshurst Road	2,506	17 0
Warrnambool-Hawkesdale-Penshurst Road (Tree Planting)	38	17 0
Woolsthorpe-Bessie Belle Road	2,953	15 11
						7,076 4 3
MIRBOO SHIRE—						
Grand Ridge Road	1,521	9 7
Mardan Road	292	17 6
Mirboo-Leongatha Road	148	3 10
Mirboo North-Thorpdale Road	1,296	10 4
Mirboo South Road	1,341	19 11
Mirboo South Road (Tree Planting)	15	1 8
Mirboo-Yarragon Road	294	13 2
Morwell-Mirboo Road	578	8 4
						5,489 4 4
MOORABBIN CITY—						
Centre Dandenong Road	487	15 8
Point Nepean Road	183	3 5
Warrigal Road (O.M.)	984	3 4
						1,655 2 5
MORDIALLOC CITY—						
Beach Road (O.M.)	6	16 9
Point Nepean Road	1,218	2 1
						1,224 18 10
MORNINGTON SHIRE—						
Moorooduc Road	81	3 2
Moorooduc Road (Tree Planting)	52	15 5
Mornington-Dromana Road	354	2 11
Point Nepean Road	1,057	18 0
Tyabb Road	720	6 8
						2,266 6 2
MORTLAKE SHIRE—						
Caramut-Lismore Road	886	1 9
Darlington-Terang Road	1,003	11 2
Ellerslie-Framlingham Road	525	15 4
Mortlake-Ararat Road	690	4 2
Mortlake-Terang Road	72	7 2
Mortlake-Warrnambool Road	48	3 11
Terang-Framlingham Road	266	10 5
						3,492 13 11
MORWELL SHIRE—						
Jeeralang West Road	1,016	17 2
Jumbuk Road	587	4 3
Morwell-Maryvale Road	1,259	8 2
Morwell-Mirboo Road
Princes Highway	170	15 6
						3,034 5 1
MOUNT ROUSE SHIRE—						
Ballarat-Hamilton Road	1,727	17 3
Ballarat-Hamilton Road (Tree Planting)	87	17 2
Hamilton-Dunkeld Road	86	16 3
Hamilton-Dunkeld Road (Tree Planting)	22	13 4
Hamilton-Penshurst Road	1,288	18 2
Maroona-Glenthompson Road (Tree Planting)	329	16 9
Penshurst-Caramut Road	1,170	1 0
						4,713 19 11
MULGRAVE SHIRE—						
Ferntree Gully Road	515	16 3
Springvale Road	130	1 2
						645 17 5
McIVOR SHIRE—						
Heathcote-Elmore Road	473	17 3
Heathcote-Redesdale Road	438	18 3
Kilmore-Heathcote-Bendigo Road	1,821	11 5
Lancefield-Tooborac Road	48	13 3
Mount Camel Estate Road	1,489	0 4
						4,272 0 6
Carried forward	1,185	5 3	..	368,053 13 3

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—*continued.*

Municipality and Road.	Permanent Works (Loan).				Maintenance Works (Country Roads Board Fund).			
	Amount.		Total.		Amount.		Total.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Brought forward	1,185	5 3	..	..	368,053	13 3
McIVOR AND METCALFE SHIRES (Joint Works)— Heathcote-Redesdale Road	70	6 6	..	70 6 6
McIVOR AND STRATHFIELDSAYE SHIRES (Joint Works)— Kilmore-Heathcote-Bendigo Road	6	3 0	..	6 3 0
NARRACAN SHIRE—								
Allambee-Childers Road	326	19 11	..	..
Childers-Thorpdale Road	196	12 0	..	..
Mirboo North-Thorpdale Road	336	2 6	..	..
Mirboo-Yarragon Road	260	9 6	..	..
Moe-Willowgrove Road	301	2 3	..	..
Moe-Yallourn Road	201	16 9	..	..
Princes Highway	139	6 11	..	..
Trafalgar-Thorpdale Road	2,407	15 5	..	..
Walhalla Road	1,506	10 2	..	..
Willowgrove Road	1,376	17 0	..	..
Yarragon-Leongatha Road	1,352	8 4	..	..
Yarragon Shady Creek Road	563	10 11	..	8,969 11 8
NEWHAM AND WOODEND SHIRE—								
Lancefield Road	476	13 3	..	..
Mount Macedon Road	204	9 2	..	..
Tylden Road	90	15 5	..	..
Tylden Road (Tree Planting)	11	6 8	..	783 4 6
NEWHAM AND WOODEND, AND KYNETON SHIRES (Joint Works)— Tylden Road	177	9 4	..	177 9 4
NEWSTEAD AND MOUNT ALEXANDER SHIRE—								
Castlemaine-Daylesford Road	502	11 1	..	..
Castlemaine-Daylesford Road (Tree Planting)	12	14 10	..	..
Creswick Road	914	13 7	..	..
Creswick Road (Tree Planting)	6	17 0	..	..
Maldon Road	100	4 2	..	..
Maldon Road (Tree Planting)	5	0 0	..	..
Newstead-Hepburn Road	20	16 6	..	1,562 17 2
NEWSTEAD AND MT. ALEXANDER AND GLENLYON SHIRES (Joint Works)— Castlemaine-Daylesford Road	25	0 0	..	25 0 0
NUMURKAH SHIRE—								
Echuca-Picola Road	466	2 10	..	..
Nathalia-Picola Road	296	3 11	..	..
Numurkah-Nathalia Road	980	17 0	..	..
Numurkah-Tungamah Road	148	3 9	..	..
Shepparton-Numurkah Cobram Road	3,128	12 11	..	5,020 0 5
NUMURKAH AND DEAKIN SHIRES (Joint Works)— Echuca-Picola Road	115	3 3	..	115 3 3
OAKLEIGH CITY—								
Ferntree Gully Road	24	2 7	..	..
Princes Highway	759	6 5	..	..
Warrigal Road (O.M.)	1,789	13 5	..	2,573 2 5
OAKLEIGH AND MOORABBIN CITIES (Joint Works)— Warrigal Road (O.M.)	136	4 4	..	136 4 4
OMEQ SHIRE—								
Benambra Road	1,021	6 2	..	..
Benambra Road (Tree Planting)	6	1 8	..	..
Day Avenue	91	8 1	..	..
Swift's Creek-Omeo Road	1,909	19 11	..	..
Swift's Creek-Omeo Road (Tree Planting)	7	7 11	..	3,036 3 9
ORBOST SHIRE—								
Cann Valley Road	1,812	15 3	..	..
Combiobar Road	499	4 10	..	..
Marlo Road	2,438	2 2	..	..
Orbost-Delegate Road	44	2 2	..	..
Princes Highway	28	18 2	..	..
Wangrabelle Road	166	5 6	..	4,989 8 1
Carried forward	1,185	5 3	..	..	395,518	7 8

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—continued.

Municipality and Road.	Permanent Works (Loan).		Maintenance Works (Country Roads Board Fund).	
	Amount.		Amount.	
	£	s. d.	£	s. d.
Brought forward .. .. .	..	1,185 5 3	..	395,518 7 8
OTWAY SHIRE—				
Beech Forest-Apollo Bay Road .. .. .	..	..	608 14 1	
Beech Forest-Apollo Bay Road (Tree Planting) .. .. .	..	..	100 0 0	
Beech Forest-Lavers Hill Road .. .. .	..	..	299 1 9	
Beech Forest-Lavers Hill Road (Tree Planting) .. .. .	..	..	58 10 5	
Beech Forest-Mount Sabine Road .. .. .	..	..	1,197 6 10	
Carlisle-Gellibrand Road .. .. .	..	..	1,008 11 8	
Carlisle-Gellibrand Road (Tree Planting) .. .. .	..	..	8 12 3	
Colac-Beech Forest Road .. .. .	..	..	1,488 17 8	
Colac-Forrest Road .. .. .	..	..	120 19 5	
Forrest-Apollo Bay Road .. .. .	..	..	2,507 5 10	
Forrest-Apollo Bay Road (Tree Planting) .. .. .	..	..	9 19 5	
Forrest-Apollo Bay and Birregurra-Forrest Roads (Tree Planting) .. .. .	..	..	0 19 5	
				7,408 18 9
OXLEY SHIRE—				
Bright Road .. .. .	..	..	4,178 3 6	
Bright Road (Tree Planting) .. .. .	..	..	17 11 3	
Buffalo River Road .. .. .	..	..	488 5 7	
Greta-Glenrowan Road .. .. .	..	..	209 0 9	
Kilfeera-Boggy Creek Road .. .. .	..	..	32 9 4	
Wangaratta-Greta Road .. .. .	..	..	789 6 6	
Wangaratta-Whitfield Road .. .. .	..	..	2,925 9 11	
Wangaratta-Whitfield Road (Tree Planting) .. .. .	..	..	17 15 7	
				8,658 2 5
OXLEY AND BRIGHT SHIRES (Joint Works)—				
Buffalo River .. .. .	..	..	342 5 11	
				342 5 11
OXLEY SHIRE AND WANGARATTA BOROUGH (Joint Works)—				
Wangaratta-Whitfield Road .. .. .	..	..	275 7 7	
				275 7 7
PHILLIP ISLAND SHIRE—				
Newhaven Road .. .. .	..	..	1,492 17 6	
Phillip Island Road .. .. .	..	..	773 1 2	
Ventnor Road .. .. .	..	..	974 3 11	
				3,240 2 7
PORTLAND SHIRE—				
Bridgewater Road .. .. .	..	..	2,406 2 6	
Heath Road .. .. .	..	..	1,616 12 6	
Portland-Casterton Road .. .. .	..	..	3,213 8 4	
Portland-Hamilton Road .. .. .	..	..	231 4 10	
				7,467 8 2
PRESTON CITY—				
Epping Road (O.M.)	1,049 5 6	..	..
		1,049 5 6		
PRESTON CITY—				
Epping Road (O.M.) .. .. .	..	..	2,686 1 3	
Epping Road .. .. .	..	..	48 5 0	
Whittlesea Road .. .. .	..	..	1,030 17 2	
				3,765 3 5
PYALONG SHIRE—				
Kilmore-Heathcote-Bendigo Road .. .. .	..	..	254 0 5	
Lancefield-Tooborac Road .. .. .	..	..	252 16 4	
Lancefield-Tooborac Road (Tree Planting) .. .. .	..	..	11 8 4	
				518 5 1
PYALONG AND McIVOR SHIRES (Joint Works)—				
Lancefield-Tooborac Road .. .. .	..	..	38 0 8	
Lancefield-Tooborac Road (Tree Planting) .. .. .	..	..	14 9 5	
				52 10 1
QUEENSLIFFE BOROUGH—				
Geelong Road .. .. .	..	..	104 14 9	
Point Lonsdale Road .. .. .	..	..	16 4 0	
				120 18 9
RINGWOOD BOROUGH—				
Main Healesville Road .. .. .	..	..	1,303 7 1	
Main Healesville Road (Tree Planting) .. .. .	..	..	7 12 0	
Mount Dandenong Road .. .. .	..	..	353 11 1	
Mount Dandenong Road (Tree Planting) .. .. .	..	..	2 1 4	
Warrandyte Road .. .. .	..	..	813 13 7	
				2,480 5 1
RINGWOOD BOROUGH AND DONCASTER AND TEMPLESTOWE SHIRE (Joint Works)—				
Warrandyte Road .. .. .	..	..	69 1 0	
				69 1 0
RIPON SHIRE—				
Ballarat-Ararat Road .. .. .	..	..	390 11 6	
Ballarat-Hamilton .. .. .	..	..	2,249 0 10	
Skipton Road .. .. .	..	..	1,004 9 11	
				3,644 2 3
RIPON AND HAMPDEN SHIRES (Joint Works)—				
Ballarat-Hamilton Road .. .. .	..	..	27 2 6	
				27 2 6
Carried forward		2,234 10 9		433,588 1 3

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—*continued.*

Municipality and Road.	Permanent Works (Loan).		Maintenance Works (Country Roads Board Fund).	
	Amount.		Amount.	
	£	s. d.	£	s. d.
Brought forward	2,234 10 9	..	433,588 1 3
ROCHESTER SHIRE—				
Bendigo-Echuca Road	13 17 7	..
Corop Road	325 3 6	..
Rochester-Bamawm-Prairie Road	2,809 12 2	..
Timmering Road	213 8 1	..
				3,362 1 4
RODNEY SHIRE—				
Kyabram-Nathalia Road	140 3 11	..
Kyabram-Tongala Road	29 4 0	..
Mooroopna-Undera Road	1,163 4 1	..
Mooroopna-Undera Road (Tree Planting)	8 5 1	..
Shepparton-Elmore	168 17 7	..
Shepparton-Tatura Road	531 12 8	..
Tatura-Byrneside-Kyabram Road	1,376 14 4	..
Tatura-Murchison Road	616 19 0	..
Undera-Wyuna	63 9 1	..
				4,098 9 9
RODNEY AND DEAKIN SHIRES (Joint Works)—				
Kyabram-Tongala (Tree Planting)	16 9 1	..
Rochester-Kyabram Tree Planting)	16 9 0	..
				32 18 1
RODNEY SHIRE AND SHEPPARTON BOROUGH (Joint Works)—				
Shepparton-Tatura Road	77 3 2	..
				77 3 2
ROMSEY SHIRE—				
Lancefield-Kilmore Road	338 3 11	..
Lancefield-Tooborac Road	100 5 9	..
Melbourne-Lancefield Road	160 7 11	..
Melbourne-Lancefield Road (Tree Planting)	88 17 5	..
Woodend-Lancefield Road	145 4 5	..
				832 19 5
ROSEDALE SHIRE—				
Princes Highway	80 10 3	..
Rosedale-Heyfield Road	185 8 7	..
Seaspray Road	791 8 7	..
Seaspray Road (Tree Planting)	90 0 0	..
Traralgon-Gormandale Road	255 2 2	..
Traralgon-Maffra Road	738 9 4	..
Traralgon-Maffra Road (Tree Planting)	26 8 5	..
Willung Road	255 0 5	..
				2,422 7 9
ROSEDALE AND ALBERTON SHIRES (Joint Works)—				
Carrajung-Gormandale Road	15 4 7	..
				15 4 7
RUTHERGLEN SHIRE—				
Barnawartha-Howlong Road	38 8 11	..
Chiltern-Howlong Road	275 0 9	..
Chiltern-Rutherglen Road	527 10 0	..
Murray Valley Road	4 13 5	..
Rutherglen-Wahgunyah Road	451 10 11	..
Springhurst-Rutherglen Road	247 16 5	..
				1,545 0 5
SALE TOWN—				
Princes Highway	2 3 0	..
				2 3 0
SANDRINGHAM CITY—				
Beach Road (O.M.)	2,410 12 9	..
				2,410 12 9
SEBASTOPOL BOROUGH—				
Ballarat-Hamilton Road	285 18 5	..
Ballarat-Rokewood Road	22 1 9	..
				308 0 2
SEYMOUR SHIRE—				
Avenel-Longwood Road	228 15 11	..
Avenel-Longwood Road (Tree Planting)	8 10 4	..
Highlands Road	548 6 4	..
Seymour-Yea Road	319 7 3	..
Upper Goulburn Road	487 0 0	..
				1,591 19 10
SEYMOUR AND BROADFORD SHIRES (Joint Works)—				
Upper Goulburn Road	91 2 6	..
				91 2 6
ST. ARNAUD BOROUGH—				
Avoca-St. Arnaud Road	7 2 9	..
Charlton Road (Treeplanting)	40 0 0	..
				47 2 9
SHEPPARTON SHIRE—				
Dookie-Nalinga Road	564 10 2	..
Katandra Road	299 5 11	..
Pine Lodge Road	98 8 1	..
Shepparton-Nagambie Road	572 17 4	..
Shepparton-Numurkah Road	384 17 6	..
				1,919 19 0
Carried forward	2,234 10 9	..	452,345 5 9

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—continued.

Municipality and Road.	Permanent Works (Loan).		Maintenance Works. (Country Roads Board Fund).	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	2,234 10 9	..	452,345 5 9
SHEPPARTON SHIRE AND SHEPPARTON BOROUGH (Joint Works)—				
Shepparton-Nagambie Road	59 6 11	..
Shepparton-Nalinga Road	7 11 7	66 18 6
SHEPPARTON BOROUGH—				
Shepparton-Nagambie Road	483 12 3	..
Shepparton-Numurkah Road	44 17 7	..
Shepparton-Nalinga Road	47 8 3	575 18 1
SHEPPARTON BOROUGH AND RODNEY SHIRE (Joint Works)—				
Shepparton-Mooroopna Road	9 12 0	..
Shepparton-Tatura Road	12 9 0	22 1 0
SOUTH BARWON SHIRE—				
Barwon Heads Road	377 11 6	..
Princes Highway	148 5 11	..
Torquay Road	147 0 1	672 17 6
SOUTH BARWON AND BELLARINE SHIRES (Joint Works)—				
Barwon Heads Road	13 8 9	13 8 9
SOUTH BARWON AND BARRABOOL SHIRES (Joint Works)—				
Torquay Road	1,568 19 10	1,568 19 10
SOUTH GIPPSLAND SHIRE—				
Albert River-Welshpool Road	34 1 4	..
Boolarra-Foster Road	812 2 0	..
Falls Road	1,247 13 8	..
Foster North-Mirboo South Road	230 0 11	..
Hazel Park Road	251 13 8	..
Main South Gippsland Road	846 19 1	..
Stony Creek-Dollar Road	490 19 1	..
Toora-Gunyah Road	400 18 1	..
Toora-Wonyip Road	660 5 1	..
Turton's Creek Road	100 7 6	5,075 0 5
SOUTH GIPPSLAND AND WOORAYL SHIRES (Joint Works)—				
Dollar-Stony Creek Road	29 5 4	..
Main South Gippsland Road	24 9 3	53 14 7
STAWELL SHIRE—				
Horsham-Wal Wal Road	266 11 8	..
Landsborough Road	93 19 10	..
Marnoo Road	564 16 9	..
Marnoo-Rupanyup Road	135 13 7	..
Marnoo-St. Arnaud Road	37 10 0	..
Navarre Road	684 16 8	..
Stawell-Glenorchy-Horsham Road	989 7 7	..
Stawell-Warracknabeal Road	197 15 5	2,970 11 6
STRATHFIELDSAYE SHIRE—				
Heathcote-Bendigo Road	1,693 6 8	..
Mandurang Road	988 18 0	..
Strathfieldsaye Road	371 3 1	3,053 7 9
SWAN HILL BOROUGH—				
Euston Road	15 18 10	..
Swan Hill Road	23 10 0	..
Ultima Road	323 5 4	362 14 2
SWAN HILL SHIRE—				
Annuello-Wemen Road	428 0 11	..
Euston Road	5 8 8	..
Nyah-Ouyen Road	759 7 11	..
Piangil Station Road	9 9 3	..
Tooleybuc Road	28 15 0	..
Ultima Road	811 17 8	..
Ultima-Sealake Road	513 10 0	2,556 9 5
TALBOT SHIRE—				
Clunes-Creswick Road	2 3 0	..
Maryborough-Avoca Road	2 17 10	..
Maryborough-Ballarat Road	576 1 10	..
Maryborough-Ballarat Road (Tree Planting)	30 0 0	..
Talbot-Avoca Road	847 0 2	..
Talbot-Eddington Road	93 4 10	1,551 7 8
Carried forward	2,234 10 9	..	470,888 14 11

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—*continued.*

Municipality and Road.	Permanent Works (Loans).		Maintenance Works. (Country Roads Board Fund).	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	2,234 10 9	..	470,888 14 11
TAMBO SHIRE—				
Bairnsdale-Bruthen Road	12 2 8	
Bairnsdale-Bruthen Road (Tree Planting)	9 5 6	
Basin Road	274 7 8	
Bruthen-Omeo Road	44 3 4	
Metung Road	402 19 0	
Mossface Road	98 7 7	
Nowa Nowa-Buchan-Gelantipy Road	1,231 18 5	
Nowa Nowa-Buchan-Gelantipy Road (Tree Planting)	27 6 6	
Princes Highway Road (Tree Planting)	11 4 3	
				2,111 14 11
TOWONG SHIRE—				
Murray Valley-Main Road	826 18 0	
Omeo Road	862 6 1	
				1,689 4 1
TRARALGON SHIRE—				
Princes Highway	33 9 7	
Traralgon-Balook Road	434 5 3	
Traralgon Creek Road	1,193 19 2	
Traralgon-Gormandale Road	232 19 8	
Traralgon-Gormandale Road (Tree Planting)	10 17 2	
Traralgon-Maffra Road	115 5 6	
Traralgon-Maffra Road (Tree Planting)	2 14 0	
Tyers Road	886 9 2	
Tyers Road (Tree Planting)	4 1 0	
				2,914 0 6
TULLAROOF SHIRE—				
Avoca Road	1,333 3 2	
Ballarat Road	70 15 8	
Castlemaine (Tree Planting)	35 1 4	
Dunolly Road	100 12 5	
Eddington Road	1,364 0 1	
Eddington Road (Tree Planting)	9 11 3	
Maryborough-Dunolly Road	1,041 7 1	
Natte Yallock Road	804 15 10	
Talbot-Eddington Road	521 16 6	
Talbot-Eddington Road (Tree Planting)	9 6 7	
				5,290 9 11
TUNGAMAH SHIRE—				
Cobram-Katamatite Road	69 7 11	
Cobram South Road	457 16 8	
Cobram-Yarrowonga Road	610 18 4	
Katandra Road	297 5 0	
Numurkah-Tungamah-Wilby Road	1,388 4 8	
St. James Road	637 11 8	
				3,461 4 3
UPPER MURRAY SHIRE—				
Corryong Road	218 19 9	
Corryong Road (Tree Planting)	10 2 5	
Tintaldra Road	735 19 11	
Tintaldra (Tree Planting)	9 3 6	
Upper Murray Road	542 15 11	
				1,517 1 6
UPPER YARRA SHIRE—				
Don Road (Upper Yarra Contribution)	911 15 8	
Don Road (Healesville Contribution)	20 3 5	
Launching Place-Gembrook Road	689 15 7	
Little Yarra Road	1,828 0 4	
Warburton Road	2,100 16 4	
				5,550 11 4
VIOLET TOWN SHIRE—				
Murchison-Violet Town Road	330 16 8	
Violet Town-Dookie Road	601 14 1	
Violet Town-Dookie Road (Tree Planting)	14 17 3	
				947 8 0
VIOLET TOWN AND EUROA SHIRES (Joint Works)—				
Murchison-Violet Town Road	92 5 2	
				92 5 2
WALPEUP SHIRE—				
Mildura Road	69 8 9	
Mildura Road (Tree Planting)	12 15 1	
Ouyen-Pinnaroo Road	4,667 12 7	
Ouyen-Pinnaroo Road (Tree Planting)	45 13 0	
Ouyen-Manangatang Road	870 6 7	
				5,665 16 0
WANGARATTA SHIRE—				
Beechworth Road	498 2 0	
Peechelba Road	147 2 1	
Wangaratta-Myrtleford Road	628 11 3	
				1,273 15 4
WANGARATTA BOROUGH—				
Beechworth Road	16 13 2	
Sydney Road	66 0 6	
				82 13 8
Carried forward	2,234 10 9	..	501,484 19 7

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—continued.

Municipality and Road.	Permanent Works (Loan).		Maintenance Works (Country Roads Board Fund).	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	2,234 10 9	..	501,484 19 7
WANNON SHIRE—				
Coleraine—Harrow—Apsley Road	2,426 3 10	
Hamilton—Coleraine—Casterton Road	1,022 15 3	
Wannon Bridge Road	241 17 2	3,690 16 3
WANNON AND GLENELG SHIRES (Joint Works)—				
Hamilton—Coleraine—Casterton Road	75 10 6	75 10 6
WANNON AND KOWBEE SHIRES (Joint Works)—				
Coleraine—Harrow—Apsley Road	21 0 4	21 0 4
WARANGA SHIRE—				
Colbinabbin—Elmore Road	971 1 4	
Colbinabbin—Elmore Road (Tree Planting)	10 8 0	
Colbinabbin—Moora Road	90 12 5	
Colbinabbin—Moora Road (Tree Planting)	4 0 0	
Heathcote—Elmore Road	1,235 19 10	
Heathcote—Elmore Road (Tree Planting)	25 0 0	
Murchison—Rushworth Road	2,737 0 2	
Murchison—Rushworth Road (Tree Planting)	10 0 0	
Rushworth—Stanhope Road	415 15 8	
Rushworth—Stanhope Road (Tree Planting)	4 0 0	
Shepparton—Elmore Road	3,476 14 9	
Tatura Road	151 14 7	
Tatura Road (Tree Planting)	4 0 0	9,136 6 9
WARANGA AND HUNTLY SHIRES (Joint Works)—				
Heathcote—Elmore Road	27 16 2	27 16 2
WARANGA AND GOULBURN SHIRES (Joint Works)—				
Murchison—Rushworth Road	4 9 10	4 9 10
WARRACKNABEAL SHIRE—				
Birchip Road	2,201 10 1	
Birchip Road (Tree Planting)	32 10 0	
Dimboola Road	1,075 15 7	
Dimboola Road (Tree Planting)	12 18 7	
Hopetoun Road	30 13 0	
Minyip Road	2,143 16 1	
Minyip Road (Tree Planting)	32 10 0	
Rainbow Road	1,713 0 2	
Rainbow Road (Tree Planting)	32 10 0	7,275 3 6
WARRAGUL SHIRE—				
Bloomfield Road	158 13 5	
Brandy Creek Road	625 14 11	
Darnum—Allambee Road	922 12 4	
Princes Highway	55 4 10	
Warragul—Korumburra Road	325 12 10	
Warragul—Leongatha Road	133 14 6	2,221 12 10
WARRNAMBOOL SHIRE—				
Allansford—Nirranda Road	1,069 14 8	
Allansford—Nirranda Road (Tree Planting)	63 18 6	
Caramut—Lismore Road	575 3 10	
Caramut—Lismore Road (Tree Planting)	150 1 5	
Framlingham Road	107 11 4	
Garvoc—Laang Road	839 3 3	
Mortlake Road	1,864 16 2	
Mortlake Road (Tree Planting)	62 3 7	
Peterborough Road	428 8 6	
Timboon—Nirranda Road	194 14 10	
Warrnambool—Caramut Road	9,782 6 7	15,138 2 8
WARRNAMBOOL AND HAMPDEN SHIRES (Joint Works)—				
Garvoc—Laang Road	1,029 3 10	1,029 3 10
WARRNAMBOOL CITY—				
Princes Highway	693 11 2	693 11 2
WERRIBEE SHIRE—				
Duncan's Road	276 0 5	
Geelong—Bacchus Marsh Road	358 15 5	634 15 10
WHITTLESEA SHIRE—				
Epping Road	1,784 6 10	
Main Whittlesea Road	1,570 18 10	
Wallan Road	396 4 0	
Whittlesea—Kinglelake Road	146 9 0	3,897 18 8
Carried forward	2,234 10 9	..	545,331 7 11

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—*continued.*

Municipality and Road.	Permanent Works. (Loan).				Maintenance Works. (Country Roads Board Fund).			
	Amount.		Total.		Amount.		Total.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Brought forward	2,234	10 9	..	..	545,331	7 11
WIMMERA SHIRE—								
Grampians Road	1,187	7 3	..	..
Horsham-Murtoa Road	1,807	1 6	..	..
Horsham-Wal Wal Road	165	9 8	..	..
Natimuk Road	2,279	14 3	..	..
Warracknabeal-Dimboola Road	75	7 6	..	..
WINCHELSEA SHIRE—								
Birregurra Road	93	8 10	..	..
Birregurra-Dean's Marsh Road	149	9 6	..	..
Birregurra-Forrest Road	3,497	4 8	..	..
Lorne Road	896	16 4	..	..
WINCHELSEA AND COLAC SHIRES (Joint Works)—								
Birregurra Road	24	16 10	..	..
WODONGA SHIRE—								
Beechworth-Wodonga Road	985	13 9	..	..
Beechworth-Wodonga Road (Tree Planting)	4	2 0	..	..
Kiewa-Wodonga Road	196	14 6	..	..
Sydney Road	217	18 9	..	..
Tallangatta Road	190	18 5	..	..
Wodonga-Yackandandah Road	252	16 1	..	..
WONTHAGGI BOROUGH—								
Wonthaggi-Inverloch Road	134	16 9	..	..
Wonthaggi-Korumburra Road	111	10 9	..	..
Wonthaggi-Korumburra Road (Tree Planting)	18	19 4	..	..
Wonthaggi-Loch Road	199	19 6	..	..
Wonthaggi-Loch Road (Tree Planting)	17	19 6	..	..
WOORAYL SHIRE—								
Fairbank Road	95	15 6	..	..
Farmer's Road	529	1 6	..	..
Inverloch-Leongatha Road	1,157	10 6	..	..
Inverloch-Wonthaggi Road	843	0 0	..	..
Kongwak-Inverloch Road	727	6 6	..	..
Leongatha-Mirboo Road	307	3 2	..	..
Leongatha-Yarragon Road	1,236	9 0	..	..
Lower Tarwin Road	2,163	15 6	..	..
Main South Gippsland Road	1,784	8 3	..	..
Mardan Road	827	2 9	..	..
Mirboo South-Foster North Road	201	8 1	..	..
Nerrena Road	1,586	0 9	..	..
Turton's Creek Road	139	0 7	..	..
Wild Dog Valley Road	486	15 5	..	..
WOORAYL AND MIRBOO SHIRES (Joint Works)—								
Turton's Creek Road	8	5 10	..	..
WOORAYL AND SOUTH GIPPSLAND SHIRES (Joint Works)—								
Mirboo South-Foster North Road	418	11 1	..	..
Nerrena	37	19 7	..	..
WYCHEPROOF SHIRE—								
Birchip-Sealake Road	225	13 7	..	..
Birchip-Sealake Road (Tree Planting)	56	0 0	..	..
Birchip-Wycheproof Road	335	8 0	..	..
Birchip-Wycheproof Road (Tree Planting)—	57	19 7	..	..
Corack Road	32	13 9	..	..
Corack Road (Tree Planting)	19	11 6	..	..
Sealake-Ultima Road	232	19 3	..	..
Sealake-Ultima Road (Tree Planting)	56	0 0	..	..
Woomelang-Sealake Road	153	10 10	..	..
Wycheproof-Sealake Road	699	17 8	..	..
Wycheproof-Wooroonook Road	69	7 2	..	..
YACKANDANDAH SHIRE—								
Dederang Road	970	9 0	..	..
Dederang Road (Tree Planting)	5	3 6	..	..
Gundowring Road	1,262	8 0	..	..
Gundowring Road (Tree Planting)	10	0 0	..	..
Huon-Kiewa Road	76	11 10	..	..
Kergunyah Road	337	3 10	..	..
Kergunyah Road (Tree Planting)	10	0 0	..	..
Kergunyah South Road	401	5 1	..	..
Kiewa East Road	88	5 5	..	..
Kiewa East Road (Tree Planting)	15	0 0	..	..
Kiewa-Wodonga Road	449	2 2	..	..
Myrtleford-Yackandandah Road	199	15 11	..	..
Running Creek Road	248	3 11	..	..
Yackandandah-Wodonga Road	1,167	15 0	..	..
Carried forward								
	2,234	10 9	..	..	577,569	12 7

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—*continued.*

Municipality and Road.	Permanent Works (Loan).		Maintenance Works (Country Roads Board Fund).	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	11,877 2 11
HORSHAM TOWN— Hamilton Road	2,993 7 4	2,993 7 4
HUNTLY SHIRE— Bendigo-Echuca Road Bendigo-Echuca Road (Tree Planting)	926 8 8 31 7 9	957 16 5
KEILOR SHIRE— Melbourne-Bendigo Road	403 13 7	403 13 7
KILMORE SHIRE— Sydney Road	51 13 1	51 13 1
LILLYDALE SHIRE— Main Healesville Road Main Warburton Road	1,763 17 2 1,045 1 1	2,808 18 3
MALDON SHIRE— Castlemaine-Maryborough Road	50 19 3	50 19 3
MANSFIELD SHIRE— Mansfield-Woods Point Road	2,529 14 2	2,529 14 2
MORNINGTON SHIRE— Mornington-Dromana Road	227 11 6	227 11 6
MORWELL SHIRE— Boolarra-Foster Road Morwell-Mirboo Road	230 17 8 301 13 4	532 11 0
NARRACAN SHIRE— Walhalla Road	1,738 18 5	1,738 18 5
NEWHAM AND WOODEND SHIRE— Melbourne-Bendigo Road	87 6 7	87 6 7
NEWSTEAD AND MOUNT ALEXANDER SHIRE— Castlemaine-Maryborough Road Castlemaine-Maryborough Road (Tree Planting)	1,216 0 5 19 1 2	1,235 1 7
PORTLAND SHIRE— Portland-Hamilton Road	217 18 2	217 18 2
SEYMOUR SHIRE— Goulburn Valley Road Sydney Road	1,007 0 5 100 12 4	1,107 12 9
SOUTH GIPPSLAND SHIRE— Boolarra-Foster Road	119 8 10	119 8 10
SOUTH GIPPSLAND AND WORRAYL SHIRES (Joint Works)— Boolarra-Foster Road	186 5 11	186 5 11
TAMBO SHIRE— Princes Highway	383 14 2	383 14 2
TULLAROOP SHIRE— Castlemaine-Maryborough Road	964 8 11	964 8 11
UPPER YARRA SHIRE— Woods Point Road	3,978 2 6	3,978 2 6
Carried forward	32,452 5 4

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE, ETC.—*continued.*

Municipality and Road.	Permanent Works. (Loan).		Maintenance Works (Country Roads Board Fund).	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	32,452 5 4
VIOLET TOWN SHIRE— Sydney Road	385 0 2	385 0 2
WANGARATTA BOROUGH— Sydney Road	94 12 5	94 12 5
WANGARATTA BOROUGH AND WANGARATTA SHIRE (Joint WORKS)— Yarrowonga Road	6 7 7	6 7 7
WANGARATTA SHIRE— Beechworth Road	386 0 6	2,449 16 1
Springhurst-Rutherglen Road	700 4 4	
Yarrowonga Road	1,354 11 3	
WERRIBEE SHIRE— Princes Highway	2,893 19 3	2,893 19 3
WINCHELSEA SHIRE— Princes Highway	21 5 10	21 5 10
WODONGA SHIRE— Bonegilla Road	82 5 0	82 5 0
Total Direct Expenditure	38,376 11 8
Grand Total (Main Roads)	2,234 10 9	..	623,913 15 8
STATE HIGHWAY MAINTENANCE.				
Princes Highway West	40,770 19 9	486,484 11 5
Princes Highway East	74,052 5 5	
Western Highway	35,885 14 11	
Calder Highway	54,665 10 3	
Northern Highway	5,027 6 6	
Hume Highway	39,830 0 3	
Oneco Highway	30,611 9 4	
Murray Valley Highway	67,711 14 10	
South Gippsland Highway	36,622 5 9	
Midland Highway	23,449 13 0	
Bonang Highway	8,114 1 11	
Sturt Highway	3,353 18 0	
Henty Highway	61,157 0 10	
State Highway Maintenance (Tree Planting)	5,232 10 8	
(TOURISTS' ROADS.)				
Acheron Way	3,210 8 0	52,212 19 3
Alpine Road	(BD)6,266 7 11	
Alpine Road	(CL) 4,598 14 10	
Donna Buang Road	4,597 10 0	
Gypsy Point Road	58 19 6	
Grampians Road	2,207 12 2	
Mallacoota Road	790 19 4	
Mount Buffalo Road	1,313 8 2	
Mount Victory Road	1,058 14 5	
Ocean Road	(CL) 7,041 19 9	
Ocean Road	(BD)15,744 5 10	
Otway Lighthouse Road	1,188 13 5	
Silverband Track	212 17 10	
Sydenham Inlet Road	1,570 17 3	
Wartook Road	237 4 7	
Arthur's Seat	(CL) 39 13 8	
Mt. Buller Road	2,074 12 7	
Total	2,234 10 9	..	1,162,611 6 4

APPENDIX D.

COUNTRY ROADS BOARD.

MAIN ROADS.

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, RECONSTRUCTED, AND MAINTAINED, UNDER THE PROVISIONS OF THE COUNTRY ROADS ACT 1928, DURING THE YEAR ENDED 30TH JUNE, 1940.

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES.			
ALBERTON SHIRE—			
Albert River Road	Patrol Maintenance throughout .. .. .	.. .. .	15
Albert River-Welshpool Road	Patrol maintenance throughout .. .. .	.. .. .	8
Balook-Yarram Road	Road mix seal, $\frac{3}{4}$ -in. by 18 feet wide, from Carrajung-Gormandale Road to Calrossie Station .. .. .	.. .. .	65
" " " "	Improvement to alignment on sharp curves near Balook .. .. .	.. .. .	—
" " " "	Gravel sheeting at rate of six cubic yards per 100 feet between Mack's Creek and McKenzies .. .. .	.. .. .	3.5
" " " "	Patrol maintenance throughout .. .. .	.. .. .	9
Carrajung-Gormandale Road	Reforming and draining from A. W. Hobson's to Greig's Creek bridge .. .. .	.. .. .	1.74
Gellondale Road	Patrol maintenance throughout .. .. .	.. .. .	30
" " " "	Construction of side drains between Alberton West Church and Miller's Hill .. .. .	.. .. .	—
" " " "	Repairs to superstructure of bridge over Albert River .. .. .	.. .. .	—
" " " "	Patrol maintenance throughout .. .. .	.. .. .	7.5
Tarra Valley Road	Improvement to alignment on sharp curves between Grand Ridge Road and Tarra Valley Falls .. .. .	.. .. .	—
" " " "	Patrol maintenance throughout .. .. .	.. .. .	14
Yarram-Boolarra Road	Patrol maintenance throughout .. .. .	.. .. .	15
Yarram-Port Albert Road	Road mix seal, from Yarram Mechanics to near Yarram Memorial Park; 18 feet wide from 0 to .1 mile and double 18-ft. strip from .1 to .63 .. .. .	.. .. .	63
" " " "	Patrol maintenance from Yarram Mechanics to Hilo's Lane, and from Alberton to Port Albert, throughout .. .. .	.. .. .	6
Yarram-Won Wron Road	Reconditioning and double coat sealing 16 feet wide on approach curve to South Gippsland Highway .. .. .	.. .. .	23
" " " "	Patrol maintenance throughout .. .. .	.. .. .	5
ALEXANDRA SHIRE—			
Cathkin-Mansfield Road	Patrol maintenance throughout .. .. .	.. .. .	12
Healesville-Alexandra Road	Raising and widening bridge at 16.5 miles .. .. .	.. .. .	—
" " " "	Patrol maintenance throughout .. .. .	.. .. .	18
Terip-Terip Road	Patrol maintenance throughout .. .. .	.. .. .	9.8
Upper Goulburn Road	Double coat sealing from 12.4 to 13.9 miles .. .. .	.. .. .	1.5
Yarck Road	Patrol maintenance throughout .. .. .	.. .. .	27
" " " "	Patrol maintenance throughout .. .. .	.. .. .	3.8
ARAPILES SHIRE—			
Horsham-Natimuk-Edenhope Road	General maintenance throughout .. .. .	.. .. .	23.5
ARARAT TOWN—			
Avoca Road	General maintenance throughout .. .. .	.. .. .	1.5
Ballarat-Stewell Road	General maintenance and road mix seal .. .. .	.. .. .	3.25
ARARAT SHIRE—			
Ararat-Elmhurst Road	Reconstruction from 5.3 to 7.3 miles .. .. .	.. .. .	2
" " " "	Patrol maintenance throughout .. .. .	.. .. .	23
" " " "	Patrol maintenance throughout .. .. .	.. .. .	3.25
Ararat-St. Arnaud Road	Resealing from 25 to 27 miles .. .. .	.. .. .	2
Ararat-Warrnambool Road	Patrol maintenance throughout .. .. .	.. .. .	34
Ballarat-Hamilton Road	Patrol maintenance throughout .. .. .	.. .. .	22.5
Maroona-Glenhompson Road	Double coat sealing from 17.2 to 20.2 miles .. .. .	.. .. .	3
" " " "	Reconstruction from 20.2 to 21.8 miles .. .. .	.. .. .	1.6
" " " "	Patrol maintenance throughout .. .. .	.. .. .	22.5
AVOCA SHIRE—			
Ararat Road	Reconstruction, including two deviations from 2 to 3.61 miles .. .. .	.. .. .	1.61
" " " "	Patrol maintenance throughout .. .. .	.. .. .	7.2
Ararat-St. Arnaud Road	Scarifying, reshaping, and resheeting with gravel between Landsborough and Navarre .. .. .	.. .. .	3.85
" " " "	Patrol maintenance throughout .. .. .	.. .. .	15.9
Ballarat-St. Arnaud Road	Double coat sealing 16 feet wide from 9.1 to 12.11 miles and 14.23 to 14.73 miles north of Avoca .. .. .	.. .. .	3.5
" " " "	Reconstruction including re-aligning, regrading, and culverts 9.3 to 13.88 miles and 14.23 to 15.85 miles north of Avoca .. .. .	.. .. .	6.2
" " " "	Patrol maintenance throughout .. .. .	.. .. .	23.25
Beallba Road	Double coat sealing of four floodways near Avoca .. .. .	.. .. .	3.36
" " " "	Patrol maintenance throughout .. .. .	.. .. .	9
Landsborough Road	Patrol maintenance throughout .. .. .	.. .. .	1.8
Maryborough Road	Patrol maintenance throughout .. .. .	.. .. .	5
Maryborough-Natte Yallock Road	Construction of three floodways at 1, 4.2, and 5.7 miles from Natte Yallock .. .. .	.. .. .	15
" " " "	Patrol maintenance throughout .. .. .	.. .. .	6.6
Moonambel Road	Construction of two floodways between Tanwood and Moonambel .. .. .	.. .. .	1.3
" " " "	Light formation of unformed section near Navarre .. .. .	.. .. .	5.1
" " " "	Patrol maintenance throughout .. .. .	.. .. .	19.1
AVOCA AND BET BET SHIRES (Joint Works)—			
Maryborough-Natte Yallock Road	Construction of deviation with 3-ft. diameter pipe culvert near Wareek .. .. .	.. .. .	25
" " " "	Patrol maintenance throughout .. .. .	.. .. .	1.7
Carried forward		—	441.15

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—<i>continued.</i>			
Brought forward			
			761.22
BASS SHIRE—			
Almurta Road	Patrol and general maintenance throughout		4.94
Almurta-Grantville Road	Patrol and general maintenance throughout		3.81
Anderson-Dalyston Road	Re-aligning and insertion of eight transition curves, also widening from 12 feet and 13 feet to 17 feet in preparation for bitumen from 73 to 75 miles		2
" " " "	Widening westerly span of railway bridge at 72.83 miles to take one-way traffic		—
" " " "	Reconditioning bridges at 73.63, 75.42, and 75.8 miles		—
" " " "	Deleting five small-radius curves and inserting two 50-mile per hour transition curves, regrading and surfacing from 71.8 to 72.41 miles .. .. .		.61
" " " "	Patrol and general maintenance throughout		6.65
Dalyston-Glen Forbes Road	Patrol and general maintenance throughout		10.33
Dalyston-Wonthaggi Road	Patrol and general maintenance throughout		1.93
Inverloch-Wonthaggi Road	Patrol and general maintenance throughout		3.59
Korumburra-Wonthaggi Road	Painting and repairs to timber and steel bridge over Powlett River		—
" " " "	Patrol and general maintenance throughout		7.72
Main Coast Road " "	Reconditioning bridge over Bass River at 64.5 miles		—
" " " "	Widening from 12 feet to 17 feet in preparation for bitumen from 62.5 to 66.5 miles		4
" " " "	Patrol and general maintenance throughout		18.66
Wonthaggi-Loch Road	Construction of reinforced concrete box culvert 48 in. x 36 in. x 32 ft. in lieu of timber culvert at 78.75 miles		—
" " " "	Widening from 12 feet to 18 feet with crushed rock in preparation for bitumen, west from Borough boundary .. .. .		.19
" " " "	Patrol and general maintenance throughout		16.2
BASS SHIRE AND WONTHAGGI BOROUGH (Joint Works)—			
Loch-Wonthaggi Road	Widening from 12 feet to 18 feet in preparation for bitumen, east of borough boundary .. .. .		.1
" " " "	Patrol and general maintenance throughout .. .. .		.69
BEECHWORTH SHIRE—			
Beechworth Road	Regrading, re-aligning, sealing and patrol maintenance		20
Bright Road	Patrol maintenance		4
Chiltern-Beechworth Road	Patrol maintenance		8.5
Everton-Myrtleford Road	Construction of a three-cell reinforced concrete culvert at Stony Creek		—
Myrtleford-Yackandandah Road	Patrol maintenance		11.5
Stanley Road	Patrol maintenance		2.2
" " " "	Patrol maintenance		8
BEECHWORTH, YACKANDANDAH AND CHILTERN SHIRES (Joint Works)—			
Beechworth-Wodonga Road	Reshaping and patrol maintenance		2.5
BELFAST SHIRE—			
Hamilton Road	Resealing from 5.5 to 10.83 miles		5.33
" " " "	General maintenance throughout		13.5
Penshurst Road	General maintenance throughout		9.5
BELLARINE SHIRE—			
Barwon Heads-Ocean Grove Road	Patrol maintenance throughout		1.25
Geelong-Porterlington Road	Patrol maintenance throughout		17.45
Geelong-Queenscliff Road	Patrol maintenance throughout		14.7
Portarlington-St. Leonards Road	Patrol maintenance throughout		6.7
BENALLA SHIRE—			
Benalla-Shepparton Road	General maintenance throughout .. .. .		.9
Goorambat Road	General maintenance throughout		5.6
Goorambat-Thoona Road	General maintenance throughout		11.8
Greta Road	General maintenance throughout .. .. .		.8
Kelfeera Road	General maintenance throughout		15
Lima Road	General maintenance throughout		2.9
Sydney Road	General maintenance throughout		2
Tatong-Tolmie Road	General maintenance throughout		10
BERWICK SHIRE—			
Beaconsfield-Emerald Road	Patrol maintenance		6.7
Cockatoo-Gembrook Road	Patrol maintenance from Cockatoo to Gembrook		4.3
Emerald-Cockatoo Road	General maintenance east of Cockatoo Creek .. .. .		.2
Gembrook Road	Patrol maintenance		5.5
Gembrook-Launching Place Road	Patrol maintenance		6.7
Hallam-Emerald Road	Patrol maintenance		4.5
Koo-wee-rup-Longwarry Road	Patrol maintenance		1.6
Nar Nar Goon-Longwarry Road	Patrol maintenance		11.6
Woori Yallock-Pakenham-Koo-wee-rup Road	Patrol maintenance		23.66
BET BET SHIRE—			
Avoca-Bealiba Road	Resheeting with gravel 4.5 miles and preparation for sealing		2
" " " "	General maintenance throughout		13.7
Betley Road	General maintenance throughout		4.5
Bridgewater-Dunolly Road	Preparation for sealing		7.5
" " " "	General maintenance throughout		17
Dunolly Road	General maintenance throughout		12
Dunolly-Eddington Road	General maintenance throughout		5
Maryborough-Dunolly Road	General maintenance throughout		4.5
BET BET AND TULLAROOP SHIRES (Joint Works)—			
Betley Road	Construction of timber and steel bridge at Bet Bet Creek		—
Dunolly-Eddington Road	Repairs to timber bridge at Bet Bet Creek		—
Maryborough-Dunolly Road	Part construction of new bridge at Bet Bet Creek		—
BIRCHIP SHIRE—			
Beulah-Birchip-Wycheproof Road	General maintenance throughout		22
Donald-Birchip-Sealake Road	General maintenance throughout		26.75
BLACKBURN AND MITCHAM SHIRE—			
Burwood Road	Patrol maintenance		3.8
Main Healesville Road	Regrading, widening and sealing from 3.9 to 4.2 miles .. .. .		.3
" " " "	Patrol maintenance		4.2
Carried forward			1204.78

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—<i>continued.</i>			
Brought forward			1204·78
BRAYBROOK SHIRE—			
Ballarat Road	Reseal north roadway		1·25
" "	General maintenance between the tram terminus and Albion gates		3·3
BRIGHT SHIRE—			
Bright Road	Construction of timber and steel bridge at Happy Valley Creek		—
" "	Construction of approaches to Happy Valley Creek bridge		·17
" "	Reconstruction with gravel for sealing		1
" "	Patrol maintenance		20
Buffalo River Road	Patrol maintenance		12
Happy Valley Road	Reconstruction with granite sand		—
" "	Patrol maintenance		14·75
Harrietville Road	Patrol maintenance		16
Kiewa Valley Road	Patrol maintenance		8
Myrtleford-Yackandandah Road	General maintenance		10·6
BROADMEADOWS SHIRE—			
Lancefield Road	Widening pavement, including sealing and resealing from Broadmeadows Road to Bulla Shire boundary		1·5
" "	Patrol maintenance		4·5
Sydrey Road	Patrol maintenance		2
BULLA SHIRE—			
Melbourne-Lancefield Road	General maintenance		14·25
Sunbury Road	General maintenance		2
The Gap Road	General maintenance		2
BULLA AND KEILOR SHIRES (Joint Works)—			
Melbourne-Lancefield Road	General maintenance		·75
BULN BULN SHIRE—			
Bloomfield Road	Patrol maintenance		·9
Drouin-Poowong Road	Construction of timber bridge at Lang Lang River		—
" "	Patrol maintenance		7·25
Fumina Road	Patrol maintenance		9·7
Koo-wee-rup-Longwarry Road	Patrol maintenance, reshaping, sand sheeting and bridge replacement		6·5
Loch Valley Road	Patrol maintenance		6·4
Longwarry-Drouin Road	Bitumen sealing, 16 feet wide		·33
" "	Patrol maintenance		5·7
Main Neerim Road	Patrol maintenance		22
Main South Road	Bitumen sealing and re-alignment		1·17
" "	Construction of timber bridge over King Parrot Creek		—
" "	Patrol maintenance		14·75
Neerim East Road	Patrol maintenance		4
Neerim North-Noojee Road	Patrol maintenance		3·5
Princes Highway	Patrol maintenance		1·06
Western Port Road	Patrol maintenance and re-aligning		8·25
BUNINYONG SHIRE—			
Ballarat-Rokewood Road	General maintenance throughout, 0 to 14 miles		14
Elaine-Mt. Mercer Road	General maintenance throughout, 0 to 5 miles		5
Navigator's Road	General maintenance throughout, 0 to 6 miles		6
BUNGAREE SHIRE—			
Daylesford-Ballarat Road	Road mix seal where necessary and patrol maintenance throughout		·5
CASTLEMAINE BOROUGH—			
Castlemaine-Maryborough Road	Reconstruction, priming and sealing		·52
" "	General maintenance		1·72
Melbourne-Bendigo Road	Road mix seal		·51
" "	Reconstruction, priming and sealing		·47
" "	General maintenance		3·2
CHARLTON SHIRE—			
Bendigo Road	General maintenance		1·5
Charlton-Durham Ox Road	Resheeting, widening and preparation for sealing		2
" "	Double coat bituminous first seal		1·4
" "	Patrol and general maintenance		15·5
Donald Road	General maintenance		12
St. Arnaud Road	Resheeting in preparation for sealing		1·5
" "	Double coat bituminous first seal		2·95
" "	Patrol and general maintenance		15
Wycheproof-Wooronook Road	Widening and light resheeting		5·5
" "	Patrol and general maintenance		6·2
CHELSEA CITY—			
Point Nepean Road	Drag spread seal, southerly from Mordialloc bridge		1·41
" "	Patrol maintenance		5·66
Springvale Road	Reconstruction including double coat sealing easterly from Edithvale railway station		·32
" "	Widening from 14 feet to 20 feet with crushed rock westerly from municipal boundary		·28
" "	Patrol maintenance		·86
Carried forward			1514·46

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—<i>continued.</i>			
	Brought forward	—	1514.46
CHILTERN SHIRE—			
Barnawartha-Howlong Road	Patrol maintenance		5.9
Chiltern-Beechworth Road	Patrol maintenance		6.6
Chiltern-Howlong Road	Patrol maintenance		7.1
Chiltern-Rutherglen Road	Patrol maintenance		3.8
Sydney Road	Patrol maintenance		1.15
COHUNA SHIRE—			
Cohuna-Koondrook Road	Sealing to junction with Murray Valley Highway .. .. .		.08
" " " "	Patrol maintenance		8.5
Cohuna-McMillan's Road	Scarifying and resheeting commencing 4 miles from Cohuna		1.25
Leitchville Road	Patrol maintenance		6
" " " "	Reconstruction, widening and sealing at Leitchville and 2 miles from Cohuna		1.13
" " " "	Widening from railway crossing at Cohuna		1.32
" " " "	Patrol maintenance		10.75
Koroop Road	Patrol maintenance		2.06
Pyramid-Leitchville Road	Patrol maintenance		2.58
COLAC SHIRE—			
Colac-Ballararat Road	Widening, sealing and road mix seal		1.79
" " " "	Patrol maintenance throughout		21.4
Colac-Beech Forest Road	Patrol maintenance throughout		11.25
Colac-Forrest Road	Widening and resheeting with fine crushed rock		1.97
Cororooke Road	Patrol maintenance throughout		16.9
Cressy-Inverleigh Road	Patrol maintenance throughout		7.25
" " " "	Reforming, widening and reconstructing with fine crushed rock		1.39
" " " "	Double coat sealing .. .. .		.63
" " " "	Patrol maintenance throughout		8.7
Swan Marsh Road	Reforming, widening and reconstructing with fine crushed rock		1.25
" " " "	Patrol maintenance throughout		5.66
COLAC BOROUGH—			
Princes Highway	Premix seal 21 feet wide from Grant Street westerly .. .. .		.8
CORIO SHIRE—			
Geelong-Bacchus Marsh Road	General maintenance throughout		19.6
CORIO AND BACCHUS MARSH SHIRES (Joint Works)—			
Geelong-Bacchus Marsh Road	General maintenance		1
CLUNES BOROUGH—			
Clunes-Creswick Road	Resheeting with gravel 18 feet wide from .5 to 2.1 miles at borough boundary		1.6
" " " "	Patrol maintenance throughout		2.1
Maryborough-Ballararat Road	Patrol maintenance throughout		3.2
CRANBOURNE SHIRE—			
Baxter-Tooradin Road	Forming, grading, and gravelling near Balla Balla .. .. .		.37
" " " "	General maintenance throughout		9.5
Cranbourne-Frankston Road	Widening pavement and surfacing 16 feet wide with crushed rock near Cranbourne .. .. .		.94
" " " "	Widening pavement and surfacing 16 feet wide with crushed rock near Frankston		1.23
" " " "	General maintenance throughout		7.5
Koo-wee-rup-Longwarry Road	Double coat sealing 16 feet wide at Koo-wee-rup .. .. .		.87
" " " "	Reconstruction and surfacing with crushed rock 18 feet wide north of Koo-wee-rup .. .. .		.22
" " " "	General maintenance throughout		11
Koo-wee-rup-Pakenham Road	General maintenance throughout		5.5
Main Coast Road	Widening pavement to 18 feet and re-alignment of curves at township of Cranbourne .. .. .		.5
" " " "	General maintenance throughout .. .. .		.5
Westernport Road	Widening pavement to 18 feet and surfacing with gravel from railway crossing at Lang .. .. .		.75
" " " "	Lang northerly		
" " " "	General maintenance throughout		9
CRESWICK SHIRE—			
Castlemaine-Ballararat Road	Sheeting with gravel 20 feet wide, 18.5 cubic yards per 100 feet, 20.92 to 23.7 miles		2.78
" " " "	Widening old macadam and sheeting with gravel 20 feet wide from 12.78 to 14.48 miles at Smeaton		1.7
" " " "	Construction of transition curve at right-angle corner near 18.5 miles		2.6
" " " "	Construction of two-cell reinforced concrete box culvert, each cell 8 ft. 6 in. by 7 ft. 6 in., at 20.36 miles		—
" " " "	Resealing from 0 to .57 and 11.17 to 12.12 miles		1.52
" " " "	Patrol maintenance throughout		23.7
Clunes-Creswick Road	Patrol maintenance throughout		4.4
Creswick-Smeaton Road	Widening old macadam and sheeting with gravel 18 feet wide and renewal of all old timber culverts from 3.15 to 5.59 miles		2.44
" " " "	Patrol maintenance throughout		5.59
Daylesford-Ballararat Road	Resheeting with gravel 20 feet wide, six short sections near Dean and Newlyn .. .. .		.87
" " " "	Resealing from 1.04 to 1.38 and 5.34 to 5.85 miles .. .. .		.85
" " " "	Patrol maintenance throughout		12.4
DANDENONG SHIRE—			
Cheltenham Road	Road mix seal from Princes Highway to Thomas Street, Dandenong .. .. .		.08
" " " "	Patrol maintenance throughout		6.4
Springvale Road	Reconstruction and widening to 20 feet with fine crushed rock		1
" " " "	Patrol maintenance throughout		7.38
Princes Highway	Road mix seal from Cranbourne Road to Foster Street		1
" " " "	Patrol maintenance throughout		1.8
DANDENONG AND CRANBOURNE SHIRES (Joint Works)—			
Dandenong-Frankston Road	Patrol maintenance throughout		6.1
DAYLESFORD BOROUGH—			
Balian Road	General maintenance throughout		1.6
Ballararat Road	General maintenance throughout		1.05
Castlemaine Road	General maintenance throughout .. .. .		.65
Daylesford-Hepburn Road	Road mix resealing between .39 and 1.14 miles .. .. .		.75
" " " "	General maintenance throughout		1.14
Daylesford-Trentham Road	General maintenance throughout .. .. .		.9
Malmsbury-Daylesford Road	General maintenance throughout		1.42
	Carried forward	—	1817.57

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—continued.

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—continued.			
	Brought forward	—	1817·57
DEAKIN SHIRE—			
Echuca-Cornella Road	Patrol maintenance throughout		7·5
Echuca-Picola Road	Patrol maintenance throughout		5
Kyabram-Nathalia Road	Resheeting with gravel		·07
	Patrol maintenance throughout		7
Kyabram-Tongala Road	Patrol maintenance		8
Rochester-Kyabram Road	Reconstruction and resheeting with gravel		3·17
" " "	Double coat sealing		2·22
" " "	Patrol maintenance throughout		13
Undera-Wyuna Road	Patrol maintenance throughout		3·31
DEAKIN AND NUMURKAH SHIRES (Joint Works)—			
Echuca-Picola Road	Reconstruction of bridge over Goulburn River		—
DEAKIN AND RODNEY SHIRES (Joint Works)—			
Kyabram-Tongala Road	Patrol maintenance		1
Rochester-Kyabram Road	Reinstating gravel sections		·2
" " "	Patrol maintenance throughout		3
DIMBOOLA SHIRE—			
Horsham Road	General maintenance throughout		·81
Rainbow Road	Resheeting existing limestone rubble section between 2·3 and 3·6 miles from Dimboola		1·29
" " "	Resheeting existing limestone rubble section between 16·62 and 18·9 miles from Dimboola		2·26
" " "	Limestone rubbling existing loam formations from 11·5 to 13·02 miles north of Jeparit		1·52
" " "	Limestone rubbling existing loam formations between 14·22 and 15·4 miles north of Jeparit		1·15
" " "	Limestone rubbling existing loam formations from 1·8 to 2·25 miles north of Jeparit		·45
" " "	Patrol maintenance throughout		42
Rainbow-Beulah-Birchip Road	Resheeting existing limestone rubble sections between 3·8 and 6·9 miles from Rainbow		1·89
" " "	General maintenance throughout		14
Rainbow Rises Road	Resheeting existing blue metal with limestone rubble from ·05 to 1·75 miles from Rainbow		3·7
" " "	Patrol maintenance throughout		6
Warracknabeal Road	Road mix seal between ·43 and ·93, 1·38 and 1·63, and 8 and 9·5 miles from Dimboola		1·92
" " "	Patrol maintenance throughout		9·5
DIMBOOLA AND KARKAROOC SHIRES (Joint Works)—			
Hopetoun-Rainbow Road	Resheeting existing blue metal with limestone rubble from 2·05 to 2·62 miles from Rainbow		·57
" " "	General maintenance throughout		5
DONALD SHIRE—			
Donald-Charlton Road	Double coat bituminous surfacing 16 feet wide from 3·3 to 4·3 miles from Donald		1
" " "	General maintenance throughout		13
Marnoo-Donald Road	Double coat bituminous surfacing 16 feet wide, south of Avon river		2·3
" " "	General maintenance throughout		12·7
St. Arnaud-Birchip Road	Light granite sand resheeting between Litchfield and Watchem		6·4
" " "	General maintenance throughout		2·7
DONCASTER AND TEMPLESTOWE SHIRE—			
Doncaster Road	General maintenance		1·1
" " "	Patrol maintenance balance of road		6·21
Heidelberg-Warrandyte Road	General maintenance		1·52
" " "	Patrol maintenance balance of road		9·81
Warrandyte-Ringwood Road	Patrol maintenance		4
DUNDAS SHIRE—			
Hamilton-Dunkeld Road	Resealing from 1·4 to 1·9, 4·15 to 5·05, 5·92 to 6·5, and 7·8 to 9·6 miles		3·78
" " "	Patrol maintenance throughout		14·5
Hamilton-Mt. Gambier Road	Resealing from 4 to 5·12 and 2·8 to 3·75 miles		2·14
" " "	Patrol maintenance throughout		12·85
Hamilton-Port Fairy Road	Resealing from 8·95 to 9·55, 12·25 to 13·12, 15 to 15·6, and 17·47 to 17·77 miles		2·37
" " "	Forming and gravelling from 15·6 to 15·9 miles, Weerangourt Hill		·3
" " "	Patrol maintenance throughout		18·75
Hamilton-Warrnambool Road	Resealing from ·5 and 1·14, 2·8 and 3·75, and 4·15 to 5·5 miles		2·94
" " "	Patrol maintenance throughout		7·5
DUNMUNKLE SHIRE—			
Horsham-Murtoa Road	Resealing with emulsion, 4 miles from Murtoa		·78
" " "	Patrol maintenance throughout		5·34
Marnoo-Donald Road	Patrol maintenance throughout		3·5
Marnoo-Rupanyup Road	Resealing with emulsion near shire boundary		4·6
" " "	Double coat sealing near Rupanyup		3·15
" " "	Resealing 4 miles from Rupanyup		2·43
" " "	Patrol maintenance throughout		10·18
Minyip-Donald Road	Double coat sealing near Minyip		1·11
" " "	Widening pavement from 15 to 18 feet 2 miles from Minyip		1·33
" " "	Patrol maintenance throughout		2·98
Rupanyup-Murtoa Road	Patrol maintenance throughout		9·25
Stawell-Warracknabeal Road	Widening pavement from 15 to 18 feet south of Rupanyup		1·5
" " "	Regrading and reconstructing 40 feet wide in the township of Rupanyup		·82
" " "	Resheeting with fine crushed rock over previously sealed road at Rupanyup South		·4
" " "	Reconstruction on new alignment on curves north of Rupanyup and north of Minyip		·91
" " "	Patrol maintenance throughout		28·71
EAGLEHAWK BOROUGH—			
Mount-Korong Road	General maintenance throughout		3
	Carried forward		2196·06

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—<i>continued.</i>			
Brought forward		—	2196·06
EAST LODDON SHIRE—			
Borong—Prairie Road	General maintenance		1·5
Dingee Road	General maintenance, shouldering where necessary		7·16
Mitiamo Road	Construction of two floodways and provision of kerbing and relieving culverts		—
Prairie Road	General maintenance, shouldering where necessary		5·55
" "	Construction of floodway and provision of relieving culvert		—
" "	General maintenance, shouldering where necessary		7·98
ELTHAM SHIRE—			
Eltham—Yarra Glen Road	Patrol maintenance throughout		21
Hurstbridge—Kingleake Road	Patrol maintenance throughout		16
Kangaroo Ground—Warrandyte Road	Patrol maintenance throughout		3·5
Yarra Glen—Glenburn Road	Patrol maintenance throughout		8
EUROA SHIRE—			
Arcadia Road	Construction of reinforced concrete bridge over Castle Creek		—
" "	Patrol maintenance throughout		5·7
Avenel—Longwood Road	Patrol maintenance throughout		2·1
Euroa—Arcadia Road	Construction of shoulders from 9 to 11 miles		2
" "	Patrol maintenance throughout		17
Euroa—Mansfield Road	Construction of shoulders from 1 to 4 miles		3
" "	Construction of timber bridge and approaches over Watchbox Creek		—
" "	Patrol maintenance throughout		16·1
Euroa—Strathbogie Road	Construction of shoulders and double coat sealing from 8·5 to 10·75 miles		2·25
" "	Patrol maintenance throughout		19·2
Murchison—Violet Town Road	Patrol maintenance throughout		16·5
FERN TREE GULLY SHIRE—			
Beaconsfield—Emerald Road	Patrol maintenance		·5
Belgrave—Emerald Road	Resealing between Belgrave and Menzies Creek		1·5
Burwood Road	Patrol maintenance		6·73
" "	Modified macadam widening near Lower Ferntree Gully		·06
" "	Resealing at Wantirna South		·7
" "	Patrol maintenance		4·5
Emerald Road	Widening and resealing between Emerald and Avonsleigh		·53
" "	Patrol maintenance		3·25
Main Ferntree Gully Road	Modified macadam widening at Scoresby and Lower Ferntree Gully		·76
" "	Resealing at Upper Ferntree Gully and Upwey		·91
" "	Patrol maintenance		10·81
Monbulk Road	Widening and super-elevating between Kallista and Monbulk		·57
" "	Resealing near Belgrave		·48
" "	Patrol maintenance		5
Olinda Road	Resealing near Upper Ferntree Gully, Ferny Creek and Sassafras		2·37
" "	Patrol maintenance		0·25
FLINDERS SHIRE—			
Bittern—Dromana Road	Surfacing with top course crushed rock at Dunn's Creek		·93
" "	Reconstruction at Warnecke's deviation		·50
" "	Reconstruction at Overgaard's Hill		1
" "	Patrol maintenance throughout		9·5
Hastings—Flinders Road	Reconstruction near Balmarring		1·64
" "	Patrol maintenance throughout		17
Mornington—Dromana Road	Replacement of old timber culvert with reinforced concrete pipes and construction of approaches		·13
" "	Patrol maintenance throughout		2·5
Mornington—Flinders Road	Reconstruction at Jarman's		·55
" "	Patrol maintenance throughout		12
Point Nepean Road	Widening bottom course at Rosebud		·34
" "	Construction of triple culvert and approaches at Lighthouse		·25
" "	Widening at Moat's Corner		·05
" "	Patrol maintenance throughout		21·5
Red Hill Road	Patrol maintenance throughout		3·75
Rosebud—Flinders Road	Reconstruction at Cape Schanck Road		1·5
" "	Widening and bottom course gravelling at Cape Schanck Road		·5
" "	Widening at Double Creek		1·15
" "	Patrol maintenance throughout		13·5
Stony Point Road	Patrol maintenance throughout		4
FRANKSTON AND HASTINGS SHIRE—			
Baxter—Tooradin Road	General maintenance throughout		1·7
Cranbourne—Frankston Road	General maintenance throughout		2·5
Frankston—Dandenong Road	General maintenance throughout		5·5
Frankston—Flinders Road	Reconstruction and double coat sealing south of Frankston		1·2
" "	Construction of deviation and double coat sealing north of Hastings		·2
" "	General maintenance throughout		14
Mooroodue Road	General maintenance throughout		5·5
Point Nepean Road	Construction of pipe culvert at Sweet Water Creek		—
" "	Construction of stone retaining wall, 750 feet long at foot of Oliver's Hill (joint works with Public Works Department)		—
" "	General maintenance throughout		7·5
Tyabb—Mornington Road	Reconstruction westerly from Tyabb		1·5
" "	Reconstruction westerly from Coolart Road		—
" "	General maintenance throughout		4·5
GISBORNE SHIRE—			
Gisborne—Bacchus Marsh Road	Reforming and gravelling		1·51
" "	General maintenance		9·7
Gisborne Station Road	General maintenance		1·2
Mount Macedon Road	General maintenance		6·75
GLENELG SHIRE—			
Casterton—Penola Road	Regrading, banking, widening and sheeting with gravel from junction with Mount Gambler Road		2
" "	Supply of maintenance gravel between 2 and 18 miles		—
" "	Supply of maintenance crushed rock between 18 and 26 miles		—
" "	Patrol maintenance throughout		26
Coleraine—Casterton Road	Completing embankment, fencing, and sheeting with crushed rock at new culvert at Pierce's		·15
" "	Road mix seal		1·14
" "	Patrol maintenance throughout		7
Coleraine—Merino Road	Regrading, banking, widening and sheeting with gravel		1·74
" "	Supply of maintenance gravel throughout		—
Carried forward			2588·91

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—<i>continued.</i>			
	Brought forward		2588·91
GLENELG SHIRE—<i>continued.</i>			
Coleraine—Merino Road	Patrol maintenance throughout		8·5
Dergholm Road	Sheeting with crushed rock between 8 and 10 miles		1·5
" " " "	Supply of maintenance gravel between 11 and 22 miles		—
" " " "	Patrol maintenance throughout		22
Edenhope Road	Resurfacing, banking, widening and sheeting with gravel between Wando Bridge and Nareen Road		4·56
" " " "	Supply of maintenance gravel between 12 and 27 miles		—
" " " "	Patrol maintenance throughout		27
Mount Gambier Road	Road mix seal in Henty-street, Casterton		28
" " " "	Resealing from 22 to 27 miles		3·81
" " " "	Forming and sheeting with crushed rock deviation through Harvey's		53
" " " "	Improving turn at Golf Links, land purchase, fencing, forming and gravelling		19
" " " "	Patrol maintenance throughout		30
Portland—Casterton Road	Resurfacing, banking, widening and sheeting with gravel at King's Hill between Merino and Digby		59
" " " "	Double coat sealing of above		91
" " " "	Road mix seal on two sections between Casterton and Sandford		20
" " " "	Patrol maintenance throughout		—
GLENLYON SHIRE—			
Ballan Road	General maintenance throughout		4·45
Ballarat Road	General maintenance throughout		3·5
Castlemaine—Daylesford Road	General maintenance throughout		13
Daylesford—Hepburn Road	General maintenance throughout		1
Daylesford—Trentham Road	General maintenance throughout		10
Hepburn—Newstead Road	General maintenance throughout		13
Malmsbury—Daylesford Road	General maintenance throughout		15
GORDON SHIRE—			
Charlton—Durham Ox Road	General maintenance, re-alignment of roadway and construction of transition curves, running boards on bridges, guard posts and resheeting of pavement		25
GOULBURN SHIRE—			
Avenel—Longwood Road	Construction of timber bridge at Sandy Creek, Longwood, and general repairs		—
" " " "	Patrol maintenance		9
Statton Road	Patrol maintenance		6
Vickers Road	Patrol maintenance		2
GRENVILLE SHIRE—			
Ballarat—Hamilton Road	Reconditioning gravel shoulders and widening from 14 feet to 18 feet from 9·45 to 11·16 miles and 12·5 to 14 miles		3·21
" " " "	Construction of reinforced concrete bridge at Scarsdale, 20 feet span by 24 feet wide		—
" " " "	Construction of reinforced concrete bridge at Linton 16 feet span by 24 feet wide plus 5 feet footpath		—
" " " "	Patrol maintenance		24·1
Cressy Road	Patrol maintenance		9·5
Lismore Road	Patrol maintenance		10
Lismore—Pittong Road	Resurfacing and strengthening with fine crushed rock 10 feet wide from 0 to 3 miles		3
" " " "	Patrol maintenance		8·9
Pitfield Road	Patrol maintenance		12·6
HAMPDEN SHIRE—			
Ayresford Road	Dragging, reshaping and double coat sealing south of junction with Princes Highway		1·7
" " " "	Installation of 12-in. diameter reinforced concrete pipe culvert at 3·15 miles south of junction with Princes Highway		—
" " " "	Patrol maintenance throughout		3·3
Camperdown—Ballarat Road	Sheeting shoulders 3 feet wide on each side of 10 feet pavement north of junction with Princes Highway		1·4
" " " "	Completion of reforming, grading and gravelling 12 feet wide from junction with Caramut—Lismore Road		1·22
" " " "	Double coat sealing on above		1·22
" " " "	Road mix seal 10 feet wide from 6·69 to 8·95 miles south of township of Skipton		2·26
" " " "	Completion of deviation and realignment of curves south of bridge over Mount Emu Creek in township of Skipton		2
" " " "	Construction of deviation and transitioned curve north-east of bridge over Mount Emu Creek in township of Skipton		16
" " " "	Double coat sealing pavement widening from 10 feet to 16 feet north-east of bridge over Mount Emu Creek in township of Skipton		2·74
" " " "	Lengthening masonry culvert walls to 30 feet and construction of reinforced concrete deck slab at 2·65 miles north-east of bridge over Mount Emu Creek in township of Skipton		—
" " " "	Widening from 10 feet to 17 feet and re-alignment of curve north-east of bridge over Mount Emu Creek		68
" " " "	Widening from 10 feet to 17 feet south of bridge over Mount Emu Creek in township of Skipton		3·2
" " " "	Patrol maintenance throughout		48·36
Camperdown—Colbden Road	Patrol maintenance throughout		3·34
Caramut—Lismore Road	Widening from 10 feet to 17 feet west of junction with Camperdown—Ballarat Road		2·25
" " " "	Widening from 10 feet to 17 feet west of junction with Camperdown—Ballarat Road		4·81
" " " "	Lengthening masonry culvert walls to 30 feet and construction of reinforced concrete deck slabs to culverts at 10·4 and 13·2 miles west of junction with Camperdown—Ballarat Road		—
	Carried forward		2954·07

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—<i>continued.</i>			
	Brought forward		2954·07
HAMPDEN SHIRE—<i>continued.</i>			
Caramut-Lismore Road	Patrol maintenance throughout		16
Cobden-Terang Road	Double coat sealing 16 feet south of junction with Princes Highway		·95
" " " "	Widening from 10 feet to 17 feet south of junction with Princes Highway		1·18
" " " "	Patrol maintenance throughout		3·3
Darlington-Terang Road	Double coat sealing 16 feet wide from junction with Terang-Mortlake Road		1
Lismore Road	Patrol maintenance throughout		3·35
" " " "	Supply of 400 cubic yards of spalls, crushing and spreading 100 cubic yards on short sections over total length of road (balance stacked on roadside)		—
" " " "	Patrol maintenance throughout		4·45
Lismore-Cressy Road	Double coat sealing on widening from 10 to 16 feet east of junction with Camperdown-Ballararat Road		1·9
" " " "	Widening from 10 to 16 feet east of junction with Camperdown-Ballararat Road		3·8
" " " "	Patrol maintenance throughout		18·79
Lismore-Pittong Road	Double coat sealing 12 feet wide north of junction with Lismore-Cressy Road		1·3
" " " "	Supply of 522 cubic yards of quartz gravel for sheeting short sections from junction with Lismore-Cressy Road to 9·76 miles north		—
" " " "	Patrol maintenance throughout		12·4
McKinnon's Bridge-Noorat Road	Road mix sealing 16 feet wide north-west of junction with Princes Highway		1
" " " "	Patrol maintenance throughout		3·85
Princes Highway	Road mix seal 20 feet wide in township of Camperdown		·48
" " " "	Patrol maintenance throughout		2·63
Terang-Framlingham Road	Patrol maintenance throughout		1·6
Terang-Mortlake Road	Sheeting shoulders north of junction with Princes Highway		1·2
" " " "	Patrol maintenance throughout		7
HAMPDEN AND HEYTESBURY SHIRES (Joint Works)—			
Cobden-Terang Road	Construction of four-span concrete, steel and timber bridge over Mount Emu Creek		—
HEALESVILLE SHIRE—			
Healesville-Alexandra Road	Patrol maintenance from south-western township boundary to Don Road		1·38
Healesville-Kinglake Road	Patrol maintenance from junction with Healesville-Alexandra Road to railway crossing		·4
Healesville-Woorl Yallock Road	Reconstruction southerly from Albert Road		·38
" " " "	Patrol maintenance from junction with Healesville-Alexandra Road to shire boundary		8
HEIDELBERG CITY—			
Greensborough-Hurstbridge Road	General maintenance throughout		9·15
Heidelberg-Warrandyte Road	General maintenance throughout		·47
Main Heidelberg-Eltham Road	Regrading intersection at McArthur Road, improvement of vertical curve at outer circle railway		—
Whittlesea Road	General maintenance throughout		7·63
" " " "	General maintenance throughout		1·18
HEYTESBURY SHIRE—			
Camperdown-Cobden Road	Construction of concrete core in masonry culvert at Cobden		—
" " " "	Patrol maintenance throughout, gravelling shoulders where required		4·9
Cobden-Port Campbell-Princetown Road	Reconditioning gravel road and widening at Cowley's Creek		6·75
" " " "	Subdraining and resurfacing on Meiklejohn's Hill		·25
" " " "	Gravelling shoulders at Newfield		1·5
" " " "	Patrol maintenance throughout		23·84
Cobden-Scott's Creek Road	Patrol maintenance throughout		6·95
Cobden-Terang Road	Patrol maintenance throughout		11·9
Timboon-Nirranda Road	Construction of two-pipe culverts at 7·5 miles from Timboon		—
" " " "	Patrol maintenance throughout		8·65
Timboon-Port Campbell Road	Construction of transition curve $\frac{1}{2}$ mile south of Timboon, and re-alignment and surfacing with gravel		·3
" " " "	Replacing culvert at Timboon		—
" " " "	Patrol maintenance throughout		5·06
HORSHAM TOWN—			
Dimboola-Horsham Road	General maintenance		1·93
Dooen Road	Widening from 15 to 20 feet		·7
" " " "	General maintenance		1·95
Hamilton Road	General maintenance; patrol maintenance on approaches to Wimmera bridge		1·64
Natimuk Road	General maintenance		1·42
Western Highway	General maintenance		·69
HUNTLY SHIRE—			
Elmore-Heathcote Road	General maintenance of bitumen surface		·36
Goornong-Colbinabbin Road	Priming and sealing with bitumen		2·08
INGLEWOOD BOROUGH—			
Bendigo-Charlton Road	General maintenance throughout		1·4
KANIVA SHIRE—			
Broughton Road	Resheeting with limestone from ·7 to 2·54 miles		1·84
" " " "	Patrol maintenance throughout		9·9
Kaniva-Edenhope Road	Resheeting with gravel from 2·85 to 3·15 miles		·3
" " " "	Resheeting with limestone from 1·15 to 2·54 miles		1·39
" " " "	Patrol maintenance throughout		12·1
Nhill-Kaniva-Border Road	Patrol maintenance throughout		·7
South Lillimur Road	Resealing from 1·14 to 1·69 miles		·55
" " " "	Patrol maintenance throughout		6·5
Yearlinga Road	Resheeting with limestone from 1·38 and 1·69 and 3·02 to 3·62 miles		·91
" " " "	Construction of curve from ·55 to ·7 miles		·15
" " " "	Patrol maintenance throughout		9·7
KARA KARA SHIRE—			
Avoca-St. Arnaud Road	Completion of preparation for sealing at Carapoeoc West, Stuart Mill and from Avoca Shire boundary northerly		4·31
" " " "	Preparation for sealing between Medlyn and Stuart Mill		5·56
" " " "	Patrol maintenance throughout		22
Charlton Road	Patrol maintenance throughout		9
Marnoo Road	Reconditioning and widening in preparation for sealing		2·19
" " " "	Patrol maintenance throughout		2·22
Navarre Road	Patrol maintenance throughout		22
St. Arnaud-Donald Road	Patrol maintenance throughout		16
St. Arnaud-Marnoo Road	Patrol maintenance throughout		18
	Carried forward		3296·36

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—<i>continued.</i>			
Brought forward			
KOWREE SHIRE—			3655·45
Hamilton—Edenhope—Apsley Road	Reforming and gravelling between Edenhope and Apsley		4·84
Harrow—Horsbarn Road	General maintenance throughout		41
Kaniwa—Edenhope Road	Forming, gravelling and construction of 11 culverts between 1·5 and 12·5 miles		19·55
Minimay—Apsley Road	General maintenance throughout		19
Wombelano Road	Resheeting sand clay sections between 8 and 14 miles in "Little Desert"		1·2
"	General maintenance throughout		14·5
"	Reforming and gravelling between 8 and 9 miles		2·66
"	General maintenance throughout		16·5
"	Forming, gravelling and curve improvement near 16·5 miles		2·28
"	General maintenance throughout		21
KYNETON SHIRE—			
Daylesford Road	General maintenance		·7
Daylesford—Trentham Road	General maintenance		2·45
Melbourne—Bendigo Road	General maintenance		1·75
Redesdale Road	General maintenance		6·25
Trentham Road	Reconditioning with crushed rock at Tylden		2·17
"	First bitumen sealing at Tylden		2·30
"	General maintenance throughout		12·97
Tylden—Woodend Road	General maintenance		3·25
LEIGH SHIRE—			
Ballarat—Rokewood Road	Construction of deviation between Rokewood and Corindhap		·21
"	Reconstruction and resheeting between Corindhap and Dereel		2·47
"	Patrol maintenance throughout		8
Bannockburn—Shelford Road	Patrol maintenance throughout		6·5
Inverleigh—Cressy Road	Widening bitumen pavement with gravel		3
Rokewood—Cressy Road	Patrol maintenance throughout		11·5
"	Double coat sealing from 10 to 11 miles		1
"	Reconstruction and resheeting from Werneth station to Ferrer's Creek		2·2
"	Patrol maintenance throughout		11
Shelford—Inverleigh Road	Patrol maintenance throughout		6
Shelford—Rokewood Road	Reconstruction and resheeting between Rokewood township and Ferrer's Creek		3·75
Werneth Road	Patrol maintenance throughout		17
"	Patrol maintenance throughout		3
LEIGH AND COLAC SHIRES (Joint Works)—			
Cressy—Inverleigh Road	Patrol maintenance throughout		2·5
LEXTON SHIRE—			
Avoca—Ararat Road	Re-alignment and new culvert at rail crossing between 2·3 and 2·42 miles		·12
"	Re-alignment and new curves, extension of culverts between 3·5 and 3·7 miles		·2
"	Re-alignment and new curves, extension of culverts between 3·97 and 4·18 miles		·21
"	Re-alignment and new curve, between 4·5 and 4·69 miles		·19
"	New construction and one new culvert between 8·55 and 9·3 miles		·75
"	Patrol maintenance throughout		9·3
Avoca—Ballarat Road	Patrol maintenance throughout		17
LILLYDALE SHIRE—			
Evelyn—Lillydale Road	Reconstruction of ·93 miles		—
"	Patrol maintenance throughout		3
Main Healesville Road	Patrol maintenance throughout		1
Monbulk Road	Patrol maintenance throughout		8·2
Mount Dandenong Road	Reconstruction at Mitcham		1·14
Yarra Glen Road	Patrol maintenance throughout		11·8
"	Patrol maintenance		4·6
LOWAN SHIRE—			
Dimboola—Kaniwa Road	Patrol maintenance throughout		2·2
Goroke Road	Patrol maintenance throughout		6·7
Lorquon Road	Patrol maintenance throughout		5
Lorquon West Road	Patrol maintenance throughout		14
Yanac Road	Patrol maintenance throughout		18
MCIYOR SHIRE—			
Heathcote—Elmore Road	Patrol maintenance throughout		10·25
Heathcote—Redesdale Road	Patrol maintenance throughout		12
Kilmore—Heathcote—Bendigo Road	Patrol maintenance throughout		25·45
Mount Camel Estate Road	Sealing 16 feet wide between Lady's Pass and Shire boundary		2·62
Tooborac—Lancelfield Road	Patrol maintenance throughout		4·5
"	General maintenance throughout		1·25
MAFFRA SHIRE—			
Boisdale—Briargolong Road	Patrol maintenance in parishes of Briargolong and Wa-de-lock		6
Briargolong—Dargo Road	Patrol maintenance in parish of Briargolong		3
Briargolong—Stratford Road	Patrol maintenance in parish of Briargolong		3
Bushy Park—Valencia Creek Road	Gravelling and sealing		2
"	Patrol maintenance in parish of Briargolong		5
Licola Road	Patrol maintenance in parishes of Glenmaggie and Licola		40
Maffra—Newry Road	Gravelling and sealing		1
Maffra—Sale Road	Patrol maintenance in parish of Maffra		6
"	Resealing		1
Maffra—Stratford Road	Patrol maintenance in parish of Bundalaguah		6
Tinamba—Boisdale Road	Patrol maintenance in parish of Wa-de-lock		3
Tinamba—Newry Road	Patrol maintenance in parish of Tinamba		7
Traralgon—Maffra Road	Patrol maintenance and construction of new concrete bridge in parishes of Maffra and Tinamba		3
"	Patrol maintenance in parish of Tinamba and widening timber bridge		6
MALDON SHIRE—			
Baringhup Road	Reconstruction of Phillip's culvert at Baringhup		—
"	Patrol maintenance		8
Castlemaine—Maldon Road	Sealing		2·5
"	Construction of culvert at Talbot's curve		—
"	Patrol maintenance		8
Maldon—Eddington Road	Patrol maintenance		11
Newstead—Maldon Road	Patrol maintenance		4·25
Carried forward			
		—	4170·24

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—<i>continued.</i>			
Brought forward		—	4170·24
MALDON AND MARONG SHIRES (Joint Works)—			
Maldon-Eddington Road	Widening, resheeting and sealing at Eddington bridge		·5
" " " "	Patrol maintenance		4
MANSFIELD SHIRE—			
Benalla-Mansfield Road	Resheeting from 2·5 to 3·2 miles		·7
" " " "	Double coat sealing from 1·2 to 1·7 miles		·5
" " " "	Patrol maintenance throughout		9·5
Euroa-Merton Road	Patrol maintenance throughout		4·4
Maindample-Benalla Road	Patrol maintenance throughout		5·5
Mansfield Road	Resheeting from 7·6 to 9·1, 13·9 to 14·73 and 6 to 6·8 miles		3·13
" " " "	Reconstruction from 7·38 to 7·6, 9·3 to 9·5 and 11·1 to 11·4 miles		·72
" " " "	Double coat sealing from 5·75 to 7·38 miles west of Mansfield and 4·15 to 5·15 miles east of Mansfield		2·63
" " " "	Construction of reinforced concrete culvert at 20·2 miles west of Mansfield		—
" " " "	Patrol maintenance throughout		37·6
Mansfield-Tolmie Road	Double coat sealing from 1·7 to 2·67 miles		·97
" " " "	Resheeting from 2·67 to 3·7 miles		1·03
" " " "	Patrol maintenance throughout		5·5
Mansfield-Woods Point Road	Double coat sealing from 1 to 1·97		·97
" " " "	Resheeting from 1·97 to 3·3 miles		1·33
" " " "	Patrol maintenance throughout		19
Merton-Strathbogie Road	Patrol maintenance throughout		6·6
MARONG SHIRE—			
Bendigo-Eddington Road	Sheeting pavement with surface gravel		·6
" " " "	Widening formation to 30 feet		·6
" " " "	Grouted stone work in floodway to prevent scour		—
" " " "	Patrol maintenance		25
Loddon Valley Road	Widening formation to 30 feet and lengthening culvert		·07
" " " "	Raising formation and sheeting with gravel		·08
" " " "	Regrading, gravelling and culverts		·33
" " " "	Erection of 15 inches by 9 inches reinforced concrete box culvert 32 feet long with end walls and posts		—
" " " "	Patrol maintenance and replacing handrailing on two timber bridges		10·3
MARYBOROUGH BOROUGH—			
Avoca Road	Patrol maintenance		1·15
Ballarat Road	Reconstruction and realignment of existing sealed section		·92
" " " "	Construction of 30 inches by 24 inches reinforced concrete box culvert 32 feet long		—
" " " "	Patrol maintenance		1·4
Castlemaine Road	Replacing existing wooden deck on culvert with reinforced concrete slab 73 feet long and 6 feet wide		—
" " " "	Construction of 24 inch by 24 inch reinforced concrete box culvert 72 feet long		—
" " " "	Patrol maintenance		1·6
Eddington Road	Patrol maintenance		1·24
Natte Yallock Road	Patrol maintenance		·95
MELBOURNE CITY—			
Hoddle Bridge Road	Provision of chain barricades, stormwater drainage and top dressing		·22
MELBOURNE AND FOOTSCRAY CITIES (Joint Works)—			
Ballarat Road	Single coat painting of mild steel balustrade and lamps on Lynch's Bridge		·07
MELTON SHIRE—			
The Gap Road	Reconstruction in crushed rock from shire boundary to Calder Highway		·85
Toolern Road	General maintenance and sheeting with gravel between Melton and Toolern		6
METCALFE SHIRE—			
Elphinstone-Harcourt Road	General maintenance		8·6
Kyneton-Redesdale Road	Re-alignment of curve at 9½ miles		·18
" " " "	General maintenance		12·25
MILDURA CITY—			
Bridge Road	Provision of longitudinal planking at approach to Murray bridge completed		—
" " " "	General maintenance from Langtree Avenue to Madden Avenue and Cureton Avenue to Murray Bridge		·38
Deakin Avenue	Plant mix drag spread seal 30 feet wide between 10th and 14th Streets		1
Langtree Avenue	General maintenance between 7th and 9th Streets		·28
MILDURA SHIRE—			
Deakin Avenue	General maintenance		·88
Irymple Road	General maintenance and resealing where necessary		3·22
Melbourne Road	General maintenance and widening 6 feet with limestone gravel on west side		1·06
Wentworth Road	General maintenance		3·18
MINHAMITE SHIRE—			
Hamilton-Macarthur-Port Fairy Road	Reconstruction and widening to 15 feet, surfacing with crushed rock and double coat sealing between Orford and Broadwater		1·5
" " " "	Patrol maintenance throughout		17
Warrnambool-Hawkesdale-Penshurst Road	Reconstruction and widening to 15 feet, surfacing with crushed rock and double coat sealing north of Hawkesdale township		2
" " " "	Patrol maintenance throughout		22
Woolthorpe-Bessiebell Road	Reconstruction and surfacing with crushed rock 16 feet wide, and double coat sealing east from the Warrnambool-Hawkesdale-Penshurst Road		1
" " " "	Reconstruction of old waterbound macadam west of the Hamilton-Macarthur-Port Fairy Road and widening to 16 feet		2
" " " "	Patrol maintenance throughout		20
MIRBOO SHIRE—			
Grand Ridge Road	Reshaping and widening pavement and formation at Allotments 87A, 88 and 110, Parish of Allambee East		·9
" " " "	Repairs to bridge over Tarwin River at Allotment 88, Parish of Allambee East		—
" " " "	General maintenance throughout		14
Mardan Road	General maintenance throughout		4·6
Mirboo-Leongatha Road	General maintenance throughout		4·4
Mirboo North-Thorpdale Road	Reshaping and widening pavement at Allotment 120B, Parish of Mirboo		1·22
Carried forward		—	4456·85

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—<i>continued.</i>			
	Brought forward	—	4456·85
MIRBOO SHIRE—<i>continued.</i>			
Mirboo North-Thorpdale Road	General maintenance throughout		6·5
Mirboo South Road	Reconstruction and double coat sealing of Main Street, township of Mirboo North		15
" " "	Re-alignment of roadway at Allotment 37, Parish of Mirboo		4
" " "	General maintenance throughout		9·5
Mirboo-Yarragon Road	General maintenance throughout		5·7
Morwell-Mirboo Road	Resealing near shire boundary		6
" " "	General maintenance throughout		5·5
MEORABBIN CITY—			
Centre Dandenong Road	General maintenance		2·89
Point Nepean Road "	Reconstruction with fine crushed rock from Point Nepean Road to Boundary Road		31
" " "	General maintenance from South Road to Oak Avenue		3·13
MORDIALLOC CITY—			
Point Nepean Road	Patrol maintenance throughout		2·9
MORNINGTON SHIRE—			
Moorooduc Road	General maintenance throughout		2·71
Mornington-Dromana Road	Patrol maintenance throughout		6·5
Point Nepean Road	Reconstruction from Tanti Creek to Tyabb Road		35
Tyabb Road "	Patrol maintenance throughout		9·5
" " "	Reconstruction from Point Nepean Road to north-east corner of Allotment 12, Parish of Moorooduc		5
" " "	General maintenance throughout		3·56
MORTLAKE SHIRE—			
Caramut-Lismore Road	Widening bitumen pavement from 12 to 17 feet with gravel		1·2
" " "	Road mix seal 16 feet wide from 5·62 to 6·47 miles		85
Darlington-Terang Road	Patrol maintenance throughout		29
" " "	Gravel sheeting from 4·36 to 5·36 miles		1
" " "	Road mix seal from 6·8 to 10·67 miles		3·87
Ellerslie-Framlingham Road	Patrol maintenance throughout		9·25
" " "	Scarifying, grading, and crushed rock surfacing from 2·89 to 5·11 miles		2·22
" " "	Gravel sheeting from Ellerslie township to Stony Creek bridge		75
Mortlake-Ararat Road	Patrol maintenance throughout		5·75
" " "	Renewal of timber superstructure of Woorndoo bridge		—
Mortlake-Warrnambool Road	Patrol maintenance throughout		24·25
Terang-Framlingham Road	Patrol maintenance throughout		13·5
" " "	Road mix seal from 11·26 to 12·26 miles		1
Mortlake-Terang Road "	Patrol maintenance throughout		12·4
" " "	Patrol maintenance throughout		7
MORWELL SHIRE—			
Jeeralang West Road	General maintenance		23·5
Jumbuk Road	General maintenance		12·5
Morwell-Maryvale Road	Priming and sealing opposite Australian Paper Mill		1·35
" " "	General maintenance		1·85
Princes Highway	General maintenance		1·5
MOUNT ROUSE SHIRE—			
Ballarat-Hamilton Road	Road mix seal between Dunkeld and Glenthompson		2
" " "	Reseal between Glenthompson and Wickliffe		1·51
" " "	Erection of guide posts at curves throughout and five danger signs		—
Hamilton-Dunkeld Road	Patrol maintenance throughout		21
" " "	Erection of guide posts at curves throughout		—
Hamilton-Penshurst Road	Patrol maintenance throughout		4
" " "	Road mix seal from 2·76 to 4·02 miles to Port Fairy		1·26
" " "	Road mix seal between 2·05 and 8·5 miles to Hamilton		1·34
" " "	Erection of guide posts at curves throughout and two danger signs		—
" " "	Construction of reinforced concrete pipe culvert with reinforced concrete ends at 6·14 miles		—
Maroona-Glenthompson Road	Patrol maintenance throughout		14
" " "	Resealing between Glenthompson and Shire boundary		1·06
Penshurst-Caramut Road	Patrol maintenance throughout		1
" " "	Road mix seal between 0 and 3·06 miles to Caramut		2·44
" " "	Erection of guide posts at curves throughout		—
" " "	Patrol maintenance throughout		15
NARRACAN SHIRE—			
Allambee-Childers Road	Patrol maintenance		8·5
Childers-Thorpdale Road	Patrol maintenance		1·5
Mirboo North-Thorpdale Road	Patrol maintenance		4·5
Mirboo-Yarragon Road	Patrol maintenance		6·5
Moe-Willow Grove Road	Patrol maintenance		7·5
Moe-Yallourn Road	Patrol maintenance		2
Prince's Highway	Patrol maintenance		1·5
Trafalgar-Thorpdale Road	Patrol maintenance, re-aligning, and sand sheeting where necessary		9
Walhalla Road	Construction of a five-span timber bridge over Moe River		—
" " "	Patrol maintenance		32
Willowgrove Road	Patrol maintenance		22
Yarragon-Leongatha Road	Patrol maintenance, re-aligning, and sand sheeting where necessary		9
Yarragon-Shady Creek Road	Patrol maintenance, re-aligning, and sand sheeting where necessary		6
NEWHAM AND WOODEND SHIRE—			
Lancefield Road	Patrol maintenance from Woodend		4·8
Mount Macedon Road	General maintenance to shire boundary		4·45
" " "	Reconditioning with crushed rock from Clyde turn-off		7
Tylden Road "	Patrol maintenance throughout		5·25
" " "	Patrol maintenance throughout		3·2
NEWHAM AND WOODEND AND KYNETON SHIRES (Joint Works)—			
Tylden Road	Patrol maintenance throughout		1·2
	Carried forward	—	4864

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—continued.

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—continued.			
NEWSTEAD AND MT. ALEXANDER SHIRE—	Brought forward	—	4884
Castlemaine-Daylesford Road ..	Patrol maintenance .. .. .	..	7.3
Creswick Road	Reconditioning and bitumen sealing .. .. .	..	1
Maldon Road	Patrol maintenance .. .. .	..	11
Newstead-Hepburn Road	Patrol maintenance .. .. .	..	4
	Patrol maintenance .. .. .	..	3
NUMURKAH SHIRE—			
Echuca-Picola Road	Patrol maintenance from 0 to 6 miles .. .. .	..	6
Nathalia-Picola Road	General maintenance from 6 to 22.2 miles .. .. .	..	16.2
	Forming, grading, and gravelling through Picola township .. .. .	..	32
	Patrol maintenance throughout .. .. .	..	7.8
Numurkah-Nathalia Road	Double coat sealing on west side of Blake Street, Nathalia .. .. .	..	3
	Patrol maintenance throughout .. .. .	..	15.9
Numurkah-Tungamah Road	Patrol maintenance throughout .. .. .	..	5
Shepparton-Numurkah-Cobram Road	Forming, grading, and gravelling from Numurkah bridge to railway crossing .. .. .	..	7
	Forming, grading, and gravelling through township of Wunghnu .. .. .	..	1.23
	Double coat sealing through north end of Numurkah township .. .. .	..	.55
	Double coat sealing north from Numurkah township .. .. .	..	1.89
	Double coat sealing south from Wunghnu township .. .. .	..	1
	Patrol maintenance throughout .. .. .	..	20.6
OAKLEIGH CITY—			
Ferntree Gully Road	General maintenance .. .. .	..	.48
Princes Highway	General maintenance .. .. .	..	1.12
OMEO SHIRE—			
Benambra Road	Patrol maintenance, including supply of maintenance gravel 0 to 14.45 miles .. .. .	..	14.45
Day Avenue	Patrol maintenance, including supply of maintenance gravel 0 to 1.75 miles .. .. .	..	1.75
Swift's Creek-Omeo Road	Construction of reinforced concrete culverts between 1.76 and 7.94 miles .. .. .	..	—
	Construction of single-span bridge over Gray's Creek at 9.93 miles .. .. .	..	—
	Construction of low earthen embankment at 10.32 miles as protection against flooding .. .. .	..	—
	Patrol maintenance, including supply of maintenance gravel 0 to 18.15 miles .. .. .	..	18.15
ORBOST SHIRE—			
Canu Valley Road	Patrol maintenance throughout .. .. .	..	29.8
Combenbar Road	Patrol maintenance throughout .. .. .	..	7.7
Marlo Road	General maintenance and road mix sealing where necessary .. .. .	..	9.5
Orbost-Delegate Road	General maintenance .. .. .	..	.48
Princes Highway	General maintenance .. .. .	..	1.5
Wangarabelle Road	Patrol maintenance throughout .. .. .	..	15.38
OTWAY SHIRE—			
Beech Forest-Apollo Bay Road	Gravel resheeting from 2.56 to 3.51 miles .. .. .	..	.95
	Patrol maintenance from Apollo Bay towards Beech Forest .. .. .	..	11
Beech Forest-Laver's Hill Road	Patrol maintenance throughout .. .. .	..	12.5
Beech Forest-Mount Sabine Road	Widening curves between 5.5 and 11.5 miles .. .. .	..	6
Carlisle-Gellibrand Road	Patrol maintenance throughout .. .. .	..	11.5
	Resealing 12 feet wide between Charley's Creek and Gellibrand .. .. .	..	.91
Colac-Beech Forest Road	Patrol maintenance throughout .. .. .	..	11
	Resealing from Gellibrand River to Carlisle-Gellibrand Road at Gellibrand .. .. .	..	.34
	Widening, superlevating and crushed rock resheeting from 1.37 to 2.32 miles from shire boundary .. .. .	..	.95
Colac-Forrest Road	Patrol maintenance throughout .. .. .	..	4.1
Forrest-Apollo Bay Road	Patrol maintenance throughout .. .. .	..	3.84
	Widening, superlevating and crushed rock resheeting from 8.1 to 9.7 miles .. .. .	..	1.6
	Patrol maintenance throughout .. .. .	..	25
OXLEY SHIRE—			
Bright Road	Construction of two steel and timber bridges 100 feet and 130 feet long and re-alignment of road (Cockroft's section) .. .. .	..	.41
	Road mix seal (Smythe's section) .. .. .	..	1.01
	Patrol maintenance .. .. .	..	24.3
Buffalo River Road	Re-alignment and reconstruction (Muller's section) .. .. .	..	.51
	Patrol maintenance .. .. .	..	7.2
Greta-Glenrowan Road	Patrol maintenance .. .. .	..	5
Kilferra-Boggy Creek Road	Patrol maintenance .. .. .	..	1.1
Wangaratta-Greta Road	Reforming and gravelling (Orr's to Connor's section) .. .. .	..	.61
	Patrol maintenance .. .. .	..	12.3
Wangaratta-Whitfield Road	Re-alignment and reconstruction (Henderson's to Docker section) .. .. .	..	3.79
	Road mix seal (Targoora section) .. .. .	..	.43
	Patrol maintenance .. .. .	..	31.8
OXLEY SHIRE AND WANGARATTA BOROUGH—			
Wangaratta-Whitfield Road	Road mix seal .. .. .	..	.69
	Patrol maintenance .. .. .	..	.69
PHILLIP ISLAND SHIRE—			
Newhaven Road	Completion of reconstruction with granitic sand opposite Allots. 62, 63, 105, 106, part Allot. 120, Parish of Phillip Island .. .. .	..	1.06
	General maintenance .. .. .	..	7.75
Phillip Island Road	General maintenance and completion of reconstruction with granitic sand .. .. .	..	1.25
Ventnor Road	Reconstruction with fine crushed rock opposite Allots. 3 and 9, parish of Phillip Island .. .. .	..	1.22
	General maintenance .. .. .	..	9.25
PORT FAIRY BOROUGH—			
Hamilton Road	Patrol maintenance throughout .. .. .	..	1.4
PORTLAND SHIRE—			
Bridgewater Road	Reforming and sheeting with gravel at Bridgewater Bay .. .. .	..	1.32
	Patrol maintenance throughout .. .. .	..	11
Heath Road	Reforming and sheeting with gravel at North Portland Post Office .. .. .	..	.94
	Patrol maintenance throughout .. .. .	..	11
Portland-Casterton Road	Reforming and sheeting with gravel at Digby .. .. .	..	.94
	Patrol maintenance throughout .. .. .	..	21
Portland-Hamilton Road	Patrol maintenance throughout .. .. .	..	3.7
	Carried forward	—	5310.46

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—<i>continued.</i>			
	Brought forward	—	5319·46
PRESTON CITY—			
Epping Road	General maintenance throughout		1·42
Whittlesea Road	Resheeting with premix from Tyler-street to Darebin Creek bridge		1·25
"	General maintenance throughout		2·5
PYALONG SHIRE—			
Kilmore-Heathcote-Bendigo Road..	Patrol maintenance		11·34
Lancefield-Tooborac Road	Removing granite rock and widening formations on sections where necessary		·34
"	Patrol maintenance		10·8
PYALONG AND McIVOR SHIRES (Joint Works)—			
Lancefield-Tooborac Road	Patrol maintenance		2·04
QUEENSLIFFE BOROUGH—			
Geelong Road	General maintenance throughout		3·5
Point Lonsdale Road	General maintenance throughout		·78
RINGWOOD BOROUGH—			
Healesville Road	Resealing		·87
"	Patrol maintenance and pitching		3·24
Mount Dandenong Road	Patrol maintenance and pitching, '9 mile		1·75
Warrandyte Road	Patrol maintenance and construction of stormwater drain, '17 mile		1·5
RIPON SHIRE—			
Ballarat-Ararat Road	Road mix seal $\frac{3}{4}$ -inch, from 98·55 to 99·28 and 99·55 to 99·95 miles		1·13
"	Patrol maintenance throughout		1·4
Ballarat-Hamilton Road	Road mix seal $\frac{3}{4}$ -inch, from 1·77 to 3·16 and 8·06 to 11·41 miles		4·74
"	Patrol maintenance throughout		16·26
Skipton Road	Road mix seal $\frac{3}{4}$ -inch, from 3·74 to 4·52 and 13·61 to 15·87 miles		3·04
"	Inverts built out near 14·02 and 14·5 miles		·03
"	Patrol maintenance throughout		18·67
RIPON AND HAMPDEN SHIRES (Joint Works)—			
Ballarat-Hamilton Road	Lower of approach wings of bridge over Emu Creek at Skipton and guard rails on bridge and footbridge painted		—
ROCHESTER SHIRE—			
Bendigo-Echuca Road	Widening pavement to railway crossing at Rochester		·08
Corop Road	Patrol maintenance		5·5
Rochester-Bamawm-Prairie Road ..	Resealing $\frac{1}{2}$ mile south, and 1 mile east from Lockington		5·5
"	Patrol maintenance		27·5
Timmering Road	Patrol maintenance		4·5
RODNEY SHIRE—			
Kyabram-Nathalia Road	Widening from '21 to '71 miles		·5
"	Patrol maintenance throughout		1
Kyabram-Tongala Road	Patrol maintenance throughout		1
Mooroopna-Undera Road	Resurfacing floodway damaged during floods from 6·55 to 6·95 miles		·4
"	Shouldering from 9·23 to 9·97 and 11·1 to 11·6 miles		1·24
"	Reconditioning, scarifying and reshaping from 8·69 to 11·6		2·01
"	Widening from 0 to 2·3 miles		2·3
"	Patrol maintenance throughout		11·6
Shepparton-Elmore Road	Widening from 12 feet to 19 feet at 4·3 to 5·5 miles		1·2
"	Patrol maintenance throughout		8·4
Shepparton-Tatura Road	Patrol maintenance throughout		10·3
Tatura-Byrneside-Kyabram Road ..	Widening from 12 feet to 19 feet, '17 to 1·12, 5·5 to 5·25 and 12·6 to 15·6 miles		4·15
"	Patrol maintenance throughout		17·4
Tatura-Murchison Road	Widening from 12 to 19 feet, '4 to 1·5 and 9·65 to 9·95 miles		1·4
"	Patrol maintenance throughout		12
Undera-Wyuna Road	Patrol maintenance throughout		6·4
RODNEY SHIRE AND SHEPPARTON BOROUGH (Joint Works)—			
Shepparton-Tatura Road	Patrol maintenance throughout		1·8
ROMSEY SHIRE—			
Lancefield-Kilmore Road	Reconditioning with gravel and deviation through Crown portion 5, parish of Lancefield		1·20
"	General maintenance throughout		9·71
Lancefield-Tooborac Road	General maintenance throughout		4·31
Melbourne-Lancefield Road	General maintenance throughout		15·7
Woodend-Lancefield Road	General maintenance throughout		5·62
ROSEDALE SHIRE—			
Princes Highway	General maintenance		·9
Rosedale-Heyfield Road	Patrol maintenance		8·2
Seaspray Road	Patrol maintenance		15·75
Traralgon-Gormandale Road	General maintenance		4·53
Traralgon-Maffra Road	Resheeting between Cowwarr and Rosedale-Heyfield Road		4
"	Patrol maintenance		21
Willung Road	Resheeting between Rosedale and Willung		3
"	Patrol maintenance		8
ROSEDALE AND ALBERTON SHIRES (Joint Works)—			
Carrajuing-Gormandale Road	General maintenance		·75
RUTHERGLEN SHIRE—			
Barnawartha Road	Patrol maintenance		1·6
Chiltern-Howlong Road	Patrol maintenance		4·6
Chiltern-Rutherglen Road	Patrol maintenance		6·85
Murray Valley Road	Patrol maintenance		·79
Rutherglen-Wahgunyah Road	Patrol maintenance		5·89
Springhurst-Rutherglen Road	Patrol maintenance		7·7
	Carried forward	—	5663·03

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
<i>UNDER MUNICIPALITIES—continued.</i>			
Brought forward		—	5994·83
SWAN HILL SHIRE—			
Annuello-Wemen Road	Patrol maintenance throughout		16
Euston Road	Patrol maintenance throughout		8
Nyah—Ouyen Road	Major reconditioning and sealing		3·51
"	Patrol maintenance throughout		49
Piangil Station Road	Patrol maintenance throughout		2
Tooleybuc Road	Patrol maintenance throughout		84
Ultima Road	Major reconditioning and sealing		3·9
"	Patrol maintenance throughout		20
Ultima-Sealake Road	Patrol maintenance throughout		16
TALBOT SHIRE—			
Clunes-Creswick Road	Patrol maintenance throughout		1·6
Maryborough-Avoca Road	Patrol maintenance throughout		8
Maryborough-Ballarat Road	Provision of stone walls for protection of road by erosion of gullies, north and south of Talbot		·05
"	Scarifying, reshaping and widening, re-alignment at McCallum's Creek bridge approaches, and sheeting with gravel 18 feet wide at Dunach		1·04
"	Patrol maintenance throughout		15
Talbot-Avoca Road	Scarifying and reshaping and sheeting with gravel from 1·9 to 3·07 miles at Amherst		1·17
"	Double coat sealing from 0 miles at Talbot to 3·07 miles at Amherst		3·07
"	Patrol maintenance throughout		10·32
Talbot-Eddington Road	Patrol maintenance throughout		1·06
TAMBO SHIRE—			
Bairnsdale-Bruthen Road	Patrol and general maintenance		·6
Basin Road	Patrol and general maintenance		10·2
Bruthen-Omeo Road	Patrol and general maintenance		·8
Metung Road	Patrol and general maintenance		6·5
Mossface Road	Patrol and general maintenance		2
Nowa Nowa-Buchan-Gelantipy Road	Patrol and general maintenance		33
TOWONG SHIRE—			
Murray Valley Road	Patrol maintenance from Bethanga bridge to Murray Valley Highway at Granya		20·3
Omeo Road	Construction of half-width concrete pavement on principal floodways		—
"	General maintenance		1·35
TRARALGON SHIRE—			
Princes Highway	Patrol maintenance throughout		1·15
Traralgon-Balook Road	Patrol maintenance throughout		12·25
Traralgon Creek Road	Patrol maintenance throughout		16
Traralgon-Gormandale Road	Patrol maintenance throughout		6·9
Traralgon-Maffra Road	Patrol maintenance throughout		3
Tyers Road	Patrol maintenance throughout		7·75
TULLAROOP SHIRE—			
Avoca Road	Scarifying, regrading and re-aligning old sealed section		1·98
"	Patrol maintenance throughout		9·2
Ballarat Road	Patrol maintenance throughout		3·1
Dunolly Road	Scarifying, reshaping and resheeting blue-metal section		8
"	Patrol maintenance throughout		8
Eddington Road	Regrading, re-aligning and resheeting		3·12
"	Patrol maintenance throughout		13·4
Maryborough-Dunolly Road	Regrading, re-aligning, resheeting, and double coat sealing		1·7
"	Patrol maintenance throughout		3·4
Natte Yallock Road	Scarifying, reshaping, and resheeting bluemetal section		·3
"	Double coat sealing 16 feet wide		1·75
"	Construction of a three-cell reinforced concrete box culvert		—
"	Patrol maintenance throughout		7·25
TUNGAMAH SHIRE—			
Cobram-Katamatite Road	Patrol and general maintenance		1·02
Cobram South Road	Patrol and general maintenance		4·36
Cobram-Yarrowonga Road	Patrol and general maintenance		1·68
Katandra Road	Patrol and general maintenance		9·47
Numurkah-Tungamah-Wilby Road	Patrol and general maintenance		30·7
St. James Road	Patrol and general maintenance		8·98
UPPER MURRAY SHIRE—			
Corryong Road	Patrol maintenance throughout		13·5
Tintalra Road	Patrol maintenance throughout		14·25
Upper Murray Road	Patrol maintenance throughout		20
UPPER YARRA SHIRE—			
Don Road	Reconstruction of bridge over Don River		—
"	Construction of 36-in. diameter reinforced concrete pipe culvert at Connibere's		—
"	Construction of three-cell 4-ft. by 4-ft. reinforced concrete culvert on Yarra floodway		—
"	Sealing Yarra bridge approaches and widening strips, 1 mile		1
"	Patrol maintenance throughout		6·9
Launching Place-Gembrook Road	Construction of 24-in. by 12-in. reinforced concrete box culvert at ·9 mile on flat above Hansen's Creek		—
"	Sanding southerly from the Warburton Road		5·5
"	Patrol maintenance throughout		10·2
Little Yarra Road	Construction of twin-cell 8-ft. by 6-ft. reinforced concrete culvert and approaches at Slaty Creek and single-cell 8-ft. by 6-ft. reinforced concrete culvert at the Barrier		—
"	Reconstruction near Yarra Junction		·62
"	Reconstruction at Powelltown		·3
"	Patrol maintenance throughout		10·36
Warburton Road	Reconstruction and sealing at Riversdale Road		·28
"	Reconstruction within the township of Warburton		·12
"	Patrol maintenance throughout		13·65
VIOLET TOWN SHIRE—			
Murchison-Violet Town Road	Patrol maintenance throughout		11·6
Violet Town-Dookie Road	Patrol maintenance throughout		16·35
Carried forward		—	6497·63

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER MUNICIPALITIES—<i>continued.</i>			
Brought forward			
YEA SHIRE—			7502·65
Highlands Road	General maintenance .. .. .	.. .. .	2·5
Molesworth-Dropmore Road	General maintenance .. .. .	.. .. .	10
Upper Goulburn Road	Construction works at Gilbert's Hill deviation .. .. .	.. .. .	·35
" " " "	Construction works at Terangaville Hill deviation .. .. .	.. .. .	·2
Whittlesea-Yea Road	Patrol maintenance .. .. .	.. .. .	21
" " " "	Resheeting 13 feet wide from Dairy Creek to Junction Hill .. .. .	.. .. .	3
Yarra Glen-Glenburn Road	Patrol maintenance .. .. .	.. .. .	21
" " " "	Resheeting from West's Bridge to Glenburn Road .. .. .	.. .. .	3
Yea-Glenburn Road	Patrol maintenance .. .. .	.. .. .	10
" " " "	Reshaping with power grader .. .. .	.. .. .	18
" " " "	Widening and super-elevating from Gordon's to Webb Wares .. .. .	.. .. .	4
" " " "	Patrol maintenance .. .. .	.. .. .	18
YEA AND BROADFORD SHIRES (Joint Works)—			
Upper Goulburn Road	Patrol maintenance .. .. .	.. .. .	1·75
	Total, Ordinary Main Roads		7615·45
METROPOLITAN MAIN ROADS.			
BOX HILL CITY—			
Burwood Road	General maintenance .. .. .	.. .. .	2·04
Main Healesville Road	General maintenance .. .. .	.. .. .	2·04
BOX HILL AND CAMBERWELL CITIES (Joint Works)			
Warrigal Road	Road mix seal .. .. .	.. .. .	·35
" " " "	General maintenance .. .. .	.. .. .	1·9
CAMBERWELL CITY—			
Doncaster Road	Widening from approximately 20 feet to 30 feet with crushed rock from Tannock Street to Greythorn Road .. .. .	.. .. .	·3
" " " "	Patrol maintenance .. .. .	.. .. .	1·13
Healesville Road	Patrol maintenance .. .. .	.. .. .	·11
CAMBERWELL CITY AND MULGRAVE SHIRE (Joint Works)—			
Warrigal Road	Patrol maintenance .. .. .	.. .. .	1·27
COLLINGWOOD CITY—			
Heidelberg Road	General maintenance from Merri Creek Bridge to Clifton Hill railway gates .. .. .	.. .. .	·5
FOOTSCRAY CITY—			
Ballarat Road	Construction of waterbound macadam priming and sealing .. .. .	.. .. .	·17
" " " "	Patrol maintenance .. .. .	.. .. .	1·08
Napier Street	Repairs to experimental section between Moreland Street and Maribyrnong Street .. .. .	.. .. .	·06
Princes Highway	Patrol maintenance, between Ballarat Road and West Footscray railway .. .. .	.. .. .	·9
MALVERN CITY AND MULGRAVE SHIRE (Joint Works)—			
Warrigal Road	General maintenance and widening where necessary .. .. .	.. .. .	·59
MALVERN AND OAKLEIGH CITIES (Joint Works)—			
Warrigal Road	General maintenance and widening where necessary .. .. .	.. .. .	·87
MELBOURNE CITY—			
Hoddle Bridge Road	Provision of chain barricades, stormwater drainage and top dressing .. .. .	.. .. .	·22
MELBOURNE AND FOOTSCRAY CITIES (Joint Works)—			
Ballarat Road	Single coat painting of mild steel balustrade and lamps on Lynch's Bridge .. .. .	.. .. .	·07
MOORABBIN CITY—			
Warrigal Road	Reseal from Keys Road to Oak Avenue .. .. .	.. .. .	1·73
" " " "	General maintenance from Centre Road to Oak Avenue .. .. .	.. .. .	3·5
MORDIALLOC CITY—			
Beach Road	Bituminous sealing from Point Nepean Road to McIndoe Parade .. .. .	.. .. .	·82
" " " "	Patrol maintenance throughout .. .. .	.. .. .	3·15
OAKLEIGH CITY—			
Warrigal Road	Plant mix seal from Princes Highway to Atherton Road .. .. .	.. .. .	·33
" " " "	Plant mix seal from railway crossing to North Road .. .. .	.. .. .	·71
" " " "	Raising and relaying channels from Atherton Road to railway crossing .. .. .	.. .. .	·1
" " " "	General maintenance .. .. .	.. .. .	1·12
OAKLEIGH AND MOORABBIN CITIES (Joint Works)—			
Warrigal Road	General maintenance .. .. .	.. .. .	1
PRESTON CITY—			
Epping Road	Reconstructing and resheeting with premix .. .. .	.. .. .	·75
" " " "	Hot asphalt surfacing of rolled concrete base .. .. .	.. .. .	·29
SANDRINGHAM CITY—			
Beach Road	Widening and channelling from ·56 to ·62 miles .. .. .	.. .. .	·08
" " " "	Widening, channelling and drainage from ·9 to 1·05 miles .. .. .	.. .. .	1·15
" " " "	Widening, channelling and drainage from 1·3 to 1·54 miles .. .. .	.. .. .	·24
" " " "	Widening, channelling and drainage from 3·3 to 3·5 miles .. .. .	.. .. .	·2
" " " "	Channelling from 4·18 to 4·77 miles .. .. .	.. .. .	·59
" " " "	General maintenance throughout .. .. .	.. .. .	5·68
	Total, Metropolitan Main Roads	·88	34·14
	GRAND TOTAL (Under Municipalities)	·88	7649·59

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER DIRECT SUPERVISION OF BOARD.			
BALLAN SHIRE— Melbourne-Ballararat Road	General maintenance at Ballan—direct labour .. .. .	..	1·01
BALLARAT SHIRE— Ballarat-Creswick Road	General maintenance between Ballarat and the Creswick Shire boundary—direct labour .. .. .	..	5·12
BELLARINE SHIRE— Barwon Heads-Ocean Grove Road	Widening with crushed rock and sealing between the Barwon River Bridge and Ocean Grove—direct labour	·6	..
Geelong-Portarlinton Road	Replacing a pipe culvert 3·3 miles north-east of Drysdale—direct labour	·01	..
BERWICK SHIRE— Princes Highway	General maintenance at Berwick—direct labour .. .. .	..	·3
BRAYBROOK SHIRE— Princes Highway	Plant mix sealing at Brooklyn—direct labour	·27	..
" "	General maintenance at Brooklyn—direct labour .. .. .	..	1·47
BROADFORD SHIRE— Sydney Road	General maintenance at Broadford—direct labour .. .. .	..	1·45
CRANBOURNE SHIRE— Main Coast Road	Re-alignment and widening at Cranbourne—direct labour	·8	..
COHUNA SHIRE— Murray River Valley Road	General maintenance at Cohuna—direct labour .. .. .	..	·5
ECHUCA BOROUGH— Echuca-Cohuna Road	Resealing at Echuca—direct labour	1·18	..
" " " "	General maintenance at Echuca—direct labour .. .. .	..	1·18
EUROA SHIRE— Murchison-Shepparton Road	Resealing between Muddy Creek and Arcadia—direct labour	5·25	..
Sydney " " " "	General maintenance—direct labour .. .. .	..	7·3
" " " "	General maintenance at Euroa—direct labour .. .. .	..	1·8
FOOTSCRAY CITY— Princes Highway	Emulsion resealing between Williamstown Road and Gordon Street—direct labour	·65	..
" " " "	Plant mix resheeting between Gordon Street and Somerville Road—direct labour	·48	..
" " " "	Experimental resealing between Somerville Road and the City boundary—direct labour	·51	..
" " " "	General maintenance at Footscray—direct labour .. .. .	..	1·69
GISBORNE SHIRE— Melbourne-Bendigo Road	General maintenance at Gisborne—direct labour .. .. .	..	1·33
GOULBURN SHIRE— Goulburn Valley Road	Reforming and gravelling south of Murchison East—direct labour	·2	..
" " " "	Resealing at Nagambie—direct labour	·5	..
" " " "	General maintenance—direct labour .. .. .	..	21·2
Murchison-Shepparton Road	Reforming, gravelling and sealing between Murchison East and Muddy Creek—direct labour	2·45	..
" " " "	General maintenance—direct labour .. .. .	..	3·5
HEALESVILLE SHIRE— Healesville-Alexandra Road	Resealing near Buxton—direct labour	3	..
" " " "	Installation of a pipe culvert 2 miles south of Buxton—direct labour	·01	..
" " " "	Resealing between Gracedale and Fernshaw—direct labour	3·8	..
" " " "	General maintenance between the Yarra Flats and Buxton—direct labour .. .. .	..	28
Marysville Road	General maintenance between St. Fillans and Marysville—direct labour .. .. .	..	6·5
HORSHAM TOWN— Hamilton Road	Construction of a 5-span concrete bridge and approaches at Wimmera River in Horsham—direct labour	·21	..
HUNTLY SHIRE— Bendigo-Echuca Road	Road mix sealing at Elmore—direct labour	·5	..
" " " "	Resealing at Elmore—direct labour	·57	..
" " " "	General maintenance at Epsom and Elmore—direct labour .. .. .	..	2·15
KEILOR SHIRE— Melbourne-Bendigo Road	General maintenance between North Essendon and Spring Gully—direct labour .. .. .	..	1·08
KILMORE SHIRE— Sydney Road	General maintenance at Kilmore—direct labour .. .. .	..	1·58
LILLYDALE SHIRE— Main Healesville Road	Plant mix regulation at Croydon North—direct labour	·1	..
" " " "	Resealing at Croydon North, at Melbourne Hill and at mileage 29·4—direct labour	3·1	..
" " " "	General maintenance between Ringwood and the Yarra River—direct labour .. .. .	..	16·95
Main Warburton Road	General maintenance between the Main Healesville Road junction and the Woori Yallock Creek—direct labour .. .. .	..	9·9
MANSFIELD SHIRE— Mansfield-Woods Point Road	General maintenance between Jamieson and Matlock—direct labour .. .. .	..	38
MORWELL SHIRE— Boolarra-Foster Road	General maintenance between Boolarra and Boolarra South .. .. .	..	6
Morwell-Mirboo Road	General maintenance between Mirboo Shire boundary and Midland Highway junction—direct labour .. .. .	..	4·1
NARRACAN SHIRE— Walhalla Road	General maintenance between Walhalla and Aberfeldy—direct labour .. .. .	..	28
Carried forward		24·19	100·11

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Works Constructed.	Reconstruction and Maintenance Works Carried Out.
		Miles.	Miles.
UNDER DIRECT SUPERVISION OF BOARD—<i>continued.</i>			
	Brought forward	24·19	190·11
NEWHAM AND WOODEND SHIRE— Melbourne-Bendigo Road ..	General maintenance at Woodend—direct labour .. .. .	..	1·12
NEWSTEAD AND MOUNT ALEXANDER SHIRE— Castlemaine-Maryborough Road ..	Resealing west of Castlemaine—direct labour	1·37	..
" " " " ..	Resealing westerly from Castlemaine—direct labour	2	..
" " " " ..	General maintenance between Castlemaine and Joyce's Creek—direct labour ..	..	12·4
PORTLAND SHIRE— Portland-Hamilton Road ..	General maintenance between Bolwarra and Portland—direct labour .. ..	..	3·7
SEYMOUR SHIRE— Goulburn Valley Road	Constructing and sealing deviation at McNally's Hill—direct labour	·95	..
" " " "	Construction of a concrete culvert at 63·23 miles	·01	..
" " " "	Resealing between McNally's Hill and the military camp—direct labour	2	..
" " " "	General maintenance—direct labour .. .. .	..	8·85
Seymour-Yea Road	Resealing near Seymour—direct labour	1·56	..
Sydney Road	General maintenance at Seymour—direct labour .. .. .	..	1·56
TULLAROOP SHIRE— Castlemaine-Maryborough Road ..	Road mix sealing at Carlsbrook—direct labour	1	..
" " " "	General maintenance between Joyce's Creek and Maryborough—direct labour ..	..	13·13
UPPER YARRA SHIRE— Woods Point Road	Reforming and surfacing between 20·45 and 24 miles—direct labour	2·46	..
" " " "	General maintenance between McVeighs and Matlock—direct labour .. ..	..	34
VIOLET TOWN SHIRE— Sydney Road	Resealing at Violet Town—direct labour	·8	..
" " " "	General maintenance at Violet Town—direct labour .. .. .	..	·8
WANGARATTA SHIRE— Beechworth Road	Sealing of the Avenue section near Wangaratta—direct labour	·28	..
" " " "	General maintenance of the Avenue section near Wangaratta—direct labour .. ..	..	·9
Rutherglen Road	General maintenance—direct labour .. .. .	..	2·65
Yarrowonga Road	Reconstruction between Wangaratta and Killawarra—direct labour	1·23	..
" " " "	Sealing—direct labour	·28	..
" " " "	General maintenance on the boundary between the Wangaratta Shire and the Wangaratta Borough—direct labour .. .. .	..	·3
" " " "	General maintenance—direct labour .. .. .	..	11·3
Springhurst-Rutherglen Road ..	Construction of a concrete bridge over the Diddah Diddah Creek	·01	..
WANGARATTA BOROUGH— Beechworth Road	Reconstruction near Wangaratta—direct labour	·65	..
Sydney Road	Widening a concrete bridge at Wangaratta—direct labour	·02	..
" " " "	General maintenance—direct labour .. .. .	..	2·4
WARRAGUL AND WOORAYL SHIRES— The Grand Ridge Road	General maintenance between the Korumburra-Warragul Road and Hallston—direct labour .. .. .	..	16·5
WERRIBEE SHIRE— Princes Highway	Widening, resheeting and double coat sealing at Werribee—direct labour	·43	..
" " " "	Re-alignment, widening, resheeting and double coat sealing at Werribee—direct labour ..	·31	..
" " " "	General maintenance at Werribee—direct labour .. .. .	..	·81
WODONGA SHIRE— Bonegilla Road	General maintenance—direct labour .. .. .	..	1·52
Total, Ordinary Main Roads		39·55	302·05
METROPOLITAN MAIN ROADS.			
KEW AND COLLINGWOOD CITIES— Johnston Street Bridge	General maintenance and repairs—direct labour .. .. .	..	·04
Total, Metropolitan Main Roads .. .. .		..	·04
GRAND TOTAL (Under direct supervision of Board)		39·55	302·09

APPENDIX E.

COUNTRY ROADS BOARD

STATE HIGHWAYS.

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF HIGHWAYS RECONSTRUCTED AND MAINTAINED UNDER THE PROVISIONS OF THE COUNTRY ROADS ACT 1928 DURING THE YEAR ENDED 30TH JUNE, 1940.

Name of Highway and Section.	Nature and Locality of Works.	Works Re-	Maintenance
		constructed.	Works Carried Out.
		Miles.	Miles.
UNDER DIRECT SUPERVISION OF THE BOARD.			
PRINCES HIGHWAY (WEST)—			
Section 1	General maintenance between Melbourne and Geelong		33·8
"	Plant mix sealing between Hopper's Crossing and Werribee	2·15	
"	Plant mix sealing, west of Werribee	·7	
"	Plant mix sealing, west of Little River bridge	·3	
"	Plant mix regulation at Lara	2	
"	Plant mix sealing over premix regulation at the Separation Street bridge	·12	
"	Widening reinforced concrete culvert at Little River	·01	
"	Widening reinforced concrete bridge over Cowey's Creek	·01	
Section 2	General maintenance between Belmont and Winchelsea		19·1
"	General maintenance between Winchelsea and the Colac Shire boundary		11·1
"	Road mix sealing westerly from Winchelsea township	3·4	
"	Construction of approach to the Birregurra Road junction	·1	
"	Resealing at Armytage	·2	
Section 3	General maintenance between Colac Shire boundary and Camperdown		44·81
"	General maintenance between Camperdown and Port Fairy		56·55
"	Road mix sealing between Camperdown and Gnotuk	2	
"	Light resealing between Gnotuk and Boorcan	1	
"	Reconstruction in modified macadam through the township of Allansford	1·29	
"	Reconstruction and sealing between Allansford and Warrnambool	·21	
"	Resealing between Allansford and Warrnambool	4·03	
"	Reconstruction in scoria and sealing between Illova and Tower Hill	1·57	
"	Construction of a steel and timber footbridge over the Brucknell Creek at Cudgee	·01	
Section 4	General maintenance between Port Fairy and Heywood		49·8
Section 5	First sealing buckshot gravel between Tyrendarra East and Tyrendarra	5·76	
"	General maintenance between Heywood and the South Australian border		44·62
"	First sealing buckshot gravel west of Heywood	·64	
"	Regrading and reconstruction in buckshot gravel the steep hills at Lyons	·92	
"	Reconstruction in buckshot gravel at the Lyons railway crossing	·41	
"	First sealing buckshot gravel between Lyons railway crossing and Winnap	5·34	
PRINCES HIGHWAY (EAST)—			
Section 1	General maintenance between Oakleigh and Warragul		49·94
"	Plant mix sealing and shouldering between Oakleigh and Springvale	3·57	
"	Shoulder improvement between Dandenong and Berwick	5·7	
"	Bituminous resealing west of Berwick Quarries	·9	
"	Construction of a new bridge at Eumemering Creek	·01	
"	Bituminous resealing on Officer Flats	·7	
"	Bituminous resealing west of Pakenham	1·05	
"	Road mix sealing between Pakenham turnoff and Deep Creek	2·3	
"	Bituminous resealing at Dore Road	·2	
"	Bituminous resealing between Hancock's Gully and Fogarty's Lane	3·6	
"	Road mix sealing between Tynong and the Bunyip turnoff	6·4	
"	Maintenance of bridges between Oakleigh and Warragul		
Section 2	General maintenance between Warragul and Rosedale		46·99
"	Light resealing over old road mix seal between the foot of the Haunted Hills and the Yallourn railway crossing	1·1	
"	Road mix sealing between the Maffra railway crossing and Sheepwash Creek	3·25	
"	Improvement of the approaches to Lloyd's subway (at 80·5 miles)	·04	
"	General maintenance between Rosedale and Sale		15·29
"	Repairs to the stock route at Rosedale	·12	
Section 3	Bridge and culvert maintenance between Rosedale and Sale		30·75
Section 4	General maintenance between Sale and Bairnsdale		58·65
"	Bridge and culvert maintenance between Sale and Bairnsdale		
"	General maintenance between Bairnsdale and Orbost		
"	Double coat sealing near Bellbird Creek	·6	
"	Gravelling and sealing at the Toorloo Arm	2·4	
"	First double coat sealing between Nowa Nowa and Wombat Creek	11	
"	Repairs and maintenance to bridges and culverts between Bairnsdale and Orbost	·02	
"	New double 36-in reinforced concrete culvert at Sandy Creek	·06	
"	Completion of the bridge over the Nicholson River	·37	
"	Approaches to the Nicholson River bridge	·08	
Section 5	General maintenance between Orbost and Cann River		58·65
"	Double coat sealing between Fat Cow Creek and the Brodribb River	2·7	
"	Scarifying and gravelling from Murrangower towards Cabbage Tree	5·8	
"	Bridge and culvert maintenance between Orbost and Cann River		
"	Realignment and gravelling at Bellbird Hill	1·15	
Section 6	General maintenance between Cann River and the New South Wales border		42·49
"	Improvement of curves east of Wingan River	1	
"	Realignment and widening the approach to Tobin Creek	·3	
"	Reconditioning, reshaping, shouldering and gravelling between Maramingo Creek and the New South Wales border	5·49	
"	Bridge and culvert maintenance between Cann River and the New South Wales border		
"	Construction of two timber and steel bridges over the Wingan River	·04	
"	Approaches to the Wingan River bridge	·32	
"	Reconditioning in Cann River township	·5	
"	Realignment west of Genoa (321 to 321·7 miles) to connect with the new bridge	·7	
WESTERN HIGHWAY—			
Section 1	General maintenance between Melbourne and Ballarat		55·9
"	Scour protection at Anthony's Cutting	·2	
"	Provision for additional waterway in culverts east of Melton	·01	
"	Realignment, regrading, resheeting and double coat sealing at East Ballan	·85	
"	Realignment and constructing approaches to a bridge at Bradshaw	·4	
"	Realignment, resheeting and double coat sealing near Pyke's Creek	·2	
"	Plant mix sealing at Llandello	·8	
"	Realignment, regrading, resheeting and double coat sealing east of Gordon	1·35	
Carried forward		97·4	627·44

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS RECONSTRUCTED, ETC.—continued.

Name of Highway and Section.	Nature and Locality of Works.	Works Re-	Maintenance
		constructed.	Works Carried Out.
		Miles.	Miles.
UNDER DIRECT SUPERVISION OF THE BOARD—continued.			
	Brought forward	97·4	627·44
WESTERN HIGHWAY—continued.			
Section 2	Light resealing on gravelling near Burrumbeet	3·2	..
"	Plant mix sealing between Burrumbeet and Trawalla	4·55	..
"	Premix regulation and super-elevation of curves between Trawalla and Beaufort	8·25	..
"	Resealing between Fiery Creek and Middle Creek	2·7	..
"	Erection of footway on existing timber bridge over Mount Emu Creek	·02	..
"	Lengthening mitre drains between Ballarat and Trawalla	21·81	..
"	Resealing east of Mount Mistake	·45	..
Section 3	General maintenance between Ballarat and Ararat .. .. .	..	50·3
"	General maintenance between Ararat and Horsham .. .. .	..	52·36
"	Double coat sealing of reconstructed section near Burnt Creek	2·1	..
"	Widening with gravel and realignment of curve south-easterly from the Horsham Town boundary	1·4	..
"	Resealing near the overhead bridge at Armstrong	·6	..
"	Resealing between Deep Lead and Dadwells	2·71	..
"	Gravelling shoulders easterly from the Wal Wal turnoff	4	..
"	Construction of a concrete bridge over Burnt Creek near Horsham	·01	..
"	Construction of a 3-cell reinforced concrete culvert at Mount Drummond Creek	·01	..
Section 4	General maintenance between Horsham and Nhill .. .. .	..	42·56
"	Resealing west of Dimboola	3·7	..
"	Resealing between Horsham and Pimpino	1·66	..
Section 5	General maintenance between Nhill and the South Australian border .. .. .	..	37·45
"	Resealing west of Lillimur and west of Kailva	1·81	..
"	Resealing between Lillimur and the South Australian border	1·34	..
CALDER HIGHWAY—			
Section 1	General maintenance between Melbourne and Malmesbury	2·88	47·81
"	Provision of fine crushed rock and salamander and improvements to shoulders between Spring Gully and Keilor .. .. .	..	..
"	Plant mix regulation 11·95 to 14·45 miles	2·47	..
"	Reconstruction and widening concrete culvert at 17·8 miles	·01	..
"	Plant mix sealing and shouldering 14·42 to 16·10 miles	1·68	..
"	Plant mix regulation 22·4 to 23 miles	·6	..
"	Resealing with No. 2 aggregate and shouldering on Adeney's Hill, 27·3 to 28·8 miles	1·5	..
"	Strengthening weak edges by a strip of premixed macadam, 28·8 to 31·13 miles	2·33	..
"	Resealing with No. 2 aggregate, 28·8 to 31·13 miles	2·33	..
"	Premix regulation and superelevating two curves prior to resealing, 34·5 to 36·6 miles	2·1	..
"	Resealing with No. 2 aggregate, 34·5 to 39·6 miles	5·2	..
"	Major patching and resheeting in the Black Forest	2·5	..
"	Sealing a vertical curve at 40·7 miles	·17	..
"	Resealing with No. 2 aggregate, 40·2 to 41·4 miles and 42·08 to 42·23 miles	1·35	..
"	Emulsion wash on road mix seal between Woodend and Kyneton Springs	10·8	..
"	Resealing with No. 2 aggregate, 58·8 to 59·9 miles	1·1	..
"	Bridge and culvert maintenance between Melbourne and Malmesbury .. .. .	..	11·88
"	General maintenance between Malmesbury and Castlemaine .. .. .	..	..
"	Bridge and culvert maintenance between Malmesbury and Castlemaine .. .. .	..	..
"	Sealing the junction with the Elphinstone-Harcourt Road in Elphinstone	·1	..
"	Deepening a drain north of Malmesbury	·13	..
Section 2	General maintenance between Castlemaine and Inglewood .. .. .	..	43·91
"	Bridge and culvert maintenance between Castlemaine and Inglewood .. .. .	..	..
"	Resealing between Harcourt and Big Hill	11·12	..
"	Priming and sealing between Bridgewater and Inglewood	·13	..
"	Priming and sealing south of Inglewood	·13	..
Section 3	General maintenance between Inglewood and Wycheproof .. .. .	..	52·23
"	Bridge and culvert maintenance between Inglewood and Wycheproof .. .. .	..	..
Section 4	General maintenance between Wycheproof and Sea Lake .. .. .	..	47·17
"	Bridge and culvert maintenance between Wycheproof and Sea Lake .. .. .	..	..
"	Premix patching and road mix sealing north of Wycheproof	3·39	..
"	Resealing between Wycheproof and Dumosa	5	..
"	Construction of a reinforced concrete bridge over Tyrell Creek at Warne	·02	..
"	Forming a side track between Dumosa and Warne	10·01	..
Section 5	General maintenance between Sea Lake and the Nyarrin turnoff .. .. .	..	11·56
"	Bridge and culvert maintenance between Sea Lake and the Nyarrin turnoff .. .. .	..	..
"	Reconditioning the existing pavement north of Sea Lake	2·04	..
"	Major reconditioning between Sea Lake and the Nyarrin turnoff	8·4	..
"	Realignments north of Sea Lake	2·7	..
"	General maintenance between Nyarrin turnoff and Nunga junction .. .. .	..	38·28
"	Bridge and culvert maintenance between Nyarrin and Nunga junction .. .. .	..	..
"	Resheeting and regrading sandhills between 246·7 and 252·6 miles	2·11	..
"	Resheeting and regrading sandhills between Nyarrin turnoff and Pier Millan	1·74	..
NORTHERN HIGHWAY			
"	General maintenance between Bendigo and Echuca .. .. .	..	48·68
"	Bridge and culvert maintenance between Bendigo and Echuca .. .. .	..	..
"	Superelevating a curve at Bagshot	·14	..
"	Shouldering between Rochester and Elmore	3·26	..
"	Resealing between Avonmore and Elmore	2·65	..
"	Resealing south of Echuca	8·25	..
"	Replacing a culvert north of Rochester	·01	..
"	Resealing at Echuca	·4	..
HUME HIGHWAY—			
Section 1	General maintenance between Campbellfield and Seymour	·9	48·37
"	Plant mix sealing at Somerton	·76	..
"	Plant mix sealing north of Craigieburn	1·8	..
"	Strengthening edges and sealing at Mount Ridley	·5	..
"	Premix regulation at Kalkallo	6·7	..
"	Plant mix sealing and shouldering between Kalkallo and Wallan	2	..
"	Regrading and resheeting at Bylands	·7	..
"	Strengthening edges prior to road mix sealing north of Kilmore	·01	..
"	Reconstructing a culvert at 54 miles	·25	..
"	Complete reconstruction and double coat sealing at Beveridge	·13	..
"	Improvements to curve and guard fencing at the Pretty Sally Hill	·8	..
"	Realignment over railway, forming and surfacing at Broadford .. .. .	..	55·58
Section 2	General maintenance between Seymour and Benalla .. .. .	..	..
"	Maintenance of culverts and bridges between Seymour and Benalla .. .. .	..	..
"	Construction of deviation near Locksley	·36	..
"	Constructing and sealing a new curve south of Violet Town	·25	..
"	Constructing and sealing a new curve at Balmattum	·24	..
"	Drag spread sealing north of Seymour	·4	..
"	Construction of the junction with Elgo Road near Locksley	·02	..
Section 3	General maintenance between Benalla and the Murray River .. .. .	..	62·8
"	Maintenance of culverts and bridges between Benalla and the Murray River .. .. .	..	..
"	Resheeting and sealing south of Wangaratta	·77	..
"	Resheeting and sealing north of Wangaratta	·72	..
"	Construction of a new curve at Springhurst	·1	..
"	Widening the pavement to 21 feet between Glenrowan and South Wangaratta	4·75	..
"	Resealing bridge approaches at Wangaratta	·16	..
"	Construction of six timber and stone weirs at Springhurst	·01	..
"	Construction of two timber bridges at Wodonga	·05	..
	Carried forward	278·85	1278·38

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS RECONSTRUCTED, ETC.—*continued.*

Name of Highway and Section.	Nature and Locality of Work.	Works Re-constructed.	Maintenance Works Carried Out.
		Miles.	Miles.
UNDER DIRECT SUPERVISION OF THE BOARD—<i>continued.</i>			
	Brought forward	278·85	1278·38
OMEO HIGHWAY—			
Section 1	General maintenance between Bairnsdale and Ramrod Creek	2·75	16·53
"	Realignment, gravelling and double coat sealing near Sarsfield	2·5	..
"	Realignment, shouldering and gravelling between Sarsfield and Bruthen .. .. .	..	..
"	Bridge and culvert maintenance between Bairnsdale and Ramrod Creek .. .. .	..	..
"	Construction of a 30 feet single span timber bridge at Dirty Hollow (69·38 miles)	·01	..
Section 2	General maintenance between 45·89 and 62·90 miles .. .. .	..	17·05
"	General maintenance between Tambo Crossing and Omeo .. .. .	..	45·89
"	Bridge and culvert maintenance between Tambo Crossing and Omeo .. .. .	..	..
"	Realignment, gravelling and shouldering at Ensay South	·28	..
"	Double coat sealing at Pretty Flat	1	..
"	Improving the alignment and a sharp verticle curve between 28·4 and 28·6 miles	·2	..
"	Improving curves, widening and gravelling between Tucker Box and Haunted Stream	·3	..
"	Double coat sealing north of Swift's Creek	2·05	..
"	Improving a curve north of Swift's Creek	·26	..
"	Replacing inverts with reinforced concrete pipe culverts between 39·63 and 43·45 miles	·02	..
Section 3	Construction of a new bridge at 29·1 miles	·01	..
"	Realignment, improving and gravelling of curves near Livingstone Creek	·3	..
"	Widening and improving dangerous curves between Glen Wills and Livingstone Creek	·6	..
"	Construction of a 60-foot timber bridge and approaches at Bingo Creek	·01	..
"	General maintenance between Omeo and Lightning Creek .. .. .	..	55
"	Bridge and culvert maintenance between Omeo and Lightning Creek .. .. .	..	..
"	Installation of a reinforced concrete pipe culvert and filling at 4·48 miles	·01	..
"	Installation of a reinforced concrete pipe culvert and filling at 13 miles	·01	..
"	Enlargement of the existing reinforced concrete culvert at 17 miles	·01	..
"	Construction of a single span timber bridge at 21·95 miles	·01	..
"	Construction of 20 passing places between Mitta Mitta and Snowy	·4	..
Section 4	General maintenance between Lightning Creek and Eskdale .. .. .	..	25·35
"	General maintenance between Eskdale and Tallangatta .. .. .	..	24·12
"	Reconstruction and curve improvement at Noorongong Homestead	·34	..
MURRAY VALLEY HIGHWAY—			
Section 1	General maintenance between Corryong and the Towong Shire boundary .. .. .	..	21·20
"	General maintenance between Wodonga and the Upper Murray Shire boundary .. .. .	..	88·58
"	Maintenance of culverts and bridges between Wodonga and the Upper Murray Shire boundary .. .. .	..	..
"	Widening a reinforced concrete culvert and constructing new culverts	·01	..
"	Constructing and sealing new curves	·53	..
"	Sealing resheeted section between Ebdon and Tallangatta	·57	..
"	Construction of a reinforced concrete culvert at 27·89 miles	·01	..
"	Road mix sealing between Bonegilla and Ebdon	1·5	..
Section 2	Construction of a timber and steel bridge west of Walwa	·01	..
"	General maintenance between the Hume Highway junction and McCoy's bridge .. .. .	..	110·95
"	Maintenance of culverts and bridges between the Hume Highway junction and McCoy's bridge .. .. .	..	..
"	Sealing Telford Street, Yarrowonga	·58	..
"	Scarifying, shaping and sanding west of Cobram	·09	..
"	Reconstruction east of Cobram	1·93	..
"	Widening the Black Dog Creek bridge west of Rutherglen	·02	..
"	Widening pavement to 20 feet east of Rutherglen	·15	..
"	Resheeting between Rutherglen and the Ovens River	2·84	..
"	Scarifying and sanding between Yarrowonga and Cobram	15·66	..
"	Raising the formation and sanding between Yarrowyah and Strathmerston	·33	..
"	Resealing near Nathalia	·37	..
"	Widening the approach to the street at Cobram	·1	..
"	General maintenance between McCoy's bridge and Echuca .. .. .	..	24·42
"	Bridge and culvert maintenance between McCoy's bridge and Echuca .. .. .	..	..
"	Resealing at Wyuna	5·35	..
"	Resealing two sections near Echuca	1·97	..
Section 3	General maintenance between Echuca and Lake Boga .. .. .	..	85·19
"	Bridge and culvert maintenance between Echuca and Lake Boga .. .. .	..	..
"	Replacing a culvert at Fish Point. 84·15 miles	·01	..
"	Resealing two sections and road mix sealing 1 section between Turrumberry and Gumbower	14·33	..
"	Resheeting and double coat sealing north of Kerang	2·1	..
"	Double coat sealing at Pyramid Creek	·5	..
"	Resealing east of Cohuna	2·13	..
"	Road mix sealing west of Cohuna	·54	..
"	Resealing west of Cohuna	2·06	..
"	Lengthening a channel culvert and construction of end walls at Tresco	·01	..
"	Drainage at Kerang East	2·25	..
"	Resealing between Kerang and Lake Charm	·8	..
"	Resealing near Tresco	2·72	..
"	General maintenance between Lake Boga and Swan Hill .. .. .	..	8·59
"	Bridge and culvert maintenance between Lake Boga and Swan Hill .. .. .	..	..
"	Resheeting, priming, and sealing north of Lake Boga	·08	..
"	Replacing a bridge with a pipe culvert at Lake Boga	·01	..
"	Widening a State Rivers and Water Supply Commission culvert at Pental	·01	..
"	Priming and sealing at Pental	·34	..
Section 4	General maintenance between Swan Hill and Boundary Bend .. .. .	..	53·72
"	Bridge and culvert maintenance between Swan Hill and Boundary Bend .. .. .	..	..
"	Forming and sheeting curves north of Piangil	·64	..
"	Realignment, sheeting, and sealing at Nyah	3·38	..
"	Major reconditioning between Swan Hill and Nyah	9·8	..
"	Construction of a curve north of Nyah	·3	..
"	Reconstructing five curves between Swan Hill and Nyah	1·46	..
"	Realignment at the Burra Swamp	·86	..
"	General maintenance between Boundary Bend and Hattah .. .. .	..	54·60
"	Bridge and culvert maintenance between Boundary Bend and Hattah .. .. .	..	..
"	Forming and limestoning at Boundary Bend	·33	..
Section 5	General maintenance between Hattah and Nowingi .. .. .	..	15·17
"	Bridge and culvert maintenance between Hattah and Nowingi .. .. .	..	..
"	General maintenance between Nowingi and Mildura .. .. .	..	35·52
"	Bridge and culvert maintenance between Nowingi and Mildura .. .. .	..	..
"	Regrading and resheeting between Nowingi and Carwarp	5·28	..
"	Regrading and resheeting between Nowingi and Carwarp .. .. .	..	2·5
"	Resealing south of Redcliffs	·67	..
"	Road mix sealing south of Redcliffs	·61	..
"	Widening the pavement by 4 feet in penetration macadam at Redcliffs	3·71	..
"	Resealing north of Redcliffs	2·43	..
"	Widening to 22 feet and sealing at Redcliffs	10·86	..
	Carried forward	390·16	1962·85

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF ROADS RECONSTRUCTED, ETC.—*continued.*

Name of Highway and Section.	Nature and Locality of Work.	Works Re-	Maintenance
		constructed.	Works
		Miles.	Carried Out.
		Miles.	Miles.
UNDER DIRECT SUPERVISION OF THE BOARD—<i>continued.</i>			
	Brought forward	300.16	1062.85
SOUTH GIPPSLAND HIGHWAY—			
Section 1	General maintenance between Dandenong and the Loch turn-off		38.83
"	Curve improvement west of Cranbourne	.2	
"	Regrading with fine crushed rock at the Cranbourne railway crossing	.15	
"	Widening the pavement to 18 feet east of Cranbourne	.5	
"	Bituminous resealing between Tooradin and the main drain	3.9	
"	Plant mix sealing between the main drain and Kooweerup turn-off	.6	
"	Bituminous resealing west of Caldermeade turn-off	.5	
"	Bridge and culvert maintenance between Dandenong and the Loch turn-off		
"	Realignment at the Yallock floodway	.8	
Section 2	General maintenance between Foster and the Alberton railway crossing		28.3
"	Widening the existing pavement with gravel easterly from Birds Road	1	
"	Construction and double coat sealing between Boolarra-Foster Road junction and Deep Creek section	1.38	
"	Forming at Rossiters Road Junction	.07	
"	Construction and double coat sealing near Deep Creek	1.41	
"	General maintenance between Yarram and Alberton		3.5
"	Double coat sealing at the southern end of Alberton township	.15	
"	Construction and gravelling between Foster and Amey's Track junction	.85	
"	Increasing the sealed width to 18 feet through Alberton township	.76	
Section 3	General maintenance between Yarram and Monkey Creek		27.55
"	General maintenance between Monkey Creek and Sale		16.45
"	Scarifying, gravelling, and double coat sealing between Cox's and the swing bridge	1	
"	Double coat sealing between 6.5 miles and 10 miles	3.5	
"	Construction of a four-span steel and timber bridge over Longford lagoon	.03	
"	Reconditioning and gravelling between 10 miles and 11.85 miles	1.85	
"	Bridge and culvert maintenance between Monkey Creek and Sale		
"	Construction of approaches to the new Longford bridge	.03	
"	Construction of culverts and approaches at Cox's	.02	
MIDLAND HIGHWAY—			
Section 1	General maintenance between Geelong and Ballarat		49.50
"	Widening and resheeting at Batesford	.34	
"	Major patching and maintenance work at Medina	3	
"	Resealing at Scotsburn	1.9	
"	Resealing at Buninyong	2.3	
"	Maintenance and double coat sealing at Bell Post Hill		1.62
Section 4	General maintenance between Shepparton and Benalla		36.27
"	Replacing a timber bridge by a reinforced concrete pipe, and construction of approaches	.12	
"	Road mix sealing between Sheepwash Creek and Benalla	13.88	
"	Premix patching between Shepparton and Benalla		
"	Resealing between Nalinga and Sheepwash Creek	4.1	
"	Beaching approaches to Nalinga bridge and attention to scours, &c.	.05	
Section 5	General maintenance between Benalla and the Maingdample turn-off		28.6
"	Maintenance of culverts and bridges between Benalla and the Maingdample turn-off		
"	Beaching approaches to a culvert between Benalla and Yn Barum	.08	
Section 8	Widening, regrading, and realignment of existing roadway northerly from Venings subway	1.1	
"	General maintenance between Morwell and Port Welshpool pier		52.8
BONANG HIGHWAY—			
Section 1	General maintenance between Orbost and the New South Wales border		72.03
"	Improvements to four curves between 30.7 miles and 35.7 miles	1.3	
"	General maintenance between Mildura and the South Australian border		68.3
"	Bridge and culvert maintenance between Mildura and the South Australian border		
"	Resheeting with limestone gravel between 13 and 23 miles	10	
HANTY HIGHWAY—			
Section 1	General maintenance between Heywood and Hamilton		34.58
"	Reconstruction in buckshot gravel between Condah and Branxholme	1.89	
"	Regrading hills and reconstruction in buckshot gravel between Condah and Branxholme	.66	
"	Reconstruction in buckshot gravel near Branxholme	4.48	
"	Construction of a new concrete bridge over Sunday Creek	.02	
"	Renewing culverts between Heywood and Hamilton		
Section 2	General maintenance between Hamilton and Cherry Pool		48.83
"	Reconstruction in buckshot gravel between Cavendish and Woolpooper	2.85	
"	Light resheeting in buckshot gravel between Woolpooper and Cherry Pool	23.53	
"	Culvert renewals and the elimination of an Invert between Cavendish and Cherry Pool	.02	
"	General maintenance between Cherry Pool and Horsham		28.35
Section 3	General maintenance between Horsham and Hopetoun		69.62
"	Widening and resealing between Horsham and Hopetoun	2.2	
"	Forming and draining between Doon North and Kellalac	10.9	
"	Surfacing with crushed rock at Doon North	2.84	
"	Resealing between Warracknabeal and Lah	4.15	
"	Plant mix sealing between Brim and Galaquil	1.85	
"	Reconditioning and resheeting with limestone north and south of Brim	1.7	
"	Reconditioning and resheeting with limestone between Galaquil and Beulah	3	
"	Construction of a three-ocil concrete culvert over the Yarrambiac Creek at Brim	.01	
"	Lengthening several pipe culverts between Warracknabeal and Galaquil		
"	Reconstruction in limestone, and realignment of curves south of Hopetoun	1.2	
Section 4	General maintenance between Hopetoun and Lascelles		15.32
"	Reconstruction with limestone south of Lascelles	.91	
"	Double coat sealing easterly from Hopetoun	1.5	
"	Forming and paving with limestone near White Elephant dam	.15	
"	General maintenance between Lascelles and Hattah		65.89
"	Bridge and culvert maintenance between Lascelles and Hattah		
"	Forming and sheeting, and reforming and sheeting near Lascelles	.34	
"	Shouldering between Lascelles and Turriff	8.27	
"	Regrading and forming on unconstructed sections between Lascelles and Nunga	9.76	
"	Scarifying and lightly resheeting sections between Lascelles and Turriff	4.21	
"	Double coat sealing south of Ouyen	3.33	
"	Reforming, rerradling, and resheeting between Nunga and Kiamal	11.47	
"	Road mix sealing and double coat sealing between Nungs and Kiamal	2	
"	Regrading sandhills between Ouyen and Trinita	2.14	
"	Double coat sealing south of Hattah	1.12	
"	Regrading and sheeting sandhills north of Ouyen	1.12	
	Total (Under direct supervision of Board)	553.63	2649.28

APPENDIX F.

COUNTRY ROADS BOARD.

TOURISTS' ROADS.

STATEMENT SHOWING MILEAGE, LOCALITY, ETC., OF TOURISTS' ROADS RECONSTRUCTED AND MAINTAINED UNDER THE PROVISIONS OF THE COUNTRY ROADS ACT 1928 DURING THE YEAR ENDED 30TH JUNE, 1940.

Name of Municipality and Road.	Nature and Locality of Work.	Works Re-	Maintenance
		constructed.	Works
		Miles.	Carried Out.
		Miles.	Miles.
UNDER DIRECT SUPERVISION OF THE BOARD.			
Acheron Way	Widening, shaping and surfacing at Cement Creek .. .. .	..	..
" " " "	General maintenance between Warburton and Narbethong .. .. .	..	23·15
Alpine Road	General maintenance between Harrietville and Mount Hotham .. .. .	..	19·5
" " " "	Widening between Harrietville and Mount St. Bernard	3·1	..
" " " "	General maintenance between Omeo and Mount Hotham .. .. .	..	33
" " " "	Realignment, widening and gravelling between 31·68 and 32·04 miles	36	..
Arthur's Seat Road	General maintenance over the whole length .. .. .	..	4
Donna Buang Roads	Widening and surfacing between Ben Cairn and Donna Buang in two sections	3	..
" " " "	Clearing, widening and surfacing between Ben Cairn and Donna Buang	85	..
" " " "	Construction of approaches to the Badger Creek bridge	09	..
" " " "	General maintenance between Cement Creek and Healesville .. .. .	..	23
" " " "	Construction of a bridge at Badger Creek	01	..
Gipsy Point Road	General maintenance between Mallacoota and Gipsy Point .. .. .	..	1·5
Grampians Road	General maintenance between the Western Highway and the Dunkeld Road .. .. .	..	44·1
" " " "	Reforming and resheeting with gravel between Bellfield and Dairy Creek	2·2	..
" " " "	Forming, reforming and draining from Sauderson's Mill towards Jimmy's Creek	2·15	..
" " " "	Forming, grading and draining south of Mirranatwa Gap	2	..
Mallacoota Road	General maintenance between Genoa and Mallacoota .. .. .	..	15
Marysville-Wood's Point Road	General maintenance between Marysville and the Cumberland Creek .. .. .	..	10·75
Mount Buffalo Road	General maintenance between Porepunkah and the Chalet .. .. .	..	18
Mount Buller Road	General maintenance between Merrifig and Mount Buller .. .. .	..	16
" " " "	Gravelling near Mount Buller Chalet	3·75	..
Mount Victory Road	General maintenance between Hall's Gap and Rosebrook .. .. .	..	19·25
" " " "	Resheeting with gravel between Zumsteins Crossing and Carter's Bridge	3·6	..
" " " "	Widening, reforming and lengthening between Zumstein's Crossing and Carter's Bridge	3·6	..
Ocean Road—			
Section 1	General maintenance between Torquay and Lorne .. .. .	..	28·6
" " " "	Widening and renewing deck on bridge at Airey's Inlet	02	..
Section 2	General maintenance between Lorne and the Wild Dog Creek .. .. .	..	26·9
" " " "	Widening, resheeting and double coat sealing south-westerly from Lorne	2·8	..
" " " "	Resealing between the Wild Dog Creek and the Petticoat Creek	3·3	..
Section 3	General maintenance between Apollo Bay and Laver's Hill .. .. .	..	34
" " " "	Widening curves and resheeting with crushed rock between 3·84 and 5·83 miles from Laver's Hill	1·09	..
" " " "	Widening curves and resheeting with crushed rock between 5·11 and 7·1 miles from Apollo Bay	1·99	..
" " " "	Provision of a footway on the Barham River bridge	01	..
Section 4	General maintenance between Laver's Hill and Peterborough .. .. .	..	42·2
" " " "	Light resheeting with buckshot gravel between Port Campbell and Peterborough	7	..
Otway Lighthouse Road	General maintenance between the Ocean Road and the Lighthouse .. .. .	..	8
" " " "	Widening and surfacing with crushed rock southerly from the Ocean Road	1·2	..
Silverband Road	General maintenance between the Grampians Road and the Mount Victory Road .. .. .	..	5·66
" " " "	Installation of pipe culverts, &c., between the Grampians Road and the Mount Victory Road .. .. .	..	..
Sydenham Inlet Road	General maintenance between the Princes Highway and the Sydenham Inlet .. .. .	..	14
Wartook Road	General maintenance between the McKenzie Falls and Lake Wartook .. .. .	..	2·25
" " " "	Widening of four curves between the Mount Victory Road and the sawmill turnout	1	..
Total (Under direct supervision of Board)		36·82	388·86