1931.

VICTORIA.

COUNTRY ROADS BOARD.

EIGHTEENTH ANNUAL REPORT

FOR YEAR ENDED 30TH JUNE, 1931.

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

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COUNTRY ROADS BOARD.

EIGHTEENTH ANNUAL REPORT.

Exhibition Building,
Carlton, N.3,
31st October, 1931.

The Hon. J. P. Jones, M.L.C.,
Minister for 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 herewith its Annual Report for the year ended 30th June, 1931.

FINANCIAL POSITION.

Owing to the continued financial depression it was not possible to secure the full quota of loan money authorized by Parliament for road expenditure for the five-year period commencing 1st July, 1925, and the construction programme for main and developmental roads was in consequence curtailed.

For this reason, too, the revenue derived from the motor registration fees declined during the year to a serious extent, and this, combined with the loss of revenue from the rents of unused roads, &c., necessitated reduced expenditure on maintenance and curtailment of necessary works.

As the fall in motor revenue still continues and there appears to be little prospect of its again reaching normal level until trade and business revive, the Board has been forced to estimate on a considerably lower basis than the previous year.

The usual grant to the State under the Federal Aid Roads Act was also greatly reduced, resulting in only a small portion of the programme of works approved under the agreement being carried out.

STATE HIGHWAYS.

The work of reconstruction and surfacing of State highways was continued in conformity with the Board's policy of progressive improvement. The greater part of the work done comprises the construction of low cost pavements capable of carrying traffic the volume and nature of which was determined after taking the usual half-yearly census. With the experience now gained, the Board is of opinion that with the exception of heavily trafficked roads near the metropolitan area, and the larger provincial cities, a well-bound gravel road is an eminently suitable type of construction for the rural roads of this State, and that a higher standard of construction at greater cost would not be warranted.

The aim of the Board has been, therefore, to select the method of construction that will ensure a good serviceable road throughout the year at a minimum cost, and with this object in view, the work of construction has been carried out under what has now come to be known as the "low-cost" system. No road, however, can be considered to be a low-cost road if the cost of construction is low and its subsequent maintenance unduly high. Maintenance costs must be reasonable as well as the cost of construction.

On the other hand, a low-cost road, even if the maintenance costs were high, may be more economical than a high-cost road, for the reason that the cost of maintenance of the former may be lower when the annual interest charge on the outlay involved in the construction of the road of the more expensive type is taken into consideration.

By carrying out research work, closely studying the nature and behaviour of soils, and adopting proved methods of executing the work by stage construction, roads of the low-cost type are now beyond the experimental stage, and have been proved to be quite adequate for the volume of traffic they are called upon to carry. New ideas are being frequently investigated by the Board, and before being applied are tested on the road and in the Board's laboratory.

Surface treatment of gravel, sand clay, decomposed granite, &c., has been adopted in all cases where considered suitable, thereby preventing material being lost during the summer months, lessening erosion during the winter, and subsequently reducing the cost of maintenance.

Following on previous lines, an analysis of traffic passing over the State highways was taken twice during the year, this being considered the most reliable guide in determining the type of surface required on any particular section. The statistics obtained show the volume of traffic over a given section during certain periods, and the nature of the traffic. The returns indicate that there has been a considerable decrease in traffic since the last summer census. This decrease may be accounted for by the falling off in motor registrations during the year and the diminution of holiday and commercial traffic. From the data obtained, the Board has also been in a position to more definitely decide on the type of improvement necessary for the traffic passing over the road, resulting in decreased maintenance costs. Progressive or stage construction can thereafter be carried out having regard to the amount of traffic using the highway, and in this way the cost of construction and maintenance is made proportionate to the importance of the traffic to be served. The road built to carry light motor traffic, which was the only form of traffic using it at the time of construction, frequently becomes subject to continuous and general use, with the result that the road requires widening and re-constructing.

In the Board's last Annual Report descriptions were given of experimental low-cost work conducted on several of the State highways. That on the Calder Highway, between Bendigo and Inglewood, which consisted of a pavement constructed by mixing gravel aggregate with tar on the road bed, has proved to be effective. The road presents an excellent surface, although subjected to exceedingly heavy rains since last summer.

The sections constructed on the Princes Highway between Panmure and Allansford, and between Portland and Heywood, the work on which was also described in the previous year's report, have provided a satisfactory roadway from the point of view of economy in construction and maintenance, and suitability for the traffic it is called upon to carry.

As the work of reconstructing State highways nears completion, provision is made by the Board for systematic and continuous maintenance. Of the total length of 1,513 miles of State highways under the Board's jurisdiction, 296 miles were improved during the year under the direct supervision of the Board to a suitable standard, and 1,110 miles were maintained under the care of experienced patrolmen. Municipal councils were responsible for maintaining the highways for a total length of 376·82 miles.

As the cost of maintenance of State highways varies according to traffic, topography of the country, nature of the soil and climate, and type of pavement, the cost per mile differs in different parts of the State. For instance, the cost of maintaining the Princes Highway east between Trafalgar and Moe is £45 per mile, whilst the section on the Princes Highway west between Port Fairy and Heywood cost £59 per mile.

The more general use of pneumatic tires, especially those of large diameter, on commercial motor trucks, is year by year becoming more apparent. The exact number of vehicles registered in the State and fitted with solid tires cannot readily be made available by the Motor Registration Branch, and for that reason no comparison over a period of years can be made, but from reliable information obtained by the Board, it is evident that the use of solid tires on commercial motors is not now generally favoured.

This fact is welcomed by the Board, as it is recognized that wear and tear on the roads will be lessened, with consequent reduction in the cost of maintenance. Combined with the present day scientific methods of low-cost construction, these factors contribute largely to the longer life of the roads.

On the Calder Highway improvements have been extended as far as the 203-mile post from Melbourne, but from that point, for a distance of 5 miles as far as Berriwillock, the road has not yet been constructed, and becomes practically impassable in wet weather. This section will be dealt with during the current financial year. From the end of that section to Mildura the highway has been placed in order by the maintenance patrolmen.

The reconditioning of the Hume Highway from Seymour to Wodonga was advanced a further stage during the year, the only sections now remaining to be dealt with being between Euroa and Violet Town, and between Chiltern railway crossing and Barnawartha. Details of the work performed are set out in the Chief Engineer's report.

The mileage of works on the Western Highway was added to by the reconstruction of 9 miles, and the surfacing with bituminous materials of lengths aggregating 25 miles. In spite of continual rains during the winter, which considerably hindered the progress of the work between Melbourne and Horsham, the road was, by continuous maintenance, kept open to traffic, and this length can now be traversed at all seasons of the year.

On the eastern section of the Princes Highway the sealing of the gravel pavement between Sale and Bairnsdale was completed. Owing to shortage of funds it was not possible to seal the surface of the highway between Moe and Sale which had been included in the programme of works at the beginning of the year.

Work on the Omeo Highway consisted of patrol maintenance and the construction of two timber bridges and a small deviation.

On State highways there are bridges to the number of 127, erected 40 or 50 years ago, which are now in a state of decay, and these are being dealt with from time to time as required. In designing new bridges for the highways special care has been taken by the Board to ensure that unnecessary expenditure is not incurred in building structures of a more costly nature than are needed.

Among the more important of these structures which was required to be rebuilt during the year was the bridge over the Sunday Creek on the Hume Highway, 2 miles south of Seymour. This structure is the first road bridge of its type erected within this State. It consists of a continuous superstructure, with spans of 52 feet in each of the end spans and two centre spans of 65 feet. The main supporting girders are designed as welded trusses with a depth of 5 feet. The cost of this structure was £6,396. The bridge is illustrated in Plate No. 1 and full details of construction are contained in the report of the Chief Engineer, which is appended.

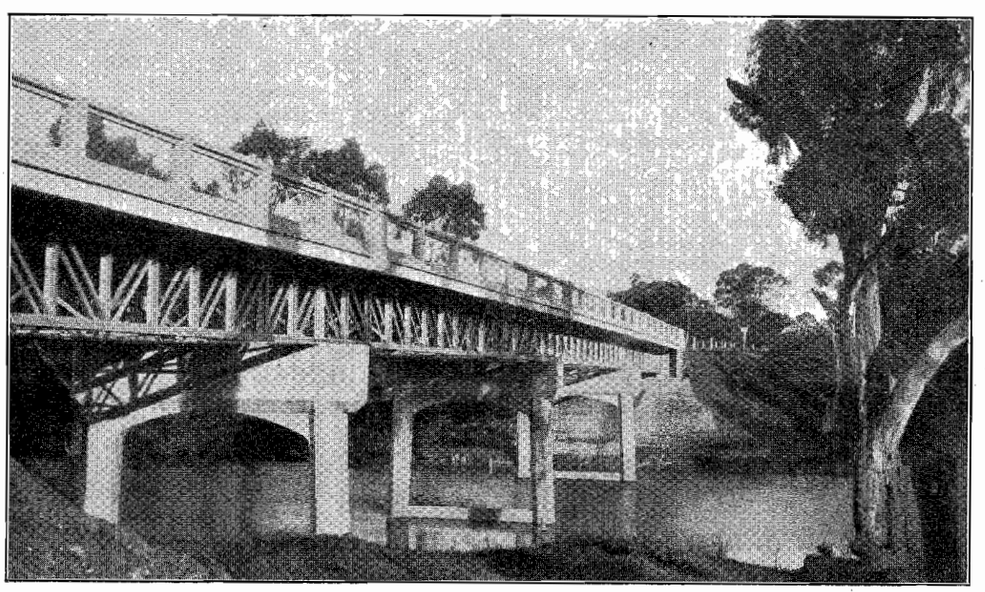


Plate No. 1.—Hume Highway. Bridge over Sunday Creek.

Another work of importance carried out on the Hume Highway was the construction of an overhead railway bridge and approaches, approximately 2 miles north of Seymour. The structure was designed and built by the Railways Department, and the approaches carried out by the Board. This work has had the effect of greatly improving the highway at this point, and has eliminated a dangerous level crossing, at which many accidents have occurred. It is also of considerable advantage from the railway point of view inasmuch as the necessity of a permanent gatekeeper being employed has been obviated, and from the road aspect a better alignment has been obtained and much traffic delay avoided. The cost to the Board of constructing the approaches is £3,302, of which £2,050 was paid during the year under review.

Considerable progress was made on an important bridge over the Tambo River at Swan Reach on the Princes Highway East, which is being erected to replace a wooden bridge which collapsed some years ago, and to which reference was made in the last annual report of the Board.

The new structure is designed to provide a roadway of 22 feet in width, together with a footway of 5 feet on one side. Owing to the nature of the foundations, it was found that piles were the only economical method of supporting the superstructure, for which work a separate contract was entered into. By careful boring of the site and the driving of test piles, it was not necessary to incur any expenditure in excess of the contract price. Due to the great depth to which it was necessary to drive piles, the use of concrete in its entirety would have been uneconomical and unnecessary, as it has been found that timber is not attacked by teredo at a lower level than the bed of the stream. The Board accordingly decided to use composite piles in which concrete is provided over the zone in which timber piles would be subject to attack, and relatively cheaper timber piles for the whole depth below the stream bed. A contract for

the construction and driving of the piles, together with the concrete piers above water level, was let, and this work has been completed. The superstructure will consist of a series of four steel girders in each span with a concrete deck and wearing surface. This work will be done under contract.

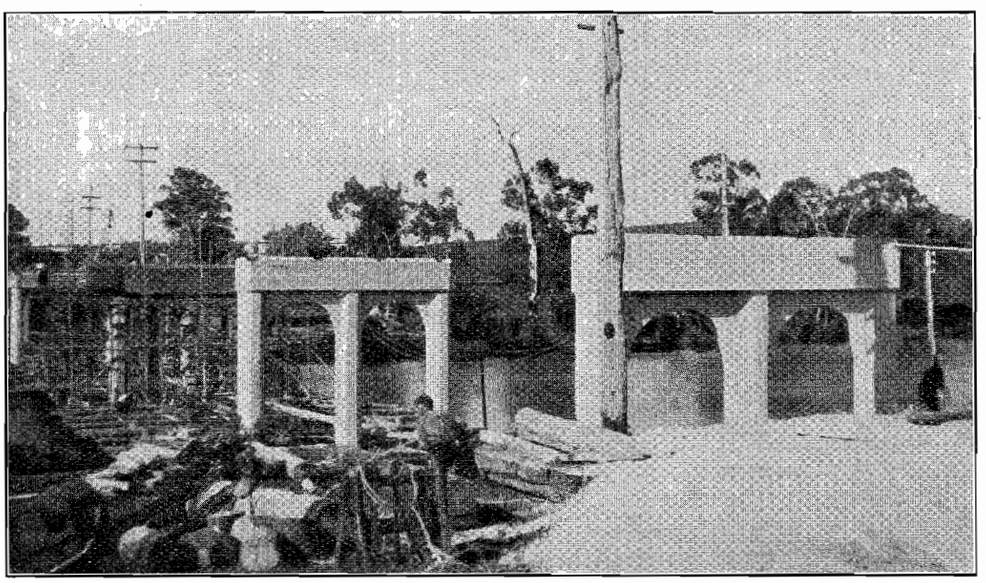


Plate No. 2.—Princes Highway East. Sub-structure of Swan Reach Bridge.

The total estimated cost including the approaches is £24,000. The whole of the work will be carried out with materials manufactured and purchased in Australia.

During the year 23 bridges were erected on State highways under the Board's direct supervision.

MAIN ROADS.

Work in the direction of constructing new main roads was considerably restricted owing to reduction of loan funds, and the amount expended was confined to works of an urgent nature, such as the erection of bridges, connecting up constructed lengths, and extending completed sections where such work was necessary to secure the full benefit of the work already done. The work completed during the past year added 54·28 miles of newly-constructed roads to those of previous years. The amount expended, which included the Commonwealth contribution of £6,780 under the original Federal Aid Roads Agreement, was £61,640, of which £51,870 was spent by municipal councils in constructing a length of 41·96 miles, and £9,770 represented the expenditure by the Board on works under its direct supervision, including bridges and approaches.

Assisted by funds provided by the Government under the Unemployment Relief Act operations were pushed forward with despatch with the object of giving immediate relief in unemployment.

In the construction of main roads, particular attention was given to the development of the low-cost type satisfactory for the needs of the traffic. Investigations made by the Board's engineers indicate that the traffic on main roads increases in proportion to the increase in the registration of motor vehicles, and that provided an adequate system of maintenance is ensured, inexpensive roads of this class will be ample for some years.

Several projects of an experimental nature, which were described in the last annual report of the Board, have proved quite satisfactory both from the point of view of the cost of construction, their capacity to carry the traffic, and the cost of subsequent maintenance.

For the maintenance of 7,530 miles of declared main roads, £885,952 was estimated by municipal councils and the Board as the amount required for the year, and £883,700 was allotted for the purpose. Owing, however, to the serious decline in the receipts from motor registration fees, the loss of revenue from rents of unused roads, &c., it was necessary towards the close of the year to curtail works of reconstruction and resheeting, and confine maintenance expenditure to ordinary upkeep and repairs to prevent undue deterioration of the road surfaces. In consequence of the work being thus curtailed, the expenditure was reduced to £613,729 for the year.

The length of surveys made on declared main roads during the year totalled 44·65 miles. Contracts were entered into for forming, gravelling or metalling 40·22 miles as against 142·94 miles for the previous year. Permanent works were constructed out of loan funds over a length of 54·28 miles, compared with 173·78 miles during the year ended 30th June, 1930. The decrease in last year's figures is due to curtailment of loan expenditure.

In addition, construction works to the value of £97,909 were put in hand and financed with moneys provided under Unemployment Relief Funds. The total length of main roads thus completed or partially constructed was 85·52 miles, in addition to the mileage constructed from loan funds.

As mentioned in the introductory remarks of this Report, many of the main roads have not received sufficient attention by shire councils to ensure adequate maintenance, and following the autumn and winter rains, when greater need existed for closer attention being given to unsurfaced roads, this lack of maintenance has had a very detrimental effect.

By the system of patrol maintenance which has been extended from time to time on State highways, they are being kept up to a proper standard, at much less cost than under the old method of delaying the work until extensive repairs become necessary, which is still adopted by many councils. The results secured by the employment of permanent patrolmen prove, beyond doubt, that roads are being more economically and efficiently maintained. In spite of these facts certain municipalities have failed to apply the system to their main roads, which are, in many instances, deteriorating for want of attention, and the Board has, therefore, been compelled to impress upon the councils concerned the responsibilities imposed upon them under the Country Roads Act. The difficulty, however, confronting many municipalities, who are required to contribute approximately one-third of the cost of maintaining main roads, is that their financial resources are considerably strained owing to their inability to collect a large part of the rates, loss of the Government endowment, and discontinuance of commission payments hitherto made to them by the Board.

The development of low-cost roads brings the necessity for providing for regular and systematic maintenance, and the councils which are responsible for this work will need the fullest possible assistance from the Board in carrying it out. By co-operating with the municipalities the Board is using every endeavour to reduce costs to ensure all-year trafficable roads, but with reduced municipal revenue several councils are loth to incur sufficient expenditure on roads carrying traffic not of local origin. In municipal districts where traffic of this nature predominates, it has been the practice of the Board for some years past to afford relief by reducing the amount of the municipal contribution, but owing to the anticipated further decrease in the Board's revenue during the current financial year, the position is becoming an extremely difficult one.

Among the works carried out under the direct supervision of the Board may be mentioned those on the main road between Benalla and Shepparton, which forms an important connexion between the two towns. Improvements were effected by forming and gravelling a length of 12 miles, leaving only a section of 3½ miles to be completed. This road already carries a large amount of produce to the rail heads at Shepparton and Benalla, and its completion will, in addition to benefiting other forms of traffic, be of material advantage to growers of soft fruits in providing suitable transport facilities to the cannery at Shepparton. The year's expenditure on this road amounted to £13,889.

On the Tolmie-Whitfield road, gravelling and formation were extended to provide access to the rail at Mansfield and Whitfield, at a cost of £10,634. This work will have an important bearing on the development of the Tolmie table-lands. Plate No. 3 illustrates the type of work done.

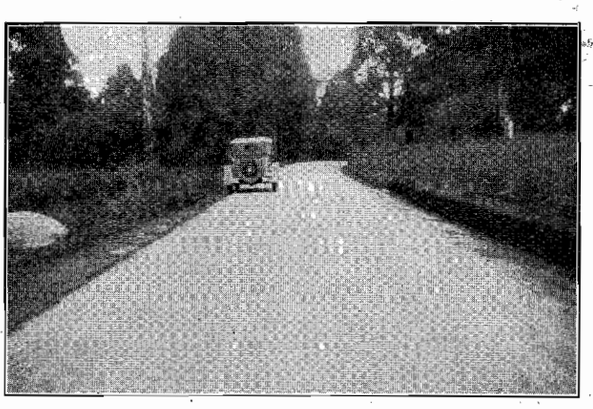


Plate No. 3.—Gravelled Section, Tolmie–Whitfield Road.

On the main road between Chiltern and Howlong, great improvement was effected to that portion along the Murray River flats leading to the bridge on the State border at Howlong, at a cost of £2,347, including the replacement of a worn-out bridge by a new timber structure and the lengthening of two other timber bridges. This road carries a considerable quantity of goods to the Victorian railway system at Barnawartha.

In the Shire of Kara Kara, the Ballarat–St. Arnaud road was extensively improved by the construction of unmade sections between Stuart Mill and St. Arnaud, and at Mogg's Plain, between St. Arnaud and Donald, the cost being £7,500.

A length of 2½ miles of gravelling on the Serpentine and South Kerang roads was completed under contract near Durham Ox, under the direct supervision of the Board, for the sum of £4,841, but much remains to be done to provide a trafficable road throughout the year. The Board hopes to extend this work as soon as additional funds can be made available. The completed work is shown in Plate No. 4.

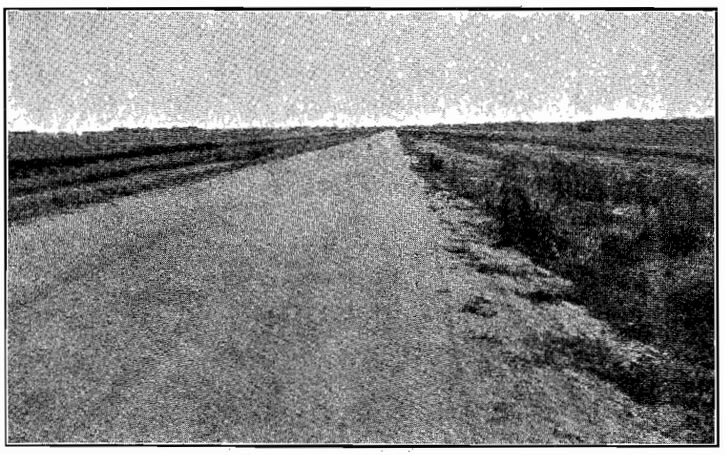


Plate No. 4.—Section of Serpentine-South Kerang Road.

Between Newfield and Port Campbell, on the Cobden–Port Campbell–Princetown-road, in the shire of Heytesbury, the road has been widened and resheeted for a length of 1 mile at a cost of £2,000. On the section between Port Campbell and Princetown, the road was deviated and metalled for a distance of 2·15 miles through Glenample. The completion of this work, together with the metalling of 2·45 miles between Laver's Hill and Princetown, has effected a very great improvement. The cost of these two sections amounted to £7,300.

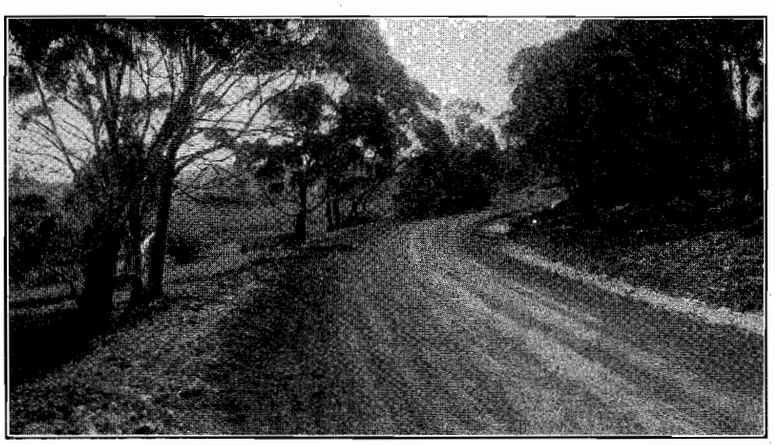


Plate No. 5.—Section of Cobden–Port Campbell Road, resheeted with Scoria.

On the Colac–Beech Forest road the completion of 4 miles of gravel construction between Kawarren and Gellibrand supplies the settlers with a good road at all times of the year. The construction of this road places the settlers in the Otway Forest in direct communication with the large market town of Colac. The work cost £3,700.

From the amount made available from Unemployment Relief funds the Geelong–Ballarat road, between Meredith and Clarendon, was reconstructed and widened for a length of 10 miles and the surface was sealed on completion out of maintenance funds. The total cost of this work was £14,858.

On the Hume Highway, in the Wangaratta township, it became necessary to replace an old worn-out bridge over the Reedy Creek known as the Long Bridge. The old structure was approximately 480 feet in length and was constructed of timber in stages as far back as 1860. The new bridge is being erected by contract on an improved alignment a short distance upstream from the old structure, and will be erected in timber and steel for a similar length. The contract, which is still in progress, was let during the year for the sum of £4,895 11s. 3d.

Bridges to the number of 52 were erected on main roads during the year—15 structures under the direct supervision of the Board, and 37 under municipal councils.

A bridge over the Ovens River in the Yarrawonga Shire, which was constructed by contract under the supervision of the Shire Engineer, consists solely of redgum timber. This structure is above the highest known flood level and is the first stage of a high level crossing at this point. It is 240 feet in length and 20 feet wide, and forms an important link between Yarrawonga and Wodonga, which is the important section of the Murray Valley-road. At a later date, when three other old low-level structures in the vicinity become uneconomical to maintain, it is proposed to erect bridges of similar design to that recently constructed. The contract price was £2,186.

DEVELOPMENTAL ROADS.

The curtailment of loan funds necessitated a reduced programme of works during the year, the principal work done being the linking up of unconstructed sections and extensions into isolated areas. With the provision of grants from unemployment relief funds, however, a considerable amount of work was undertaken on many of the declared developmental roads.

In the present days of financial stress and low prices, a greater need exists for increased production at reduced costs. At no time has the necessity been so urgent for additional land settlement as at present, and bearing this in mind, the Board has used every endeavour to secure the maximum benefit in completing roads to give access to the railway or market.

The extension and linking up of existing developmental roads and the provision of additional roads of this character in country made available for further settlement are considered essential to the progress of rural areas. Whilst the backbone of our system of developmental roads is well advanced, there is urgent need of constructing or completing the lateral or feeder roads, so that the settler at present isolated during the winter may be granted all-year transport facilities, which will result in reduction of his transportation costs and consequent greater value for his produce.

Following the practice of the previous year, the construction of developmental roads was carried out with sand or gravel of suitable quality, generally obtained in the district in which these works are situated. The work done was of the low-cost type construction.

£155,136 was expended out of loan funds, and £212,165 under unemployment grants, or a total of £367,301.

The total mileage of developmental roads initially constructed or completed with loan moneys was 141·58, of which 116·22 miles were dealt with by shire councils and 25·36 by the Board under its direct supervision.

A comparison of the developmental road works completed during the last financial year, with those carried out during the year ended 30th June, 1930, indicates that in the latter period 456 miles of roads were constructed or partially constructed by the municipalities and the Board out of loan funds, whilst during the twelve months ended 30th June last, 141 miles were constructed.

By the expenditure of funds provided under the unemployment relief schemes 158·67 miles were added to the list of partially constructed works, and, in addition, 65·5 miles of roads were grubbed and cleared.

Of the developmental road works completed or partially constructed under the Board's direct supervision, the more important were situated in the Kinglake district, in the Heytesbury Settlement area, and the Childers and Callignee Estates. The roads constructed by the Board are designed to serve as the main system.

During the past 40 years, the development of the Kinglake area has been retarded on account of the lack of transport facilities. Recognizing the possibility of development in the growing of root and berry crops and dairying, the Board has endeavoured to effect the completion of the main system and the extension of developmental roads in this area.

In the Childers district, a large area of land, which had been abandoned owing to the want of road communication, was purchased by the Closer Settlement Board some time ago and re-subdivided by that Board. A properly located road system was surveyed and the roads constructed with funds provided from time to time, and during the last financial year considerable progress was made with the road construction programme. This is now nearing completion, and the results already indicate that this area will, within a short period, be one of the most successful settlements in the State.

In the Heytesbury Forest large areas of Crown lands were thrown open for settlement by the Lands Department during the year under review. As a preliminary to settlement, the Board took in hand the work of road construction, with the result that a main system of roads was constructed and a length of 62·73 miles of roads subsidiary to the main system were grubbed and cleared. When additional funds have been made available the Board will immediately undertake the forming and gravelling of these roads so that they will be trafficable at all seasons. This is considered a vital necessity as the roads will be feeders to the railway and thus enable the settler to market his produce.

The land in the Callignee Estate purchased by the Closer Settlement Board for settlement was subdivided immediately after purchase, and a road system was devised suitable for this settlement. The earthworks through the estate are practically completed, and contracts for gravelling are now well in hand.

The location and formation of a new road from its junction of the Apollo Bay–Wye River road to the Forrest–Apollo Bay-road at Tanybryn was a valuable addition to the developmental roads in the shire of Otway. This road serves a considerable area of land suitable for dairying, provides a much needed improvement in the road communication to Apollo Bay, and has already stimulated additional settlement in the district.

The construction of the Highlands-road within the shires of Seymour and Yea supplies to the settlers of the district an important connexion with the township of Seymour. The new road was constructed for a distance of 8 miles, a connexion was also made with the Seymour–Dropmore-road, and the formation was extended under contract for a length of $1\frac{1}{2}$ miles towards Caveat.

To give an idea of the value of this road, it may be mentioned that prior to the road being relocated and constructed the cost of carting fertilizers from Seymour to the Highlands school was 50s. per ton, whereas the cost of transport on the newly constructed road has been reduced as low as 12s. 6d. per ton. Plate No. 6 shows a section of the completed road.

Plate No. 6.—Showing section of Highlands Road.

A length of $2\frac{1}{2}$ miles was formed on the Maintongoon-road in the shire of Alexandra to serve an area between Boonie Doon and Alexandra. This road will replace the old track, which mounted a spur with a grade of 1 in 3.

In the hill country of Gippsland, roads in the Allambee Estate were widened and re-aligned for a distance of 3 miles in continuation of the work already done. This work completes the formation from McDonald's Track to Sagasser's-road. McDonald's Track was re-located around Worth's Hill over a length of 3·3 miles, and formation work on the Wild Dog Valley-road was extended for approximately 4 miles. On the Toora–Gunyah-road a troublesome section was deviated around Mt. Fatigue, thereby giving improved access to the settlers. These works were carried out by day labour, contracts having been let for the necessary bridges and approaches.

As in the case of State highways and main roads, works constructed by contract have been found to cost considerably less than those carried out by day labour. In many instances the cost of works done under contract was very much lower than the estimates, and 30 per cent. lower than the cost of similar works done two years ago, thus allowing additional lengths of roads to be constructed with the balance of the money not committed. Due to the adoption of low-cost methods, it is claimed that a further saving in surfacing of at least 30 per cent. was effected.

The decrease in costs is of course also largely due to the reduction in wages, cost of materials, and the keen competition amongst contractors to secure work in order to keep their machinery and plant employed. In spite of the decreased prices at which contracts were let, increased efficiency was shown, resulting in the work being completed in a very satisfactory manner.

Since 1918, when the Developmental Roads Act came into force, 4,248 miles of roads have been declared developmental roads, and for the year ended 30th June last, 300·25 miles were constructed or partially constructed. As previously stated, the developmental road system of the State is in a forward stage of development, but the existing need is for the building of feeder roads into agricultural districts and areas isolated from the main arteries.

The maintenance of developmental roads is a responsibility devolving on shire councils, but with the decrease in their revenue and inability to collect arrears of rates, it is becoming

increasingly difficult for them to give adequate attention to the upkeep of these roads. Where developmental roads are deteriorating for lack of maintenance the attention of the council has been drawn to its obligations, and a request made for immediate action. Unless prompt steps are taken to preserve the surfaces of these roads, heavy expenditure will need to be incurred at a later date in restoring them to a good condition.

For many years the less important roads of the State have not been provided with bridges in cases where the nature of the small streams has been such that the flow of water has been intermittent. For these reasons many of the developmental roads declared by the Board are from time to time rendered impassable through floods. The normal timber beam bridge is not as a rule suitable where a large quantity of debris is brought downstream, especially in mountainous areas. The Board has, therefore, in instances of this kind, designed long span timber trusses to allow of the debris flowing clear of the structure. These trusses are usually expensive, and in order to bridge streams of this nature in isolated localities, the Board has designed a special type. A bridge of this class was erected during last year over the Merriman's Creek, on the Merriman's Creek-road, in the shire of Alberton, at a cost of £469 2s. 11d. This structure is illustrated in the adjoining Plate No. 7.

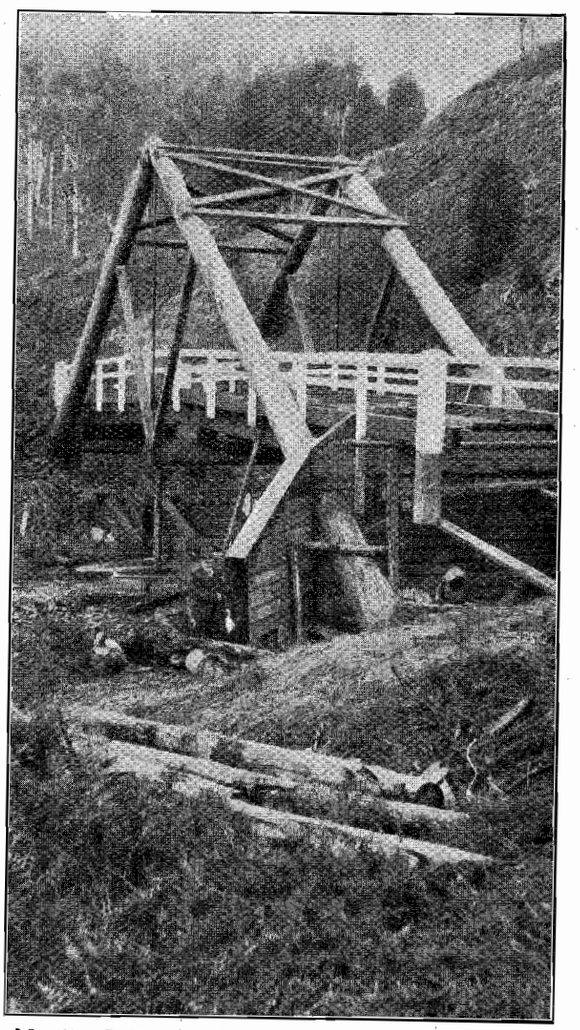


Plate No. 7.—Bridge (under construction) over Merriman's Creek.

The connexion between the settlements on the west bank of the Snowy River north of Gelantipy and the eastern bank west of Bonang, was for many years dependent on a ferry service over the river. Some years ago the ferryman retired, and, due to the remoteness of the site, it was not possible to replace him. Consequently the route was only of use to cattle when the Snowy River was low enough to ford near its junction with the Deddick River. The Snowy River was too deep for sheep, and the pastoral areas were thereby placed at a disadvantage.

During the last few years consideration has been given to the construction of a bridge at the site, following requests from the Tambo and Orbost shires. The site is a difficult one to bridge, due to the tremendous floods experienced, the high velocity of the river, and the fact that considerable quantities of boulders and timber are brought down during floods. A high level structure of welded steel warren trusses on concrete piers, which was found the most economical, was designed, and the work is now in progress. A contract for the piers was completed during the year. The bridge is estimated to cost £12,000.

ISOLATED SETTLERS.

The handicaps of many settlers isolated from the main road system and the difficulties under which they are striving to earn their livelihood on account of lack of road facilities are being continually brought under notice. The necessity of the isolated farm being given direct communication with the main road leading to the rail or market is, however, fully recognized by the Board. To meet the demand the Board is dealing with the most necessitous cases as and when funds are made available. With the increased sum allotted, marked headway was made during the year in supplying road access to many properties, particularly in the hill country.

During the past year, the sum of £4,338 was expended on the provision of roads of this class, this sum being allocated from unemployment relief funds on the approval of the Unemployment Relief Works Board. Owing to the stipulation that the grant made for each road was to be supplemented by a contribution from the local council or settlers—either in money or kind—the value of the completed work is considerably in excess of that represented by the expenditure, in many instances the value obtained being as much as 40 per cent. in excess of the amount of the grant. In carrying through these works a commendable spirit of self-help has been manifested amongst the settlers, and roads which would not—under ordinary circumstances—have been built, are now available without any loan liability on the State or the municipality.

In this way necessary and useful work has been performed in not only absorbing a number of local unemployed, but in constructing much needed outlet roads for farmers, and so assisting in the development of the district by cheapening cost of production and giving better opportunities of increased yields.

The Board is so impressed with the urgent necessity of proceeding with further works of this nature, that it urges that Parliament be asked to provide further and larger sums for this purpose.

FEDERAL AID ROADS GRANT.

The Federal Aid Roads Act, which was passed in 1926, made provision for a sum of £2,000,000 to be paid to the States during each year for a period of ten years for the construction or re-construction of roads, such sum to be apportioned to the States on the basis of 2/5 area and 3/5 population. It was also stipulated that each State was to contribute an amount equal to 15s. for every £1 paid by the Commonwealth Government, and under these conditions Victoria received from the Commonwealth Government an amount of £360,000 per annum, which was supplemented by the State's yearly contribution of £270,000.

The expenditure of this money was confined to three classes of roads, namely :—

1. Main roads, which open up and develop new country.
2. Trunk roads between important towns, and
3. Arterial roads to carry the concentrated traffic from developmental, main, trunk and other roads.

The method of executing the work was by contract, except where it was considered more economical or expeditious to carry out the work by day labour. The State was required to make proper provision for the adequate and continuous maintenance in good repair and condition of all roads constructed or re-constructed under the agreement.

Following discussions between representatives of the Commonwealth and the States, it has now been agreed to amend the agreement under the Federal Aid Roads Act as follows :—

1. From the 1st April, 1931, the Commonwealth is to pay to the State a sum equal to 2½d. per gallon on petrol, &c., cleared for home consumption under the Customs tariff, and in addition, 1½d. per gallon excise duty on petrol refined in Australia. The total amount derived is to be apportioned to the States on the basis of the annual grant of £2,000,000 under the original Act, and all moneys received from such sources are to be paid into the Trust Account and paid monthly to the States.
2. The above payments are to be continued to the 31st December, 1936, thereby extending the original period by six months.
3. The States are to be relieved of their obligation to contribute 15s. for every £1 contributed by the Commonwealth, and this relief covers any such obligation under the principal agreement not fulfilled on the 30th June, 1931.
4. The States are to be free to spend the Commonwealth contribution on any class of road works including maintenance.
5. The variations to the principal agreement are to take effect as from the 1st July, 1931.

Under the scheme outlined, it is estimated that Victoria's share of the Commonwealth payment during the current financial year will be £250,000.

As pointed out in the Board's last annual report, the new agreement will be of material assistance to this State, inasmuch as the State will not be required to contribute £270,000 per annum, equivalent to 15s. for every £1 provided by the Commonwealth, and the State will use its discretion in expending the amount available on either maintenance, construction or re-construction works.

Although the total amount to be derived under the proposed amended agreement is estimated for the present year to be less than formerly paid, the scheme will be more elastic and of considerable advantage to the State.

During the financial year ended 30th June, 1930, an amount of £180,000 was made available to Victoria for the relief of unemployment, ostensibly from the £1,000,000 of accumulated balance of road moneys provided under the Federal Aid Roads Act. The amount was to be expended on roads of the classes defined under the Federal Aid Roads Agreement, but it was stipulated that additional roads which may be eligible for inclusion in the scheme may be added to the programme of roads already laid down, and money properly expended on any such road since the commencement of the agreement may form part of the State's quota of 15s. The Commonwealth undertook to continue the agreement until £1,000,000 had been added to the total funds, so as to ensure that the programme laid down would be carried out.

A large proportion of the amount allotted to this State was expended by the Board on roads of a developmental character, and considerable benefit accrued, not only in relieving unemployment, but in giving road access to land situated in valuable dairying and agricultural areas.

Owing to financial conditions, and the necessity of immediate assistance being given to South Australia, it was agreed that £100,000 should be paid by the Commonwealth to that State out of the amount of £360,000 due to Victoria under the Federal Aid Roads Act for the year ended 30th June last, thus leaving a balance of £260,000 for Federal Aid Road Works.

The Federal Government, however, subsequently intimated that the sum of £180,000 already expended on unemployment relief works must be met by the State out of the balance of £260,000, with the result that only £80,000 was available for Federal Aid Roads for the year under review.

With commitments from the preceding year, the amount expended under the Federal Aid Roads Act was £206,930 under the old agreement whilst £120,303 was the expenditure under the amended agreement.

In accordance with the decision of the Federal Aid Roads Board, to which reference was made in the Board's last annual report, £4,904 13s. 6d. was paid into the separate account during the year in connexion with the making of surveys, preparation of plans, and supervision of works. This amount, together with the accumulated sum of £11,809 13s. 8d., was expended on the extension of works on which Federal Aid funds had already been expended and on new work on the Deddick River-road, which was designed to serve new settlement in that district.

ROAD AND RAIL TRANSPORT.

Since the close of the war, road motor transport has developed to a remarkable degree under the altered economic conditions, and Victoria, like other countries throughout the world, is now faced with the problem of meeting large deficits on the working of its railways. On various occasions it has been stated that the railway deficits of recent years in this State have been solely or partly due to the construction of roads in country districts, which have had the effect of diverting passenger and goods traffic to the motor vehicles, thus losing to the railways a considerable amount in fares and freights. For this reason it has also been stated from time to time that roads should not be constructed parallel to the railways.

Before arriving at such a conclusion it should not be forgotten at the outset that the declared State highways were surveyed and constructed over long lengths long before the advent of the railway, and these roads originally formed the only means of communication between the important towns of the State. Having been laid out on good grades, the routes of these roads were largely followed when the railways were under construction, with the result that the railway paralleled the road.

While the volume of traffic on State highways from remote parts is greater than the local traffic, the fact that the highways serve the abutting properties and lands within the vicinity must not be ignored. Generally, they serve the land as well as the through traffic. This was the intention of the legislature on the passing of the Highways and Vehicles Act in 1924, when provision was made in the Act for the declaration by the Board of any main road or developmental road as a State highway.

With the rapid development of motor transportation, the restoration of the State highways to a suitable standard became a matter of necessity. Apart from the aspect of providing means of free intercourse between important towns, the benefit to the railways revenue from the goods

transported over these roads to the railway was an important consideration in restoring them. Without the State highways it would not have been possible to devise an adequate system of developmental roads defined in the Country Roads Act as "roads which will serve to develop any area of land by providing access to a railway station or to a main road leading to a railway station." It should not be overlooked that the whole of the State highways were classified as main roads prior to the passing of the Highways and Vehicles Act in 1924.

As far as goods traffic is concerned, there is abundant evidence of competition by motor vehicles with the railway system, but this competition is not restricted to areas where roads have been constructed. It exists in all parts of Australia where no roads exist, due to the mobility of the motor vehicle and its capacity to overcome roadless conditions.

The total length of constructed and unconstructed roads in Victoria is estimated at 102,000 miles. Roads under the jurisdiction of the Board comprise 11,491 miles, of which approximately 9,200 miles act as direct feeders to the railway system, and the remainder which the railways parallel also serve as feeder roads in the conveyance of produce to railway stations and sidings as well as for carrying through traffic.

Until recent years practically the whole of the transport of the State beyond the limits of the metropolitan area was handled by the Railways Department, but with the improvement in motor vehicle design, the proved reliability of the motor car, the time saved in handling and delivering goods, the advantage of quick transport to the railhead, and the marketing of produce in faster time, highway transportation became firmly established, with the result that the horse-drawn vehicle is dwindling into insignificance.

To control motor passenger traffic, and at the same time place it under regulation, the Country Motor Omnibus Act was passed in 1928, and this restricted competition on the lines laid down in the Act controlling motor omnibus traffic within the metropolitan area. The railway passenger traffic was thus safeguarded to a large extent, but competition with motor cars carrying less than six passengers subsequently developed, resulting in the passing of the Light Motor Omnibus Act in 1929. A total of 960 motor omnibuses were licensed under omnibus legislation by the licensing authorities within the metropolis, urban and country districts, during the past year, and unnecessary competition has thus been eliminated as far as possible, and overlapping of passenger transport services has been prevented.

The transport of goods by motor trucks, of which 24,363 were registered last year, representing 16.8 per cent. of the total motor registrations in the State, is carried on by three classes of operators, namely :—

1. The common carrier, who conveys goods for hire to any point ;
2. The operator, such as the merchant or manufacturer, who owns the vehicle and uses it in his business for the transport of his own goods or products ; and
3. The person who contracts for the transport of goods, but who does not operate as a common carrier.

Common carriers' trucks, referred to under Class No. 1, of which 190 only are said to be regularly competing with the railways, form only a small part of the total traffic using the highways, and the same remark applies to other motor vehicles, mentioned under classes Nos. 2 and 3, used in conveying goods from the stores to the various country districts.

Where the railway is already established and is providing efficient and economical service, these forms of road traffic constitute unnecessary duplication. Alternative services of this nature are not required, involving, as they do, loss to the State and to the motor vehicle operator alike, and, as an economic necessity, some effective method of controlling them—either by regulation or co-ordination—should be devised. In the opinion of the Board some effective scheme of licensing commercial vehicles is essential in the interests of the railways, road users, and the public generally, as a means of regulating goods traffic and placing it on a sound financial basis.

This, however, will not deal with the problem of general competition with the State-owned railways. As already stated, carriers of passengers and freight constitute only a small proportion of the bulk of the highway traffic. The private motor car, the use of which is not always confined to the conveyance of the owner and his family, is the greatest competitor in the passenger traffic, and one of the prime causes of the falling off in railway revenue, apart from the decline caused by the financial depression. How to meet competition of this nature is an economic problem confronting the authorities in other countries throughout the world, and is not confined to this State. The free use of the roads by the private motor vehicle cannot easily be restricted ; co-ordination between the railway and the motor vehicle is recognized as a solution, but is difficult to attain with the private motor car, whilst it is not possible to impose, at the present time additional taxation on the motor user, who contributes the bulk of the money expended on the maintenance and reconstruction of the roads, which are kept in order and placed at the service of other users who contribute nothing by way of direct taxation.

LAND SETTLEMENT.

With a system of roads in a forward state of development, the settler has now many advantages compared with what existed a few years ago. In the present period of depression and low prices it is incumbent on every farmer to get all he can from his land by increasing his output and marketing his produce at the least possible cost, and the provision of suitable roads has a very important bearing on the reduction of costs; but before constructing any road the first essential to be considered is whether expenditure on the work proposed will be justified.

The important part played in land settlement by the construction of roads has been clearly demonstrated during the past few years, particularly in the southern and north-eastern parts of the State. The failure—or partial failure—of settlement schemes has, in many instances, been entirely due to the lack of transport facilities, forcing many of the settlers to abandon their holdings which, for the greater portion of the year, were isolated from the railway, market and social centre.

With the extension of roads in recent years, much abandoned country has been re-settled, dairying has been established on a firm footing, the plough has been brought largely into use, and many blocks from 100 to 150 acres are now returning a comfortable living. Evidence of the important development which is taking place is seen in the hill country between Traralgon and Yarram, between Morwell and Foster, and south of Trafalgar. Much land remains to be settled, but this is, for the most part, held by financial institutions and absentee owners, and in its present unproductive state is a positive menace and handicap to the genuine settler occupying the adjoining property.

The road system is, however, far from completed. It may be stated that the "backbone" of the rural roads—known as developmental roads under the Country Roads Acts—are well advanced, but as these roads extend, the urgency of completing feeder or lateral roads becomes more apparent. The feeder road system should be so designed that every farmer will be afforded equal and adequate transport facilities. Such roads must not be constructed to a standard beyond traffic requirements; the cost of constructing them must be reduced to an absolute minimum, and they must thereafter be maintained to a standard capable of being used throughout the year between the farm and the rail or market.

With the construction of roads, increase in settlement and extension of irrigation, marked progress in production has been achieved. A report recently issued by the Federal Dairy Investigation Committee shows that Victoria occupies a leading position in the production records of herd cows, and that the standard attained by the dairy farmers of Gippsland who participated in herd testing compares favorably with results achieved in any part of the world. With the adoption of more scientific methods of pasture improvement and pasture management, it is felt that even these results are capable of improvement.

As an indication of this progress it is interesting to recall that from 1913 to 1930 the production in this State of exportable commodities in the form of wool and butter increased respectively from 106,833,000 lbs. to 146,057,000 lbs., and from 73,381,000 to 90,639,000 lbs. The area under cultivation increased from 6,130,000 acres to 8,062,000 acres, and the value of rateable property within municipalities rose from £301,917,000 to £680,649,000.

In the Gippsland and Otway districts a number of unoccupied blocks, which had reverted to the Crown, having been abandoned many years ago on account of having no road communication, were re-settled by the Lands Department, and the provision of roads to these blocks has become a matter of necessity. In co-operation with that Department, the Board has provided roads where required, with the result that many of the blocks are already occupied and other areas in the vicinity are being re-occupied.

It is felt that moneys expended on country development in the direction of fostering further settlement must benefit the State as a whole, provided satisfactory transport facilities are made available, and with this object in view, the Board is anxious to continue its programme of developmental road works as soon as the necessary funds can be made available.

STATE UNEMPLOYMENT RELIEF FUNDS.

At no period in the history of the State has the necessity for putting in hand works of a reproductive character for the relief of unemployment been more urgent than during the past twelve months. For this purpose a total amount of £200,400 under Unemployment Relief Acts Nos. 3866 and 3948 was allotted to the Board for road construction works, of which £111,638 was expended during the year on roads of a developmental character, £4,338 on roads to isolated settlements, and £55,452 on main roads. The total expenditure of £167,090 was distributed over 37 developmental roads and 17 main roads. The total mileage of initial construction, which consisted of grubbing and earthworks, was 85·58.

The work accomplished has materially assisted in relieving the situation, and at the same time, has aided the settler by providing him with improved means of transport. In addition, much useful work has been done, which, for want of funds, could not have been carried out by

the municipalities, and under ordinary circumstances could not have been put in hand by the Board for some time. In this way valuable country is being gradually opened up and production assisted at a time when the greatest need exists for country development. Descriptions of the main and developmental road works carried out with relief funds are given under their respective headings.

By the expenditure of these grants, rationed employment was made available for 2,760 men.

The road illustrated in Plate No. 8 is typical of the work done.

Plate No. 8.—Toora-Gunyah Road.

COMMONWEALTH UNEMPLOYMENT RELIEF WORKS.

As already explained under the heading of Federal Aid Roads Grant, an amount of £180,000 was diverted during the financial year 1929–30 for expenditure in relieving unemployment.

£105,585 was expended to the 30th June, 1930, and of the balance of the amount available, £71,552 represents expenditure to the 30th June, 1931, leaving a credit of £2,863, which has been committed to meet liabilities on contracts outstanding as at that date.

£32,975 represents the expenditure on works of a developmental character, covering a distance of 35·29 miles, and £38,577 on main roads constructed for a distance of 35·37 miles, in addition to grubbing work extending over a total length of 49·52 miles.

Only such works as were considered suitable were carried out by day labour, contracts being entered into for the major portion of the programme.

In July, 1930, an amount of £76,500 was also granted by the Commonwealth Government to this State for the purpose of putting further works in hand as a means of relieving unemployment. To the 30th June last £71,576 was expended, representing £67,696 on developmental projects and £3,880 on main roads. The total mileage initially constructed, in addition to the grubbing of 65.5 miles, was 41·45.

The total amount expended under both grants was distributed over 32 developmental roads and 14 main roads, and employment was found for 1,290 men. Details of the work done are given under the headings of main and developmental roads.

AMENDING LEGISLATION.

Motor Car Act No. 3901.

Following a number of recommendations made by the Chief Commissioner of Police and the Board, a Bill to amend the *Motor Car Act* 1928 was passed into law in December, 1930. The new Act contains several important provisions affecting motor vehicles, and removes anomalies which were found to exist in the old Act.

Chief among the amendments are—

1. The issuing of special identification plates by the Chief Commissioner of Police.
2. Provision for payment of registration fees by half-yearly instalments where the total sum payable amounts to £10 or more.
3. Motor cars carrying passengers or goods for hire in Victoria from adjoining States now require to be registered in Victoria although they are registered in the adjoining State.
4. The Chief Commissioner of Police may refuse a licence to any person convicted of an offence.
5. Racing or speed trials to be allowed on any specified highway with the approval of the Governor in Council.
6. Exemption of motor cars carrying goods and weighing less than 30 cwt. from the speed limit fixed under the provisions of the Principal Act.

7. Trailers attached to traction engines to be registered.
8. Officers of the Country Roads Board and the police given power to weigh any motor car by means of portable weighing devices.
9. Increase from 15 to 20 miles per hour in the speed of pneumatic-tired goods motor vehicles weighing (with the load) from 3 to 8 tons.
10. Heavier penalties for thefts of motor cars.
11. Under the principal Act power was given to the Country Roads Board and municipalities, having regard to the nature of the construction and the condition of any highway, to prohibit the use thereon of motor cars the weight of which and of the load together exceeded 5 tons, except under a special permit granted by the Board or the council. The amending Act increases the gross weight to 6 tons.

While increasing the facilities for identifying motor cars and so checking the operations of motor vehicles, many valuable concessions have been granted under the amending Act to the users of motor vehicles in this State.

Country Roads Act No. 3944.

An Act to amend the Country Roads Act, which came into operation on the 1st July, 1930, makes provision for all fees for licences for unused roads to be paid into Consolidated Revenue, instead of into the Country Roads Board Fund, as previously, and for fees received in respect of water frontages—which were also formerly credited to the Country Roads Board Fund—to be paid into an account at the Treasury to be called the Rivers and Streams Fund.

The amendment relating to fees for water frontages will allow of considerable improvements being effected to the rivers and streams of the State in the direction of preventing water from being deposited on valuable land, consolidating river banks, clearing streams of snags, preventing siltation, and protecting roads and bridges.

This amending Act also stipulates that in respect of the financial year commencing 1st July, 1930, the sum of £10,000 hitherto paid from Consolidated Revenue to the Board towards the maintenance of main roads is to be withdrawn.

In accordance with the principle enunciated in the report of the Board for last financial year of meeting the Interest and Sinking Fund payments on loans raised for road construction purposes from the revenue derived from taxation of road users, without any charge on the Consolidated Revenue of the State, legislation was enacted in December, 1930, under which provision is made for the whole of such payments to be made out of the Country Roads Board Fund in each financial year commencing 1st July, 1930.

It will be recalled that this principle was established in 1929, when the Country Roads Board Fund was required under Act No. 3844 to recoup Consolidated Revenue for a proportion of the Interest and Sinking Fund payments, and the sum of £271,473 was paid for the year ended 30th June, 1930.

Under Act No. 3944—passed by Parliament in December last—£333,008 was transferred from the Board's fund to recoup Consolidated Revenue in respect of the year ended 30th June, 1931.

INVESTIGATION BY THE COMMITTEE OF PUBLIC ACCOUNTS.

An investigation of the accounts and activities of the Board was made by the Parliamentary Committee of Public Accounts during the year. The conclusions of the Committee, which are embodied in a report presented to Parliament in July last, were as follow :—

(*a*) That the Country Roads Act is efficiently administered and that generally the revenue of the Board is economically expended.

(*b*) That increased settlement and production has followed the construction of roads and that settlers who would have abandoned their farms on account of lack of roads have remained on their farms.

(*c*) That 1,250 miles of State highways which existed as traffic arteries before the railways were built now serve as feeders to the railway system.

(*d*) That the assistance rendered to municipalities is at present limited to less than 11,000 miles of roads out of a total mileage of 102,000.

(*e*) That, in all the districts visited, the improved road service had a most beneficial effect on primary production and the stability of settlement.

(*f*) That in the hill country of Gippsland, before road construction was consummated, it cost the settler up to 50s. a ton to cart his produce from Carrajung to Traralgon, but the cost is now only 12s. 6d. per ton. Potatoes can now be landed in Melbourne at about 20s. per ton.

(*g*) That many farmers now use a light utility motor truck to transport their produce to the rail or butter factories, where previously pack horses or sledges were used.

(*h*) That there is urgent need for the passing of legislation to provide for the payment of annual motor registration fees by half-yearly and quarterly instalments.

(*i*) That there is need for the introduction of compulsory third-party insurance on motor vehicles.

It was recommended by the Committee that—

(*a*) The Country Roads Act be amended to enable roads to be constructed out of revenue, thus obviating the necessity of increasing the Board's loan liability.

(*b*) In future, the interest payable by municipalities on loan moneys be at the same rate as that paid by the State, plus adequate provision for sinking fund.

(*c*) As far as possible, State service cars be repaired at the Board's workshops.

(*d*) The present method of financing the Board be continued.

(*e*) Finalization of the areas required for watershed purposes within the Otway to be proceeded with without delay.

(*f*) The Board to be permitted to expend portion of maintenance funds on tree planting to supplement local effort.

(*g*) Legislation be enacted to provide for compulsory third-party insurance along the lines of the New Zealand Act.

(*h*) The Government Insurance Office be authorized to transact this class of business, and that the profits so earned, after provision for adequate reserves, be used either to reduce premiums or be paid into the Country Roads Board Fund, and expended on road improvement.

(*i*) Legislation be enacted to provide for the optional payment of annual registration fees by quarterly instalments, with a surcharge of 10 per cent.

ACCOUNTING SYSTEM.

The expenditure of large sums of money on construction and maintenance of roads necessitates a high standard of accounting to insure an adequate and accurate record of costs. The system of accounts established by the Board, combined with the close co-operation between the engineering and accounting staffs, supplemented by the continuous check of the auditor, has proved in every way efficient and economical.

By the use of electric accounting and calculating machines, not only has the accountancy staff and the cost of administration been reduced to a minimum, but records of unit costs and progressive total expenditure are available from day to day.

The system adopted was the subject of favorable comment by the Committee of Public Accounts in its report to Parliament of its investigations of the accounts and activities of the Board.

SIXTH INTERNATIONAL ROAD CONGRESS.

In October last, the Sixth International Road Congress met at Washington, U.S.A., at which delegates from almost every country in the world attended. The State of Victoria was not, however, represented.

The object of the congress, which meets at intervals of four years, is to discuss problems connected with the construction, maintenance, administration and financing of roads.

As the result of the deliberations many valuable conclusions were arrived at which will prove to be of immense benefit not only to the countries represented at the congress, but to the various road-making authorities in Australia.

OFFICIAL MOTOR CARS.

Prior to March, 1930, official motor cars used by the Board's officers stationed in Melbourne were garaged at the officers' homes or at local garages in cases where no garage was available at the residence. This arrangement was made owing to the fact that there was no suitable site adjoining the Board's offices at the Exhibition Building on which a garage could be erected at a reasonable cost, nor was any suitable building available for that purpose.

As this system involved an expenditure of £52 per annum for garage fees, as well as the expense of running the cars between the office, the suburban garages, and the officers' homes, a contract was entered into for garaging, washing, greasing, and oiling the cars at a city garage handy to the Board's office.

Under the system outlined, it is estimated that a saving of £482 was effected over a period of twelve months.

The system of costing adopted by the Board permits of accurate records being kept of the cost of operating its motor vehicles, supplies an efficient check on the expenditure of each officer or employee responsible for the driving and care of each car, allows of a comparison being made of the cost of operating, and indicates the merits, or demerits, of each vehicle.

The total distance travelled by the Board's official cars for the twelve months ended 30th June last, was 482,205 miles, or an average mileage of 17,221 for each car. The average cost of

operating per mile was 3·98d. This average could, however, be reduced if a number of cars which have been in continuous use over periods up to six years, and upon which it is necessary to expend far more than a normal sum on repairs and renewals to keep them in running order, were replaced with more up-to-date vehicles.

PROTECTION OF ROADS.

For the protection of lightly constructed roads against damage by excessive loads, it was necessary for the Board to exercise its statutory power to prohibit the use on such roads of motor vehicles exceeding, with the load, 6 tons in weight. In spite of this action, many of these roads were, during the exceedingly wet weather, occasionally used by motor vehicles carrying abnormally heavy loads, with the result that extensive damage was caused, rendering sections of the road almost impassable.

Although the cost of repairing the damage was paid, on occasions, by the owner of the vehicle responsible for the damage, the carrying of excessive weights over roads on which a load restriction has been placed cannot be countenanced, and the necessary action is being taken to safeguard roads of light construction, which are considered adequate for the general traffic, but are not capable of withstanding the effect of exceptional heavy loads.

TREE PLANTING.

The continued efforts of a number of municipal councils, progress associations, and other bodies in planting trees on roadsides have resulted in the extension of the plantations for a considerable distance.

The Calder Memorial Avenue Committee used every endeavour to extend the scheme of plantations on the Melbourne–Geelong section of the Princes Highway, but owing to lack of funds it is regretted that little headway was made during the year. With an amount since donated by the Malvern Horticultural Society, however, an additional plantation has been prepared and planted near the junction of the Aviation-road. Further funds having now been made available, the work at present is being extended as far as the Werribee railway gates for a distance of $3\frac{1}{2}$ miles. With the completion of this section there will remain a gap of $3\frac{1}{2}$ miles only between the Little River bridge and the single line of plantations established a few years ago under the auspices of the Geelong Town Planning Association.

Additional trees to the number of 100 were planted on the Calder Highway in the shire of Gisborne in extension of the scheme put in hand in 1929. The efforts of Cr. James Railton, of the Gisborne Shire Council, the Tree Planters Association and the Victorian Nurserymen's Association, have been responsible for the formation of an avenue of trees which will be a feature of this section of the highway within a few years.

WANDERING STOCK.

With the increase in fast moving traffic, a grave menace to the safety of the travelling public has developed in recent years by stock being allowed to graze unattended and wander over many of the main traffic roads. The danger is more prevalent on several of the State highways which, being generally laid out to a width of 3 chains, offer convenient areas for depasturing cattle. Many serious accidents have occurred as a result of this practice.

In many instances, municipal councils are encouraging the practice by issuing registration discs entitling the owners of cattle to graze them on the roads, for which privilege fees are collected and paid into the council's revenue.

In such cases the Board has communicated with the councils concerned, asking them to discontinue the practice, and as the desired action has not been taken in certain instances, the Board has been compelled to enlist the aid of the police to enforce the provisions of the Police Offences Act, with a view to eliminating the source of danger.

It is the intention of the Board to seek, at an early date, the necessary legislative authority enabling it to deal with this nuisance.

LICENSING OF COUNTRY MOTOR OMNIBUSES.

The Light Motor Omnibus Act passed in 1929 authorized the Board to license motor vehicles carrying less than six passengers at separate and distinct fares, and the licence issued entitled the vehicle to operate anywhere in Victoria excepting upon specified highways, but the owner of a vehicle which operated regularly on those highways during the three months ended 31st December, 1929, was, on application, granted a licence to operate until the 31st December, 1930.

Since that date several operators of light motor omnibuses have adopted various subterfuges in their endeavours to operate along the prohibited routes, and prosecutions have been launched by the Board from time to time.

In a test case heard at the Court of Petty Sessions at Werribee, a decision was given against the Board, but on review, the Supreme Court reversed the magistrate's decision and imposed fines. The operators thereupon applied for special leave to appeal to the High Court, but this was refused, and most of the operators ceased to ply along the excepted highways.

Several, however, still continued to flout the law, necessitating further action being taken against them, with the result that only two were operating on the highways. As the operators of both these vehicles have been again fined, it is anticipated that both these services will be discontinued.

In September, 1930, operations were commenced illegally on a majority of the payable omnibus routes in the State by a certain firm, which managed to carry on until March last, when the services ceased, as the proprietor was unable to pay the fines inflicted upon him for various breaches of the law.

The following statement shows the number of licences issued, routes prescribed, &c., from the 1st July, 1930, to the 30th June, 1931 :—

		Fees Payable.
Stage Motor Omnibuses—		
Licences issued and renewed ..	278 ..	672 19 3
Permits issued	10 ..	5 0 0
Routes prescribed	32 ..	..
Touring Motor Omnibuses—		
Licences issued and renewed ..	67 ..	324 9 2
Light Motor Omnibuses—		
Licences issued and renewed ..	448 ..	1,691 14 11
Drivers' Licences issued	618 ..	154 10 0
Total ..	..	£2,848 13 4

Since the Country Motor Omnibus Act came into force in March, 1928, 204 routes have been approved.

For various offences under the Motor Omnibus Acts, proceedings were instituted in 192 cases—fines and costs totalling £2,522 13s. 2d.

SUMMARY OF EXPENDITURE.

Statement of expenditure on road construction including expenditure under Special Appropriations, is submitted below in a summarized form, from which it will be seen that the total for the year was £1,656,274 8s. 1d.

—	—	Under Direct Supervision of the Board.	Under Supervision of Municipalities.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1. State Highways— Maintenance and reconditioning ..	..	326,292 17 8	53,568 19 2	379,861 16 10
2. Main Roads— Construction	61,640 9 11			
Maintenance	613,728 12 1			
		62,171 6 2	613,197 15 10	675,369 2 0
3. Developmental Roads— Construction	..	74,281 7 10	150,211 17 1	224,493 4 11
4. State Unemployment Relief— Main and Developmental Roads ..	167,089 15 0			
Roads for Isolated Settlers ..	4,338 9 9			
		97,785 5 0	73,642 19 9	171,428 4 9
5. Roads to Develop Tourists Resorts ..	..	342 11 0	..	342 11 0
6. Migration Grant, Childers Settlement Road	..	55 16 0	..	55 16 0
7. Migration Developmental Roads ..	..	..	*4,086 2 3	4,086 2 3
8. Great Ocean Road	..	497 6 8	..	497 6 8
9. Grants to Municipalities Act 3662 ..	..	..	38,839 17 1	38,839 17 1
10. Federal Unemployment Relief ..	..	95,346 15 0	47,781 6 7	143,128 1 7
11. Federal Trust	..	16,714 7 2	..	16,714 7 2
12. Experimental Roads	..	1,446 12 5	11 5 5	1,457 17 10
		674,934 4 11	981,340 3 2	1,656,274 8 1

* £1,362 0s. 9d. additional expenditure was paid out of Developmental Roads Loan Fund.

Towards the expenditure on the conditioning and reconditioning of State highways, and for the construction of main and developmental roads, the Commonwealth Government contributed an amount of £238,549 16s. 5d., under the provisions of the Federal Aid Roads Act.

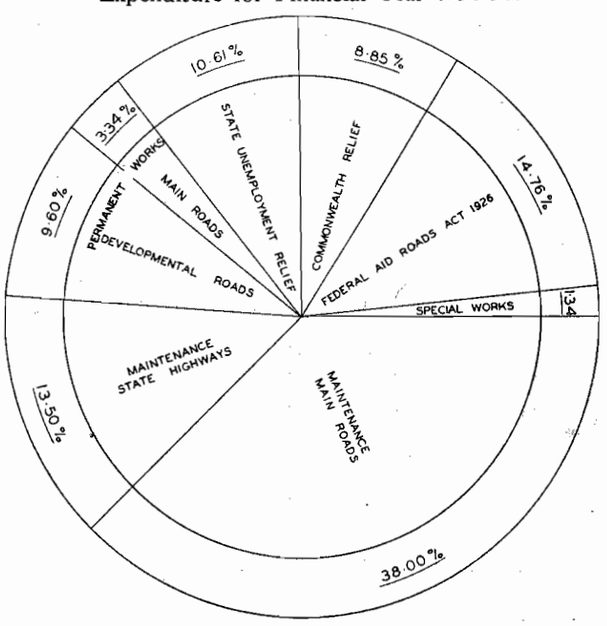
The expenditure by the Board of funds from various sources is shown by percentages in the accompanying graphs.

Graph No. 1 indicates the percentage of expenditure under the several headings for the year ended 30th June last, and No. 2 graph supplies similar information for the period extending from the inception of the Board to the end of last financial year.

DIAGRAMS SHOWING COMPARATIVE SECTIONAL TOTAL EXPENDITURE.

ROAD WORKS.

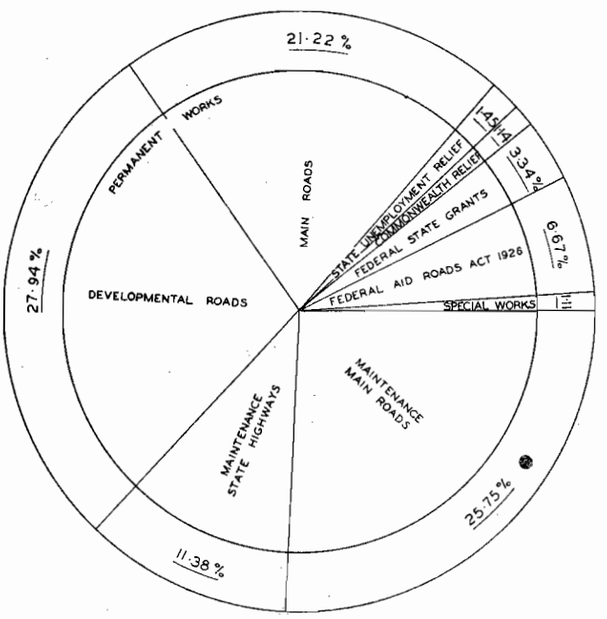
Expenditure for Financial Year 1930-31.



No. 1.

ROAD WORKS.

Total Expenditure since Inception of Board to 30.6.31.



No. 2.

APPORTIONMENT OF COSTS.

In accordance with the provisions of section 28 of the *Country Roads Act* 1928, the cost of permanent works and maintenance was apportioned for the year ended 30th June, 1930, an amount of £91,886 4s. 5d. being charged to municipalities in respect of expenditure on permanent works, and £197,623 13s. 10d. on maintenance.

The Shires of Huntly, Swan Hill and Walpeup have not yet paid to the Board the amount due by them to the 30th June, 1931, the reason given in each case being their inability to collect a large proportion of the rates. For the same reason the Shires of Birchip, Karkarooc, Shepparton, Upper Yarra, and Waranga were able to pay their contribution towards maintenance only, leaving outstanding the amount due on account of permanent works. The Shire of Otway, which comprises the most undeveloped area in the State is also in arrears with its contribution for road construction, but is making every effort to reduce its liability, and with the increase in the settlement of the area, it is anticipated that the council will soon be in a position to overtake the arrears.

The total amount owing by municipalities at 30th June was £35,592 6s. 9d. but this sum has since been reduced to £30,651 11s. 0d.

MOTOR REGISTRATION.

Motor cars to the number of 168,231 were registered during the year ended 30th June, 1931, the following classes of vehicles being included in the total:—

Private cars	116,568
Commercial motor vehicles	24,363
Hire cars	2,705
Licensed omnibuses	960
Motor cycles	23,635
Total	168,231

A comparison of the above figures with those of the previous year shows a decrease in registrations of 6·15 per cent. for the year ended 30th June, 1931.

The net revenue received was £1,059,194, as compared with £1,137,912 for the year ended 30th June, 1930.

MEMORIAL TO LATE MR. WILLIAM CALDER.

In recognition of his services to Gippsland and the State generally a memorial to the late Mr. William Calder, the first chairman of the Country Roads Board, was erected on the Princes Highway between Warragul and Drouin, by the Gippsland Shires and Boroughs Association and the people of Gippsland.

The memorial in the form of a small replica of Cleopatra's Needle, which is erected on a site where the first road contract under the Board was carried out, was unveiled on the 28th May last.

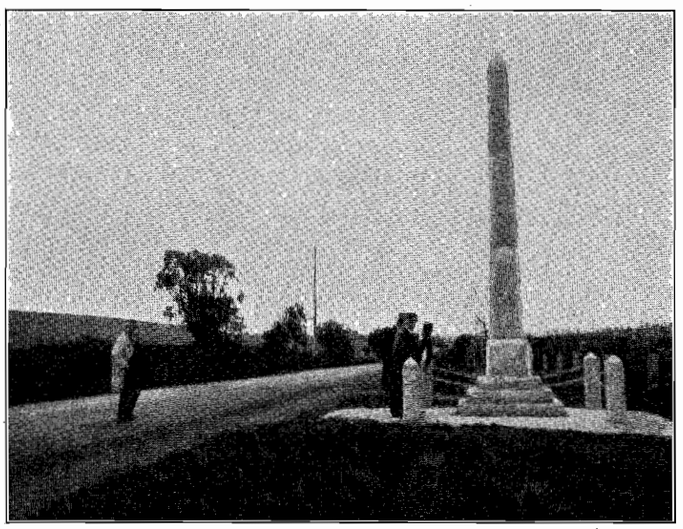


Plate No. 9.—Memorial to late Mr. William Calder.

DEATH OF MR. E. J. WILSON, DISTRICT ENGINEER.

With deep regret the Board records the death of Mr. E. J. Wilson, B.C.E., District Engineer, at Bendigo, which occurred on the 16th May last.

Prior to his appointment in February, 1926, to the position which he held on the Board's staff at the time of his death, Mr. Wilson occupied the position of engineer to the Shire of Bairnsdale for a period of eighteen years.

The loss of a valuable officer is deplored.

We have the honour to be, Sir,

Your obedient servants,

W. T. B. McCORMACK, Chairman.

F. W. FRICKE, Member.

W. L. DALE, Member.

R. F. JANSEN, Secretary.

CHIEF ENGINEER'S REPORT.

Country Roads Board,
Melbourne,
27th October, 1931.

The Chairman,

SIR,

I have the honour to submit herewith my report covering the more important works carried out under the direct supervision of the Board during the year ended 30th June, 1931. The total direct expenditure for the year was £613,819, compared with £1,148,041 for 1929–30. The latter year was a peak period, as all leeway in Federal Aid expenditure was made up and there was also heavy Unemployed Relief expenditure. When it was realized that funds available for the year were limited, action was taken to reduce staff. During the preceding very busy period, instead of increasing the permanent or temporary staff, overseers, resident engineers, and surveyors were engaged at daily, weekly or contract rates and were put off immediately the works they were engaged on were completed. In addition the engineering staff was reduced by eleven, although the general adoption of low-cost types, and the lowering of costs has resulted in a large mileage being obtained with the funds available.

The following table for three typical years shows markedly the steadily decreasing cost per mile :—

Year	1927–28.	1929–30.	1930–31.
Expenditure under direct control	£791,480	£1,148,041	£613,819
Miles constructed or reconstructed	318	529	651 (includes 112 miles surveyed, grubbed and cleared only)
Miles maintained	891	1,260	1,423

Mention was made in the last report of vehicle operation costs. Some little work has been done during the year in an endeavour to obtain information related to our own conditions, but time and staff were not available to do more than indicate that figures available for other countries are generally applicable. In particular, records kept by the Main Roads Board of New South Wales, have given valuable information and are confirmed by American figures. The results indicate that the difference in operating costs between cars and light trucks operating on bad roads and those operating on good roads is approximately 1½d. per mile. For even light traffic of 100 vehicles a day this represents £225 per mile per annum. As a great deal of this cost is represented by imported materials, it will be seen that wherever traffic is at all heavy it is highly economical to improve the roads—particularly as the works call almost entirely for local labour and materials.

The results obtained by the use of low-cost types of construction over the past few years have been observed during the very wet autumn and winter, and they have, in practically all cases, more than exceeded expectations. The few isolated failures have been with poorer materials subjected to heavy horse-drawn traffic. It is advisable to draw attention, in view of the frequent advocacy of returning to horse-drawn transport, of the much greater cost incurred in providing for the latter type of traffic. The roads built for horse-drawn traffic gave trouble when motor transport became common, and it is true that a different type of road was found necessary. Contrary to the general impression, the road required for motor transport, for a given volume, is generally very much cheaper than for horse-drawn transport, frequently referred to in American publications as " mutilative " traffic. With the general use of the pneumatic tire this difference has become accentuated, and grade limits and pavement types have been modified, with the result that road construction has been considerably cheapened.

The years of dry winters preceding the wet autumn and winter of 1931 enabled old waterbound macadam, particularly where sealed, to stand up to traffic without excessive maintenance. The last winter has, however, caused extensive failures, particularly where no loam or fine-grained basecourse had been laid over poor subgrade before placing the macadam. Unfortunately, the reduced maintenance funds available and the poor financial position of many shire councils have caused neglect of maintenance at a time when it has been most necessary and the outlook in this respect is somewhat disquieting. If proper attention cannot be given to these roads, costly failures will undoubtedly have to be faced in the near future. Maintenance in these cases is very much cheaper than reconstruction.

One of the main technical advances made during the year has been the adoption of welding as a routine method, rather than as an experiment, in bridge construction. The experience with Sunday Creek bridge, following careful observation of work done by the Railway Construction Branch, and investigations into the test results and " procedure control " information available, have enabled designs to be made with confidence. Owing partly to the light sections used, there is generally a considerable saving to be made by this method in medium span highway bridge trusses.

Laboratory work has been particularly extensive during the year, mainly with soil analysis, research into various bituminous materials and correlation of tests therefor, and routine testing of materials. The excellent, though generally simple, laboratory equipment available and the qualified staff has been again extremely valuable in reducing the costs of works.

Another considerable change in field work has been the general use of fine crushed rock instead of waterbound macadam for new construction.

Waterbound macadam is not now used as a routine method of construction, and it is found that relatively thin gravel or fine crushed rock pavements are quite adequate for most main or developmental roads. Considerable economy in construction and maintenance has thus been achieved, and the fine-grained base provided makes an ideal first stage in the stage construction of even a high-grade pavement should traffic warrant later. Waterbound macadam, subject to infiltration of clay from below on poor subgrades, is very often an embarrassment under these conditions.

The general specification for fine crushed rock, with typical limits filled in, is given below :—

GRAVELLING (Crushed Rock).

Gravel.—The gravel shall consist of crushed rock complying with the following requirements. The whole of the stone used shall be crushed from approved rock having a French co-efficient of wear of not less than . When tested with laboratory screens the whole of the crushed material shall pass 1-in. circular screen, and not less than 65 per cent. or more than 75 per cent. by weight shall be retained on a 10-mesh sieve. Suitable stone is known to exist in allotment , parish of , but the quantity or quality is not guaranteed.

The contractor must make his own arrangements and provide sufficient suitable material to satisfactorily complete the contract. His price for this material, as stated in the relevant scheduled items, shall include royalty, cartage and all other charges, and a certificate of clearance signed by any landholders concerned must be produced before final payment is made.

A sample of the stone proposed to be used must be submitted with tenders, and the whole of the gravel used must be crushed to the required grading from stone similar in every respect to the approved sample.

SPREADING.

The gravel shall be spread in even and equal layers at the rate of cubic yards per 100 lineal feet, and to a width of . This gives a loose depth of approximately in each layer.

The bottom coat shall be spread and thoroughly consolidated before the top coat is spread, and the contractor shall keep the bottom coat dragged and maintained during the spreading of the top coat as hereinafter specified.

On all widened curves additional gravel shall be spread to the same even thickness as the adjacent pavement. Care must be taken in spreading the gravel to see that the specified amount is spread evenly. Should less gravel than that specified be spread an adjustment in the schedule price will be made accordingly. Should more than the specified amount be spread no such adjustment will be made, the cost of the extra gravel being borne by the contractor.

Spreading shall commence at a point on the road nearest the source of supply, and shall continue from that point so that the spread gravel will receive the traffic and consolidation of the vehicles used for cartage.

Where approved by the engineer the gravel may be spread direct from tipping trucks provided that the height of fall is not excessive and that the gravel is spread in an even continuous layer. The contractor shall be responsible for spreading the material uniformly, but will be permitted to move the material by drags or graders to obtain this uniformity, provided that there is no segregation of fine and coarse material and that complete consolidation is subsequently obtained.

No gravel shall be dumped on the subgrade and where spreading by hand is adopted the following method must be adopted :—

The whole of the gravel shall be tipped on to flat iron sheets or platforms of sufficient size to hold the full load of each vehicle used for carting, and it must be carefully spread by shovelling with a twisting motion, to the required depth over the bed so as to secure a thorough distribution of the coarse and fine material. Wooden gauge blocks must be used to ensure an even depth in spreading, one being placed in the centre and one at each side.

Immediately before the gravel is spread, boards x 1 inch in 10-ft. lengths or over, shall be fixed true to line and level and full width apart along each side of the boxing, and be secured in position with approved spikes driven firmly into the ground. As the gravel is spread, and before the boards are removed, the shoulders of the road shall be made up to the full required height of the boards, and firmly rammed and consolidated behind same. Sufficient boards shall be kept on the works and placed in position at least 50 feet in advance of the gravel spreading. On all curves shorter boards shall be used in order to maintain the alignment of the curves.

CONSOLIDATION.

Consolidation shall be effected as far as possible by construction and ordinary traffic being allowed to use the spread gravel, which must be continuously dragged and if necessary shaped up with a grader. Corrugated, multi-wheel, or similar types of roller may be used instead of, or in addition to, an ordinary roller if considered necessary by the contractor, but rolling of the gravel will not be insisted on if complete consolidation to the satisfaction of the engineer can be obtained by traffic. The bed and the shoulders shall be rolled by a roller weighing not less than 5 tons. Where necessary the contractor shall water the gravel to assist in consolidation.

At the completion of the maintenance period the pavement and shoulders shall be thoroughly consolidated to the cross-section and longitudinal section shown on plans.

MAINTENANCE DURING CONSTRUCTION.

The contractor shall cart the gravel over the pavement as it is spread, the vehicles using no definite line of traffic but moving in different lines so that the whole pavement width shall be trafficked by the vehicles. No ruts, waves, or isolated hard spots shall be allowed to form, and the contractor shall keep the pavement formed to the required template by the constant use of an approved road drag or grader. Dragging shall be carried out continuously and to the complete satisfaction of the engineer.

MEASUREMENT.

The whole of the gravel used shall be measured in the vehicles used for cartage, at the tip head. Such vehicles shall be fitted with bodies approved by the engineer, and have tail boards of equal height to the sides. Each load shall completely fill the body and must be levelled off before being checked. The contractor shall top up light loads from dumps provided by him for that purpose, or they shall be rejected.

MAINTENANCE.

After the works are completed as hereinbefore specified, and certified to by the engineer that the whole of the works are satisfactory, the road shall be thrown open for traffic, after which for a full period of two months the contractor shall maintain the surface by the constant use of an approved road drag, keep all ruts filled in, land slips and fallen timber removed, and on completion the road surface shall be true to alignment and grade, with a uniform cross fall as indicated, and both gravel and formation left in perfect condition. Maintenance gravel must be supplied and stacked at the rate of cubic yards for every 1,000 feet of construction work. The sites must be cleared and levelled, and the heaps squared up in prismoidal form for measurement.

DISTRICTS.

The work of the District Engineers has been an increasingly important element in securing more economical control of the funds at the Board's disposal. Early in the financial year, as soon as the allocations for maintenance have been made by the Board, the District Engineers generally inspect the proposed works with the Shire Engineers. The Shire Councils are thus furnished quickly with the benefit of the Board's experience in developing cheaper or more efficient methods of construction or types of road, and the Board is enabled to consider any proposals submitted by the Shire Engineers or by its District Engineer tending towards economy from the incorporation of local materials, or introducing special features demanded by local conditions. In each municipality there is thus secured as promptly as possible a programme of maintenance works designed to use the available funds so as to keep the greatest possible mileage of road in good trafficable condition throughout the year. The District Engineers have exerted a useful personal influence with certain councils and their engineers in securing the adoption of the system of regular and efficient patrol maintenance of main roads in place of the frequently haphazard and wasteful policy of intermittent repair. A valuable decentralizing function of the district officers is that of co-ordinating in the more distant parts of the State programmes of work for the Board's mechanical plant, such as the bituminous spraying units described later. In some instances the supply of gravel from special large pits to a number of municipalities has been similarly directed by the District Engineers.

SALE DISTRICT.

Princes Highway.—Maintenance was as hitherto generally in charge of patrolmen who each with a small gang had charge of the maintenance of approximately 30 miles of highway.

It was hoped that surface treatment would be applied to those granitic sand and gravel sections between Moe and Sale which were still unsealed at the end of last season. Reduction in the amount of money available, however, made this impossible. In view of the destructive action which the fast-moving traffic on this highway has on the coarse gravels available in the district, it is intended to complete this programme during the coming season. By the completion of the sealing of the gravel pavement between Sale and Bairnsdale, the Board has been relieved of very heavy maintenance charges on this section. East of Bairnsdale no work other than continuous patrol maintenance was carried out, although surveys have been made with the object of improving the alignment which is particularly desirable east of Orbost, where the country is entirely dependent on the road transport for communication with the remainder of the State or with New South Wales.

Omeo Highway.—The work on this highway was limited to the construction of timber bridges and approaches at Ramrod Creek and the Haunted Stream, to the completion of a deviation at Herd's Gully, and to patrol maintenance. Improvement on several sections is desirable since the district through which the highway passes depends upon the road for transport in a similar manner to the country east of Orbost. For a similar reason, i.e., reduction in funds, this work could not be carried out.

Unemployment Relief Works.—The camps established for the relief of unemployment completed or continued considerable developmental construction in Orbost, Tambo and Omeo Shires. A further 7 miles of the Deddick River-road, in the heavier section along the river, were cleared and formed, making a total of $9\frac{1}{4}$ miles of this road constructed to date by day labour with relief funds. Contracts were also let for 8·6 miles to join this work with the Orbost–Delegate-road at Bonang. Extension of settlement of the country along the road has been very marked

as the road work has progressed, and the opening up of Crown lands at Ambyne at the end of the section completed is now proceeding. Construction was continued on the Orbost–Delegate-road for 5 miles, using Federal funds. An isolated fertile area on the Buldah River has been provided with an outlet to Orbost via Cann Valley-road by construction of 6·3 miles from the latter road into the settlement. Work by day labour on Buchan–Ensay-road was extended for 3·2 miles, reaching comparatively open country. Contracts were let and are almost completed for 6 miles of side cutting required between the edge of the present settlement at South Buchan and Dinner Hill, where the day labour work commenced. The total length of newly-formed road thus giving access from the Timbarra area towards the Nowa Nowa–Buchan main road is 13 miles. Work on the Benambra–Corryong-road was extended a further 6 miles towards the divide between the Mitta Mitta and Upper Murray basins.

Bendigo District.

In the report for the year 1929–30, reference was made to the drought conditions which prevented satisfactory road making and maintenance; the weather conditions for the year now under review are the reverse of those then existing, but have likewise retarded road maintenance. Roads that in recent years gave little trouble have this winter become almost impassable. An indication of the present wet season as it affects road works can be gathered from the number of days on which work was possible during June. In one shire two days' work were lost in that month in 1929, one in 1930, whereas in 1931, it was only possible to work on two days.

In the spring of 1930 the rainfall was normal, but from the heavy rains in December to the end of June, rainfall, greatly in excess of that normally experienced, has occurred. Waterways, that have been dry for a great portion of previous years, were often in flood and flowed continuously. In many places, and in particular in flat country, the results of the irrigation work carried out within the last five years were not observed until the recent rains, and it was found that the small levee banks erected by land-owners have, in many cases, altered very greatly the whole drainage of the countryside. Inverts and culverts constructed in suitable places prior to, or during the drought seasons, were found to carry no water, the irrigation works and levee banks having deflected the water to cause concentration, either where no inverts or culverts had been provided or where the waterway provided is now inadequate.

During the exceptionally wet year, all constructed portions of the highways have carried traffic satisfactorily, but the effect of heavy loads after the prolonged rains on formed but unsurfaced roads has been very noticeable. In many instances the road, though capable of carrying light loads (up to say 3 tons) was rendered almost impassable by the damage caused by a few trips of a vehicle loaded to the limit permitted by the Act; many users of the roads being inconvenienced, due to the action of perhaps one truck owner. In the Calder Highway, north and south of Culgoa, 5 miles of formed but unsurfaced road were rendered impassable to light vehicles by the holes and deep ruts caused by heavy trucks. On the Echuca–Gunbower road, near Echuca, similar damage was caused to the newly constructed sand-clay road and to unconstructed sections. It would appear that, particularly on sand-clay roads, the four-wheel load should be limited to 6 tons or even less during the first wet season after construction. Light traffic tends to continue and assist the mixing process, but heavy vehicles break through the partly-consolidated crust, and form deep ruts (sometimes up to 18 inches deep) which not only impede further traffic but also retain water and thereby greatly retard the work necessary to bring the road to its previous condition. The formation then probably remains saturated until the middle of the following summer.

Single-coat sealing of gravel was carried out for the first time in the district. Corrugations and roughnesses were removed by scarifying and reshaping at the end of the winter, using a tractor-drawn heavy scarifier and grader, and the road was continuously maintained with a road planer to remove longitudinal irregularities and to remedy corrugations immediately they occurred. The customary primer coat was omitted, and after thorough cleaning of the road to remove loose material, bitumen fluxed with tar oil to the consistency of 85/80 road oil (float test 200 secs. at 90° F.) was applied at the rate of 0·30 gallon per square yard. The seal was found to be most satisfactory and a short test section of fluxed bitumen on sanded formation has also given good results. In work of this description carried out on the Northern Highway between Elmore and Rochester it was found of utmost importance to obtain a thoroughly consolidated road and to remove all loose material before sealing.

During the year the engineer of the Mildura Shire carried out reconstruction of portions of the highway in bituminous macadam, utilizing the local limestone deposits; and it is thought that this method of using the local limestone will permit of the construction of pavements capable of carrying the relatively intense traffic experienced near Mildura.

Calder Highway.—The reconstruction works carried out now provide an all-weather road to Warne Bridge, 24 miles north of Wycheproof, and 203 miles from Melbourne. Between this point and Berriwillock there are 5 miles of unconstructed road, which in the recent wet weather

became almost impassable. From Berriwillock to Mildura, though little permanent construction has been carried out, the highway has been progressively improved by the patrol maintenance gangs. During an exceptionally wet winter the highway has been continuously used, with the exception of the length previously referred to.

Between Specimen Hill and Bridgewater contracts for gravelling were satisfactorily completed. North of Bridgewater certain sections were constructed by the mixed-in-place method and gave an excellent " riding " surface. Between Wycheproof and Culgoa several miles of local limestone road were completed at a cost of approximately £650 per mile ; and with the exception of two short sections there is a continuous stretch of this construction to 3 miles north of Nandaly. The limestone has proved satisfactory and economical, the maintenance thereof being carried out mainly with a road planer. Between Kiamal and Trinita, and particularly on the crown of sandhills, the original marling laid eight years ago has worn through in many places and has been re-sheeted where necessary by the patrol gang. North of Carwarp the worst sections of the highway have been re-sheeted with limestone.

Northern Highway.—Reconstruction was carried out between Elmore and Rochester and the highway is now trafficable in all seasons. The only occasions when traffic was held up was due to the road being covered with flood waters from the Campaspe River.

The worst sections of the road north of Elmore and north of Goornong have been gradually improved by sanding under patrol maintenance. Single-coat sealing of gravel south of Rochester was carried out.

Castlemaine–Maryborough Road.—The mixed-in-place construction on the portion of the road between Maryborough and Joyce's Creek was completed and the maintenance of this section remains under the direct control of the Board.

St. Arnaud Road.—Gravelling of several short sections of road (totalling 3½ miles) north of Coonooer was carried out with granitic gravel under the Board's direct supervision, from Unemployed Relief Funds, as a step in the progressive improvement of the road between St. Arnaud and Charlton.

Serpentine–South Kerang Road.—Two contracts, totalling 2½ miles in length, were let for gravelling with granitic gravel on this road near Durham Ox, under the direct supervision of the Board, from Unemployed Relief Funds. Owing to the wet season the contracts are still in the maintenance period.

Benalla District.

Hume Highway, Sections 2 and 3.—The continuous lengths of sprayed pavement not yet being sufficient for employment of truck patrols, the system of maintenance by individual patrolmen on sections averaging 6½ miles in length was continued. Assistance was given in heavier work by two light-power graders, while temporary help was required by the patrolmen during December when exceptionally heavy falls of rain were experienced.

The reconstruction carried out during the season completed the reconditioning of the highway between Seymour and Wodonga, with the exception of two particularly bad lengths totalling 15·3 miles between Euroa and Violet Town, and between the Chiltern railway crossing and Barnawartha. The work consisted of re-sheeting with gravel or granitic sand and in the preparation of old gravel pavements and formations for surface sealing. The success of the latter work proved the value of the heavy graders hauled by " Caterpillar " tractors, which were purchased for this purpose and used for the first time during the season. Two typical examples of this work are between Violet Town and Badaginnie, and from Winton northwards for a distance of 4 miles. On the former, 7·9 miles in length, the formation was brought to a reasonable cross section by re-shaping with a light grader during the winter months and finally blading with a heavy grader and a road planer before applying the priming material. Certain sections where the formation was not considered strong enough to give the necessary support to the seal coat were also re-sheeted with local gravel. The old pavement north of Winton consisted of local ironstone gravel of which the general shape was very poor and which corrugated quickly in dry weather. The gravel was scarified and re-shaped with a heavy scarifier grader, short sections were re-sheeted where this was considered necessary and the whole was then maintained with a heavy grader and road planer until the primer was applied. The riding qualities obtained on both these jobs were excellent.

Curtailment of funds has unfortunately postponed the sealing of certain sections of granitic sand. As these sections are constructed of material of a small maximum grain size, it is not anticipated that any difficulty will be experienced in preparing them for surface treatment when funds are available.

The reconstruction of numerous small culverts was included in the various road contracts and a day labour gang was employed in widening and renewing culverts and bridges. The work involved in altering the alinement and widening a small concrete bridge north of Springhurst is described elsewhere. A contract was also let for the construction of a new bridge, 480 feet long, over Reedy Creek in the Borough of Wangaratta.

Tolmie–Whitfield Road.—Further progress has been made with both gravelling and extension of new formation of this road, which gives the fertile Tolmie tableland access to the rail heads at Mansfield and Whitfield. Local sandy conglomerate was used on 6½ miles of new pavement. A further deviation of the old track for 3 miles was commenced by day labour, and a contract has recently been let to complete it.

Benalla–Shepparton Road.—Forming and gravelling at either end of this road were continued, three contracts totalling 12 miles being completed (see Plate No. 10). A further section of 3½ miles remains to be gravelled before the road will be passable in winter for through traffic.

Chiltern–Howlong Road.—Considerable improvement has been carried out to the portion of this road which runs along the Murray River Flats to the interstate bridge over the Murray River at Howlong. There are seven timber bridges on these flats, all of which were in a more or less unsatisfactory condition. The worst has been replaced with a new structure (see Plate No. 11) and two others have been reconditioned throughout. The work was carried out by day labour, redgum timber being used, some of which came from the Murray River Flats and part from Greta West. This road is an important feeder from Howlong to the railway at Barnawartha.

Plate No. 10.
Benalla–Shepparton Road.

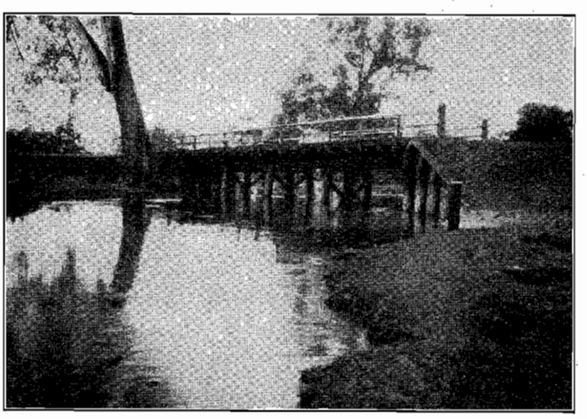


Plate No. 11.
Bridge on Chiltern–Howlong Road.

Mount Buffalo Road.—With the completion of the widening of a further 2 miles of this road between Eurobin Falls and Porepunkah the full length to the Government Chalet has now been improved sufficiently to allow two-way traffic to operate safely. The road is continuously maintained with three patrolmen, and has in consequence sustained very little damage, in spite of the record rainfall experienced during the year.

Stawell District.

Western Highway.—Good progress has been made with the improvement of this road. Lengths totalling 9 miles were reconstructed, and 4 miles of this, together with further lengths totalling 25 miles, were completed with bituminous surfacing. The reconstruction included 3·3 miles over Mount Mistake, between Beaufort and Ararat, on which a shaping course of granitic sand was placed, intended to form a base course. It was decided, however, that the expense of a top course could be saved by direct surface treatment of the sand. A caterpillar tractor and a grader with long wheel base were used to bring the sand into shape ready for sealing. This type of plant was also used on ironstone gravel between Stawell and Deep Lead.

The gravel laid by contract last year between Deep Lead and Dadswell's was also prepared for sealing partly by ordinary dragging and partly by use of 12-ft. road planers, and was sealed in the summer. Through Dadswell's the top course of gravel specified under the contract was omitted. Owing to continual wet weather last winter only the first course had been laid, and this carried all the traffic successfully, the shape being maintained by the contractor with dragging, and weak places being replaced as they appeared. The surface was sealed during the summer.

Bridge approaches at Mount William Creek were completed in penetration macadam, the stone used being from Mount Drummond in the vicinity. Screenings for covering in the adjacent section of surface treatment were also obtained from the same source. The use of this local stone was a very desirable development as there is no hard, well-graded gravel near that part of the highway.

Except during infrequent severe floods the road from Melbourne to Horsham can now be travelled in all weather. Between Horsham and Dimboola, owing to the very wet season, great efforts have been required of the patrolmen to keep the sand clay and natural soil formations in trafficable order. The work has been heavily handicapped through the regular use of the road by trucks with loads up to 6 tons, which cut tracks along the whole length in its soft condition,

causing much inconvenience to lighter vehicles. Such traffic was clearly beyond the capacity of this fine-grained road in a continuously wet season; the road is, nevertheless, a striking example of what can be done by constant maintenance; this length having been practically the only earth road leading to Horsham that has been kept open all the winter.

The experimental portions which were surface treated as described in the 17th Annual Report, remained quite stable. That near Dahlen siding was slightly damaged through the deposition of clay on the top by vehicles entering from the adjacent earth sections. The clay adhered to the bitumen, and lifted it in small patches. This trouble would largely disappear if the whole length of the road were covered. Two additional short lengths of bituminous surface treatment have been laid, the worst clay lengths being selected, and again without failure.

Between Dimboola and Nhill, over 3½ miles of existing limestone were re-shaped, and a contract has been let to form and drain a bad section near Lochiel, but otherwise funds have been available only for elementary maintenance. In Lowan and Lawloit Shires further improvements have been made by the councils which control the highway, and their progressive policy now affords a well built and carefully maintained road throughout their territories almost to the South Australian border.

A record survey of the highway has now been completed to the border, and permanent surveys have been made of those sections still requiring reconstruction. Mile posts have been erected right through, and prove a great convenience in supervision of maintenance. Good progress has also been made with the erection of direction signs.

Main Roads.—Some progress has been made in reconstruction on many of these roads for the year, but a great deal more remains to be done. The majority of the shire councils are handling the maintenance problem on a systematic and continuous programme, although hampered by lack of adequate funds.

The Ballarat–St. Arnaud–Donald road has been considerably improved in the Shire of Kara Kara by the construction of unmade lengths between Stuart Mill and St. Arnaud, and the completion of the gravel across Mogg's Plain between St. Arnaud and Donald. This plain has been a nightmare to vehicles of all descriptions in the winter time for many years. The Stawell–Warracknabeal–Hopetoun road, though still impassable to through traffic in bad weather, has been further improved, more particularly between the northern boundary of the Shire of Borung and Sheep Hills. Unfortunately no further progress has been made with the lateral road between Murtoa and Horsham. This road is impassable in wet weather, but no improvements of any description have been effected on the Horsham end in Wimmera Shire.

The use of rail-borne gravel from Great Western during the year shows a very marked decrease on the previous year from approximately 24,000 cubic yards to 5,000 cubic yards. This is partly due to curtailment of funds, and to the increasing use of local material. Most councils are experimenting in this direction, more particularly in the use of soft sandstone and limestones, for a foundation course, with the idea of covering with a better class material, or surface treatment where the traffic warrants it.

Developmental Roads.—Not much progress has been made with the extension of these roads during the year on account of scarcity of loan funds. The question of maintenance in many places is becoming serious, but while the necessity for maintenance has been pointed out to the councils, it is realized that in many instances their financial position makes it difficult for them to carry out the necessary works.

Warrnambool District.

Princes Highway.—During the year the chief work on the Princes Highway in the district was the completion of last year's programme. This consisted of widening and surfacing with bituminous macadam the rough waterbound sections of road between Warrnambool and Colac. The highway from Melbourne to Yambuk is now constructed of bitumen surfaced macadam, penetration macadam, or higher types of pavement for the full distance of 192 miles, thus considerably reducing maintenance costs.

With the completion of this construction work the patrol maintenance system was re-organized—truck patrols being established at Colac, Camperdown, and Warrnambool to maintain the highway between Birregurra and Yambuk, a distance of 112 miles. From Yambuk to the South Australian border, a distance of 84 miles, the road is constructed of waterbound macadam and buckshot gravel except for 10 miles of bitumen surfaced road between Dartmoor and the border. The maintenance here is carried out by six patrolmen equipped with horses, drays and drags and provided with assistants when necessary.

Main Roads.—Throughout the district the shire councils have pushed on with their programmes of re-sheeting and bitumen surfacing the more important main roads. The system of modified macadam developed on the Princes Highway during the previous year was described in the Board's 17th Annual Report. The extension of this method on main roads in place of the semi-penetration method referred to in that report has been a notable feature of the past season's work. Basaltic rock occurs over a large part of the district and gravel is relatively scarce, so that

the use of some form of macadam has been general since the earliest road construction Waterbound macadam was generally used until the advent of motor traffic Surface sealing was then resorted to so as to prevent ravelling and corrugation. Owing to the difficulty of eliminating these when reconstruction or re-sheeting was required, as mentioned in the previous report, a bituminous binder was later substituted for water, the semi-penetration method being used. It is considered that the further change to the modified macadam method has reduced the cost and improved the stability of the macadam, and made it easier to construct and to hold to an even surface under traffic.

Works in Heytesbury Area.—In July, 1930, 1,000 lineal feet of the Princes Highway at Stoneyford, consisting of rough waterbound macadam, was widened to 20 feet, and re-sheeted with scoria obtained locally; the scoria being consolidated by trafficking and dragging. This section did not ravel during the summer, but it became badly corrugated. With the advent of wet weather, however, it was readily brought back to a satisfactory shape by dragging. As a result of the experience gained from this experiment, it was decided to use scoria for widening and re-sheeting 1 mile of the Cobden–Pt. Campbell–Princetown road between Newfield and Port Campbell. The present road is of soft limestone 10 feet wide and from 3 to 6 inches thick over a very bad clay subgrade. As the existing metal surface was very irregular and weak a new foundation for the scoria was constructed by widening the existing limestone to 16 feet with 6 inches of loam and sheeting the limestone pavement with approximately 3 inches of loam, the loam being consolidated by grading and dragging under traffic. The loam which was obtained locally is of a fine silty nature, carrying traffic well when moist, but becoming very floury in dry weather. On this base was laid a surface course of scoria, 3 inches consolidated thickness; the scoria was spread in two layers each of 3 inches loose thickness and consolidated by trafficing and dragging. This work is standing up to traffic and weather very well, and it is proposed that eventually the surface will be sprayed. This type of construction is also being adopted for the surfacing of 0·85 mile of the Eastern Creek road; the existing formation being loamed to give 4 inches of loam over the clay formation and surfaced with 4 inches consolidated thickness of scoria.

A contract now in progress will complete the forming of the Port Campbell–Princetown road. The deviation of 2·15 miles through Glenample on this road was metalled 6 inches consolidated thickness over a sandy subsoil using local limestone, the bottom 4 inches being limestone of a granular nature and the top 2 inches of "milky limestone" which is a much rarer material thereabouts. It is anticipated that rain percolating through the surface will carry down sufficient lime in solution to eventually bind into a solid mass the granular lime, and in the meantime the milky stone surface will prevent unravelling in dry weather.

During the year, the metalling of the Laver's Hill–Princetown road was completed—a length of 2·45 miles across the Gellibrand River flats at Princetown being constructed in ironstone metal and the existing embankments raised, so that now the water will go over the road only in exceptional floods. Princetown is now connected to the railway at Laver's Hill with an all-weather road.

During the year large areas of Crown land in the Heytesbury Forest have been thrown open for selection by the Closer Settlement Board, in blocks of approximately 250 acres; the land being intended for dairying. To provide outlets to each block, 60·7 miles of road have been grubbed and cleared—the work being carried out by contract with State Unemployment Relief Funds. To distribute the work, it was let in 26 contracts of from 2 to 3 miles in length, and fortnightly progress payments made enabling groups of men with little or no capital to submit tenders. The procedure proved satisfactory, very low tenders being received, and the work was carried out expeditiously, only one successful tenderer failing to go on with his contract.

Head-quarters District.

Active co-operation of the Board's Inspecting Engineer with the Shire Engineers in charge of works has been maintained as far as possible throughout the district. Several works have been directly supervised, particularly those on which Unemployment Relief and Federal Aid Funds have been spent, both day labour and contract methods being employed.

The entrance to Geelong from the Inverleigh district is by a steeply graded and poorly alined road near the Australian Cement Company's works at Fyansford. Formation has been commenced on a graded deviation of this road between Aberdeen-street and the Fyansford bridge. Local unemployed were engaged and good progress has been made.

A length of 10 miles of the Geelong–Ballarat road, from a point near Meredith to Williamson's Creek near Clarendon was reconstructed and widened to 20 feet, also by day labour, using relief funds. Local gravel was used and the surface was sealed after consolidation.

A further 5,000 feet of the Geelong–Queenscliff road near Moolap was reconstructed with modified macadam, and 7,000 feet near Wallington with sand gravel sealed. Only 2 miles of this

road now requires reconditioning to give a smooth-surfaced road between Geelong and Queenscliff. Regular maintenance of the surface treated gravel previously completed is also performed under the Board's direct control.

On the Great Ocean-road a deviation was constructed and lightly gravelled between Airey's Inlet and Mogg's Creek along the sea frontage, making use of the new bridge over Airey's Inlet constructed by the local residents. This will shorten the distance between Anglesea and Lorne by approximately 3 miles.

In the Otway Shire a new road has been located from the Cape Patten main road at Skene's Creek to Tanybryn, on the ridge at the head of the creek. This road gives greatly improved access to Apollo Bay for the valuable land traversed, the development of which has been retarded by the steep grades and bad state of the old Forrest–Apollo Bay road. The formation has been completed by day labour from Skene's Creek to within 1 mile of Tanybryn, and many holdings served are now being improved.

Another day labour gang was employed in completing the formation of the Elliott River road between Apollo Bay and the Hordern Vale-road. A contract has been let for the forming of 0·8 mile on the Hordern Vale-road, near the Aire River. This will complete the grading of the road between Laver's Hill and Apollo Bay. Five miles of this route at the Laver's Hill end, in very sticky clay, have been sanded during the year. The sand is mixing well with the clay under traffic, and although at present the road is very badly cut up it is considered that further grading and mixing in the summer will stabilize the base and greatly improve the bearing power of the formation.

Similar work has been carried out on Kennedy's Creek-road for 2 miles near Kennedy's Creek. Seven miles of gravel were also laid on this road near Chapple Vale, where there is a cheese factory. A further 1·2 miles of gravel were laid covering the worst sections of the road between Chapple Vale and Laver's Hill. This road can now be travelled in any weather.

Between Kawarren and Gellibrand 4 miles of gravel were laid, joining the metalled road between Carlisle and Gellibrand with the hard road to Colac. The settlers at Carlisle and Gellibrand have thus for the first time an all-weather road to Colac.

Near Seymour construction of a new road from the Rocky Passes across the headwaters of Stewart's Creek to the Highlands School was completed, 3 miles being built during the year with relief funds, by day labour. A connexion was also made to the old Seymour–Dropmore road, allowing a rough steep portion of the latter to be closed. An extension of the new formation for 1½ miles beyond the Highlands School towards Caveat was let by contract.

Relief funds have also been used in the construction of a road to serve the Maintongoon Ridge, which lies parallel to the Delatite valley between Bonnie Doon and Alexandra. The old track left the valley at Johnson's Creek, and mounted a spur with a grade of 1 in 3. A length of side cutting of 2½ miles has been completed and the steepest part of the spur track thereby eliminated.

Further progress was made on the Eildon Weir–Jamieson road, which is being constructed on behalf of the State Rivers and Water Supply Commission to replace the old road along the Goulburn Valley between Eildon Weir and Darlingford. The various contracts for the formation were practically completed during this year.

Fine crushed rock has been found a very convenient and economical type of pavement on the main Dividing Range in the vicinity of Kinglake. On such heavy clay formations and with such wet conditions as occur there, the use of a fine grained type of pavement is very desirable, and as there is no gravel or suitable sand available, the hardest of the local sandstone has been used, crushed to about 1 inch maximum size. The road is now completed from Kinglake to the saddle of Mount Slide on the main Melbourne to Yea road. An adjacent portion of the latter road has been similarly re-sheeted with crushed rock, and the same material is being used in an extension of the surfacing of the ridge road 1 mile towards Toolangi.

Contracts for 5 miles of crushed rock on the Healesville–Toolangi road near Toolangi were also finished during the year, thus completing the paving of the Chum Creek deviation on that road. West of Toolangi, however, a pit gravel from the banks of the Yea River near Castella was available and was used in commencing the paving of the Toolangi–Kinglake portion of the road along the Divide.

In South Gippsland, the clearing and forming of the Callignee Estate was continued by day labour 2·8 miles towards the Traralgon–Yarragon road at the south end of the estate, and a contract has been let to complete this and to spread 2 miles of gravel obtained from the adjacent pits at Balook. Gravelling is also in progress at the north end of the road, and an all-weather outlet will thereby be provided from the end of the existing surfaced road at the bridge over Flynn's Creek near Dowling's up to Purnell's Saddle. The improvement of the holdings in the estate is proceeding rapidly.

In the Allambee Estate widening and re-alinement by day labour were continued on the old road along the upper valley of the Tarwin River for 3 miles, thus completing this

formation work from McDonald's Track near Moonlight Creek to Sagasser's-road. The portion of McDonald's Track across the eminence known as Worth's Hill between the Warragul–Leongatha and the Allambee Estate roads has been re-located. The formation was carried out by day labour, the length being 3·3 miles.

Formation of the Wild Dog Valley road system was continued by day labour for a total length of approximately 4 miles. Tenders have been accepted for bridges and approaches, and after construction of these the new formation will be completed from Strezlecki station to the existing surfaced road leading to Leongatha.

With unemployment relief funds good progress has been made in the construction of a very bad section of the Toora–Gunyah road on a new alinement around Mt. Fatigue northward from the end of the present settlement. The country traversed is steep and well timbered, but was at one time under grass and will doubtless return to productivity with improved access.

STATE HIGHWAYS.

Maintenance.—Owing to the curtailment of funds the extension of "black" surfaced pavements during the season was not sufficient to make the adoption of the truck patrol system desirable in the outlying sections of the Highways. The limits of this type of maintenance, referred to in last year's report, now extend as far as Port Fairy on the Princes Highway West, Drouin on the Princes Highway East, Kyneton on the Calder Highway and Tallarook on the Hume Highway. Maintenance by individual patrolmen, each responsible for from 5 to 8 miles of road, was otherwise general.

An exception is the organization on the Princes Highway East beyond Bairnsdale, where sections approximately 30 miles in length are controlled by each patrolman under whom are employed five or six men. The apparently heavy maintenance in this case is due to the extremely light nature of the gravel surfacing, often only 1 inch in thickness. To such pavements material must be added constantly in place of the occasional resheeting necessary where the pavement thickness is sufficient to reduce patrol maintenance to the work of keeping the surface in good order.

The use of graders and drags for shoulder maintenance has become more general but much has yet to be done to eliminate costly hand work in the maintenance of table and side drains. Diversity in design due to local conditions is the chief difficulty in the latter case.

The most important implement used in the maintenance of earth and gravel roads is the road drag. The type hitherto used has the advantage of light draught, two horses being required for an 8-ft. drag, but does not eliminate long swings in the pavement which are felt when travelling at the high speeds which are now general on the Highways. It is hoped to develop a light type of road planer which will be easy to pull and which will have the advantage of this type in reducing longitudinal irregularities.

Reconditioning.—Reconditioning carried out during the season consisted generally of raising the pavement to the minimum standard necessary to enable it to be surface-treated with bitumen or tar. The heaviest work necessary consisted in the construction of gravel pavements, the lightest in reshaping good earth formations preparatory to applying the surface treatment. The results of the latter type of work on long lengths have more than fulfilled the expectations arising from the success of earlier experimental sections.

On either gravel or earth, treatment with a heavy grader during the winter, followed by maintenance with a road planer, has been found essential to produce a pavement with good riding qualities. If the expenditure entailed by this preparation cannot be borne, it is not considered that sealing is generally justified, as the shape of the sealed pavement will probably be perpetuated by subsequent sealing or will have to be corrected by more expensive treatment such as a light "inverted penetration" coat.

Partly due to the earlier assumptions that spraying could only be successfully carried out in the summer, great difficulty has hitherto been experienced in applying the first seal to gravel pavements before those excellent riding qualities which are generally obtainable in the winter have been destroyed by the action of fast motor traffic in dry weather. This difficulty may be overcome in two ways:—By applying the seal coat before the traffic has destroyed the surface in dry weather, or by eliminating irregularities after they have occurred. The disadvantages of the former are that spraying has to be carried out in early spring when the weather is doubtful, entailing heavy overhead and plant charges. Difficulty may also be experienced in having sufficient plant to deal with all the pavements which may have arrived at the critical stage on the cessation of wet weather. It is felt, however, that by the use of softer bituminous materials the value of the seal coat obtained by spraying in cool weather is little, if any, less than that of applications made in the summer. The second method entails the use of plant which can cut the high areas off a corrugated but otherwise good riding surface. Considerable success has been obtained by the use of heavy long wheel base graders for this purpose hauled by "crawler-type" tractors. It is probable that in future a combination of

the two methods will be used, although it has been found that as much as possible of the first seal, particularly on coarse gravel, should be applied in the early spring before the road surface has been damaged. The preparation of surfaces composed of finer gravels which have not been sealed until they are affected by traffic should be undertaken by the use of cutting plant, such as heavy graders.

Many "black" pavements of which the riding qualities were considered satisfactory when the speed of motor vehicles was lower, are not sufficiently free from longitudinal irregularities for comfort at present speeds. While every effort is made to obtain freedom from irregularities in new work, attention is also being given to the elimination of such faults existing in pavements already surfaced. Two methods may be used. One is the application of a light coat of soft bituminous material to the pavement, followed by the construction upon it of a very light penetration wearing surface of $\frac{3}{4}$-inch–1-inch screenings one stone thick, the surface of these being levelled with a planer before penetration. The other consists of the construction of a very thin "mixed-in-place" surfacing on the existing pavement. The former will be tried during the coming summer. The latter was carried out successfully last summer on the Calder Highway in Korong Shire, where a very well graded creek gravel was available locally.

Traffic Counts.—Summer and winter traffic counts were taken on all the Highways. Figure 1 shows the increase in the total number of vehicles passing the census stations during twelve hours since regular traffic counts were instituted. In the same figure is shown the change in the total number of motor vehicles registered in the State annually during the same period.

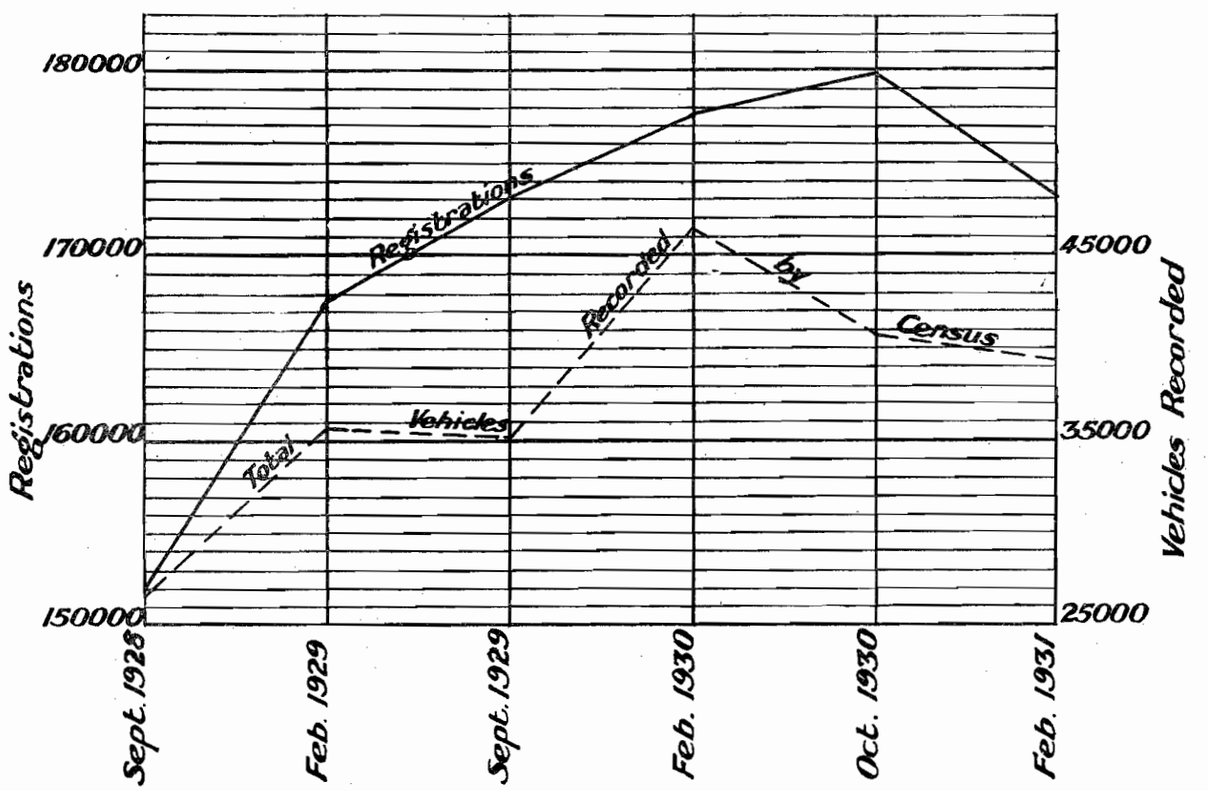


Fig. No. 1.—Graph showing variation in total registrations in Victoria, and total number of vehicles passing census stations, on the State Highways, for each 12 hour census taken since 1928.

Roughometer Records.—The last annual report referred to records made of the relative roughness of various roads by means of an instrument fitted to one of the Board's cars. The roughometer is bolted to the engine block of the car and measures the total movement, in the vertical direction only, between the engine and the front axle due to flexure of the springs while travelling over any length of road. It was fitted to a Morris Cowley car used principally in routine inspection work, travelling about 1,300 miles a month. Unfortunately the readings were not consistent, as it was found that if a survey of a section of road was repeated after a period of some months the results indicated a considerably greater change than had obviously taken place. As the instrument itself appeared to act perfectly the cause of the inconsistency was looked for in the other factors which influenced the readings.

Some of these are :—

1. Velocity of travel along the road.
2. Pressure of air in tyres.
3. Ratio of sprung to unsprung weight.
4. Elastic constants of springs.
5. Friction in the springs and at their supports.

Items 1, 2, and 3 can be controlled with a fair degree of accuracy, 4 is thought to be a function of age and use, but 5 is, with ordinary laminated springs, very variable depending on the amount of oil and rust between the leaves.

In order to eliminate this variable an old model " T " Ford car was purchased at a cost of £15 for use exclusively on this work and fitted with helical springs in front instead of the conventional laminated springs. The springs as constructed proved too stiff, but rather than get new ones made the front of the chassis was loaded up with two 100-lb. pigs of lead. These made the riding quality of the car about normal and also by increasing the sprung dead weight will considerably reduce the effect of small changes of live weight. The car was also fitted with an odometer reading to 0·001 mile, accurate to about one-half of one per cent. This is very necessary as it is frequently desirable to check up short lengths of construction work, and as the readings have to be reduced to " units per mile " a small error in distance affects the result appreciably. The general appearance of the car and method of mounting the instrument are shown in Plates 12 and 13.

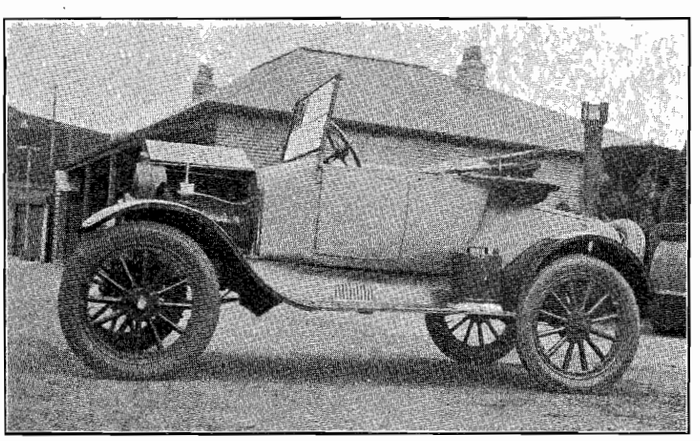


Plate No. 12.—Roughometer Car.

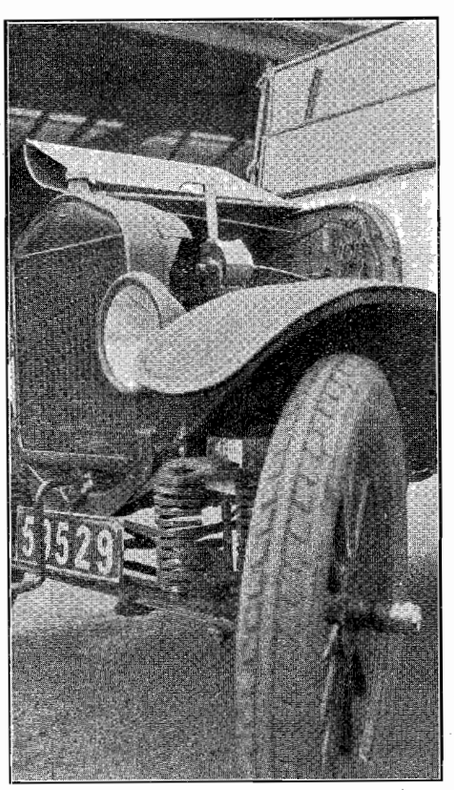


Plate No. 13.—Showing Roughometer mounting, springs and lead weights.

Although it was thought that a car constructed in this way would give constant readings it has been calibrated frequently by running over a series of one-inch planks. A short length of smooth road is chosen and a reading obtained in the usual way. Then five pairs of planks are laid down so that each wheel is lifted up one inch and set down one inch five times—a total of 10 inches. Another run is made over these planks and the difference in the two readings is taken to be the effect of 10 inches of roughness, that is the difference in reading divided by 10 is the coefficient to reduce the reading on the instrument to " units ".

Shortly after the car was completely assembled the Western Highway between Melton and Deep Creek was sprayed, and opportunity was taken to check it before and after spraying to see if the surface was improved or otherwise. The result indicated that the roughness had increased, and accordingly it is proposed to make certain changes in spraying operations which it is hoped will prevent this increase in roughness. This result was contrary to expectations, and it is thought it may be due in part to the spraying having been carried out very late in the season, when the weather was too cold to permit proper incorporation of the screenings with the bitumen.

A series of tests has been made to find out the effect of speed and tire pressure on the readings. The results are shown graphically in Fig. 2. The peculiar increase in reading at 22½ m.p.h. is probably related to the natural period of vibration of the springs. The effect of

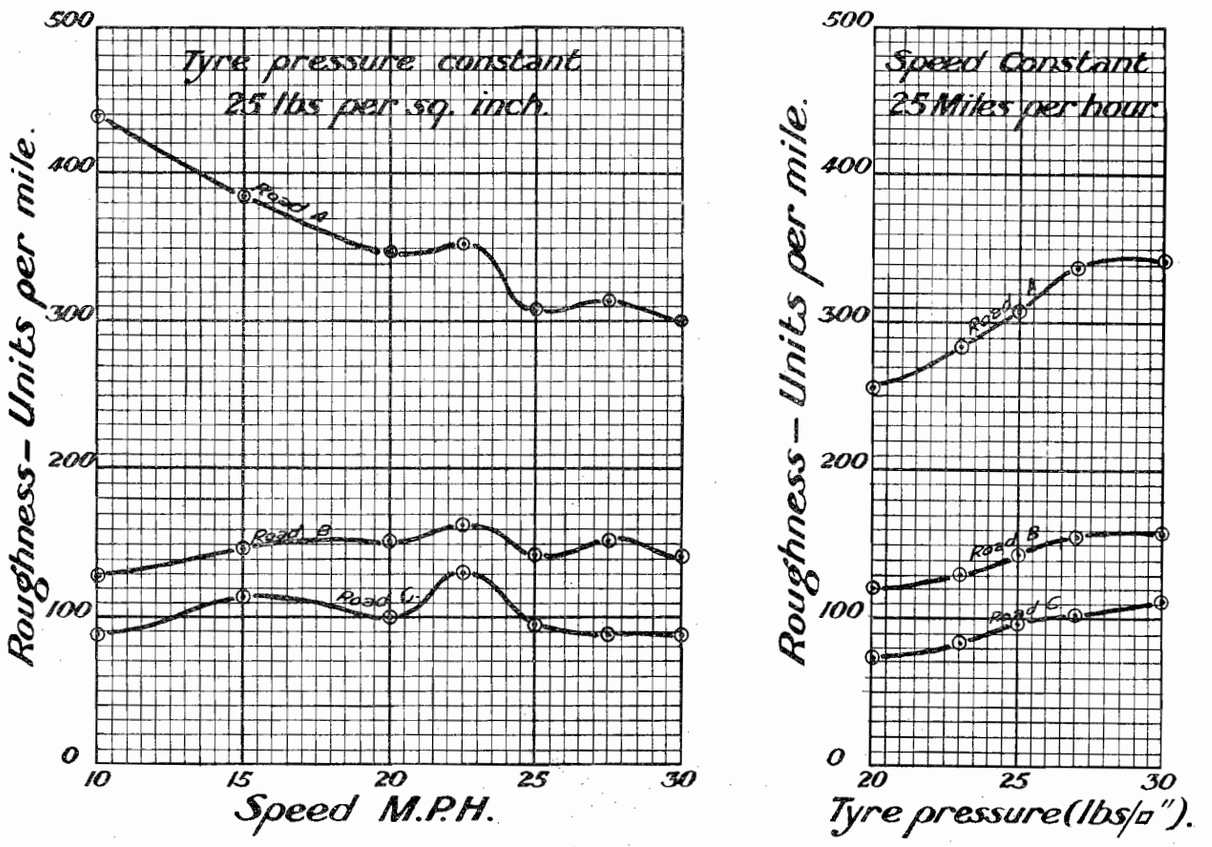


Fig. 2.—Effect of Variation of Tyre Pressure and Speed on Roughometer Readings.

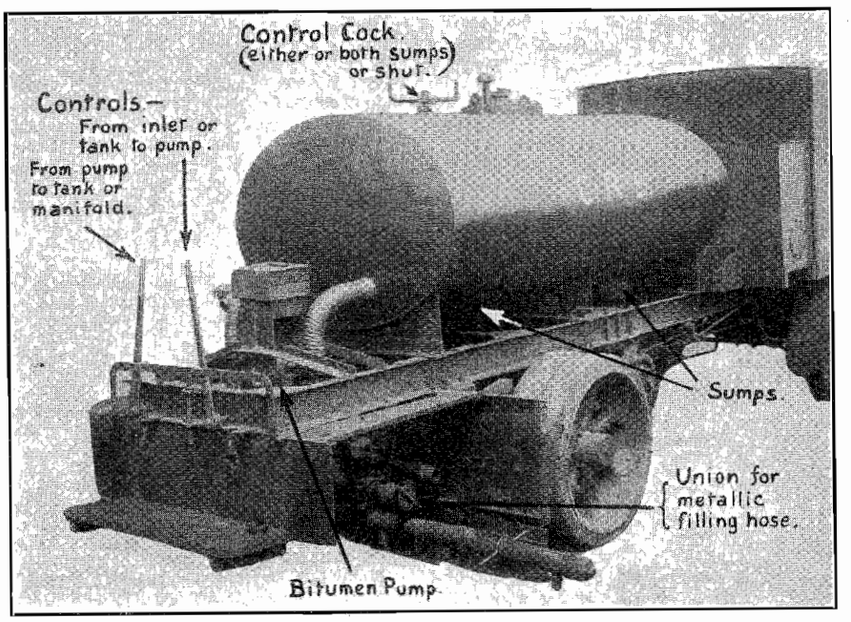
tire pressure is so important that a special tire gauge by which the pressure can be accurately determined to one-fifth of a pound per square inch has been devised. The best type of commercial gauge is neither precise nor accurate enough for this work.

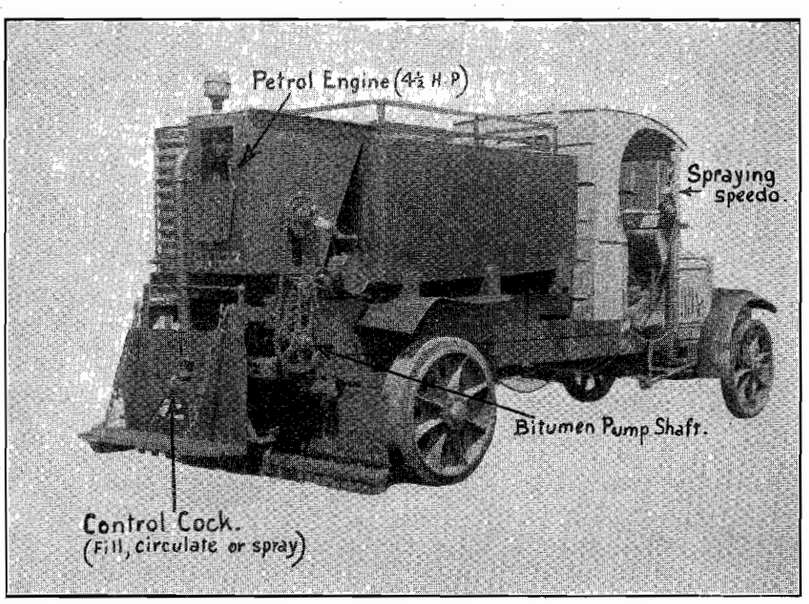
BITUMINOUS SURFACING OF ROADS.

During the 1930–31 season the plant operating for the mechanical distribution of bituminous materials was as follows :—

Units.	Sprayers.		Heaters.		
	No.	Type.	Size.	Type.	Remarks.
800-gal...	6	Steam lorry chassis. Pump driven from transmission	800-gal.	Wood-fired	Two per sprayer
400-gal...	5	Thornycroft chassis. Pump driven by independent " Lister " engine	400-gal.	Oil-fired ..	Two per sprayer
300-gal...	5	Tractor or roller drawn sprayer. Independent engine driving pump	300-gal.	Wood-fired	Three or four per sprayer depending on works

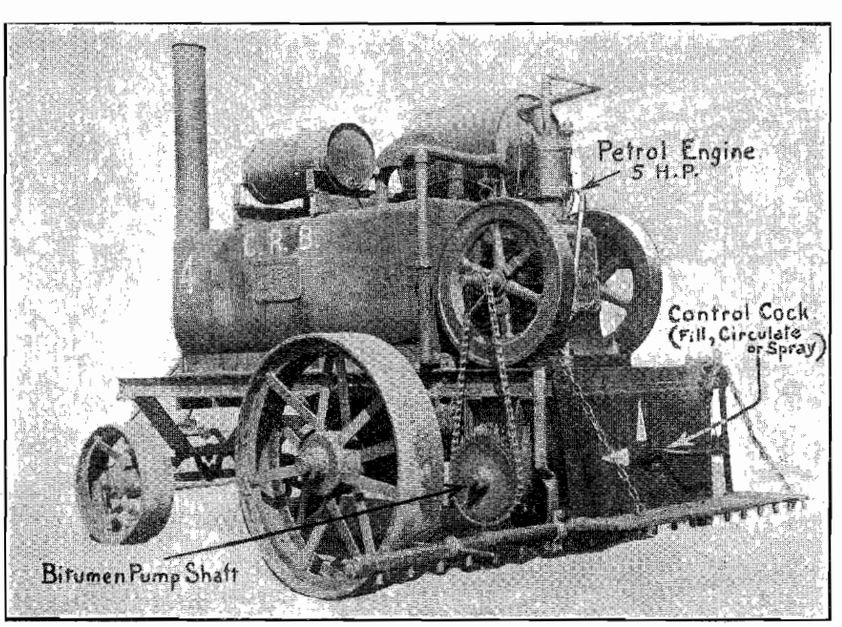
800-gallon Tank.





400-gallon Tank.

300-gallon Tank.



Plates Nos. 14, 15, and 16, illustrating the three types of sprayers.

Of the six 800-gallon sprayers, two were new machines replacing 800-gallon sprayers Nos. 1 and 2 which had been used for sixteen years. Two new Leyland steam lorry chasses were purchased, and on one the tank and equipment from sprayer No. 1 were mounted in the Board's workshop. On the other chassis a tank of oval cross section and spraying gear were mounted by contract. Both these machines have given excellent results, and as the new chasses were purchased at greatly reduced valuations, these units were completed at a very low cost (£605 each).

The five 400-gallon sprayers mounted on Thornycroft chasses have again demonstrated their usefulness and mobility. Four more 400-gallon oil-fired type bitumen heaters were obtained, so that with the six heaters previously obtained, each sprayer could be equipped with two heaters. These heaters, which are of local manufacture, are equipped with a steam injection type of burner, the steam being generated in a coil which surrounds the flame. The fuel may be either cold tar, tar oil, or fuel oil. After the experiences of the previous season, modifications in the burning system and the provision of sufficient spares have made these heaters very satisfactory in operation. As the heating time has been reduced by the use of oil firing, a greater output per day per heater is obtained than with wood fired heaters. The output of the sprayer is thus increased without additional heaters, the heating plant being kept also at such a size that the whole unit may move together when transferring from one work to another. Tests which are detailed hereafter have been carried out to determine whether it is desirable to fit oil burners to the Board's 800-gallon bitumen heaters.

The lengths treated by the sprayers and the respective costs are shown in the following table :—

—	Single Coat.			Double Coat.		
	Length.	Total Cost.	Cost per Square Yard.	Length.	Total Cost.	Cost per Square Yard.
	Miles.	£	*d.*	Miles.	£	*d.*
Six 800-gallon sprayers	74·5	16,804	4·96	83·0	31,714	9·79
Five 400-gallon sprayers	42·4	9,660	5·26	126·9	47,902	9·33
300-gallon sprayers	..	..	..	22·2	9,545	9·76
Totals	116·9	£26,464	..	232·1	£89,161	..

349 miles treated at a total cost of £115,625.

During the past season, owing to the curtailment of works, several experienced overseers were available, and the services of these overseers were made available to municipalities to assist them in carrying out works with the Board's spraying plants. Figures for the percentage of time spent under various headings during the last five seasons are shown in the following table :—

800-GALLON SPRAYER EFFICIENCIES.

Year.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.
Spraying	36·7	40·4	37	35·7	47·5
Moving	22·4	22·1	24	28	21
Wet weather	13·2	16	16	12·4	10·5
Holidays	4·3	6·6	7	6·9	8
Mechanical delays	5·3	4·9	3	3·5	4
Avoidable delays*	18·1	10	13	13·5	9

* No bitumen, no screenings, road not prepared, long lead, &c.

These figures have been calculated on the total time the sprayers were away from the Board's storeyard, and the rated output has been taken as four loads sprayed per day. For the past season, the percentage of time spent in spraying has been increased by approximately 10 per cent. due to the reduction of avoidable delays and to reduction of time spent in shifting. Until all municipalities have secured overseers experienced in the use of plant, it is, therefore, proposed to make available to the municipalities overseers trained by the Board in organizing and carrying out mechanical spraying.

Materials.—Extensive use was made of local tar products which had been developed and used experimentally in the previous year. So that information might be gained as to the ultimate life of these products, efforts have been made to develop an accelerated weathering test, and speciments of various bitumens and tar products were exposed in thin films to heating in a humid atmosphere and to intense light. The apparatus used has been an open-flame type carbon arc

lamp to generate the light, and the material under test is spread in a 0·5 m.m. film in a humid chamber and maintained at a temperature of 150° F. for twenty hours. An attempt has also been commenced to measure the surface tension of bituminous and tarry material in an endeavour to use the relation between this property and adhesiveness.

Extensive use of cold tar for primer coat work and modified macadam, and of light tars for mixed in place work has been made, and tar flux oil has been used for fluxing bitumen.

The grading limits for covering materials as set out in last year's Report have proved satisfactory. In use, one cubic yard of screenings or gravel covers 80 square yards of surface when bituminous application is at 0·3 gallons per square yard. In some areas scoria has been used for covering material, and is suitable for light traffic roads, although the wearing qualities of this material are less than those of gravel or screenings. Generally 1 cubic yard of scoria is used to cover 45 square yards of surface when the bituminous application is at the rate of 0·3 gallons per square yard.

Heater Tests.—As the maximum output of an 800-gallon spraying plant is determined by the output of the heaters, the efficiency of the plant could be increased if the time of heating could be reduced sufficiently to provide one extra load per heater per day.

Tests in the Board's storeyard have been carried out, using wood firing, briquette firing, and oil firing. These indicate that the fitting of an oil-burning system can save over one hour in heating time, which would permit one extra load per heater daily.

Fuel.	A. Initial Temperature of Solid. °F.	B. Temperature when all Material Melted. °F.	Time taken A—B.	Amount of Fuel used.	Remarks.
Wood, stringybark ..	79°	375°	3 hrs. 50 mins.	652 lb. 25 c. ft.	Approx. 680 galls. bitumen
,, box	67°	385°	3 hrs. 50 mins.	572 lb. 16 c. ft.	Approx. 680 galls. bitumen
Briquettes	86°	400°	3 hrs. 40 mins.	516 lb.	
,, ...	84°	350°	4 hrs. 0 mins.	390 lb.	Reduced grate area
Fuel oil	78°	384°	2 hrs. 35 mins.	14·7 gals.	Approx. 665 galls. bitumen

The heater to which the oil burner was fitted was equipped with two 6-in. diameter return tubes in addition to the side flues, while the heater used for the wood and briquette tests had only side return flues. Further tests are being carried out to determine the effect of fitting return flue tubes to wood-fired heaters. The estimated saving by using two oil-fired heaters instead of wood-fired heaters with an 800-gallon sprayer is £22 per heater per year. This does not take into account any saving in labour costs on the road owing to less slack time between trips of the sprayer. During the coming season one sprayer will be equipped with two oil-fired 800-gallon heaters, and the performance of this unit will be compared with the other units using wood-fired heaters. Accurate information on the saving possible will thus be gained, and the desirability of converting the remainder of the Board's 800-gallon heaters can be considered again before the following spraying season.

Jet Tests.—Until the spraying season 1929–30, the Board's spraying plant was fitted with manifolds, from which the bitumen was sprayed on to the road surface by a single row of twin-hole jets. Certain of the seal coats applied by this method were poor, and resealing had to be carried out sooner than would have been necessary had the distribution of the material been uniform. During the last two seasons the sprayers have been fitted with intermediate jets placed at a slight angle so that the spray of a jet on the ground overlaps those on each side of it for half the width of each spray. Improved work has been carried out with this arrangement, but the results have not been entirely satisfactory. No information on the design of jets to obtain uniform distribution with material of the viscosity of bitumen is known to be available. Tests have therefore been carried out in order to obtain the following information :—

1. The distribution of the material in the spray from each jet.
2. The effect of pressure and the viscosity of the material on the discharge and distribution of each jet.

After testing many jets it has been found that good distribution and the least variation under varying pressures were obtained with a type of slot jet which is used extensively in the United States of America. This has the important advantage of one large single hole. Curves showing the distribution obtained with various types of jets are shown at end of report in Figs. 3, 4, 5. Following these tests the Board's 300-gal. and 400-gal. sprayers, with which the rate of application can be varied by changing the road speed, are being equipped with slot jets of

the size shown in Fig. 3. The extension of their use to the 800-gal. sprayers, in which the pump is connected directly to the transmission, will be postponed until it is known whether sufficient variations in the rate of application can be obtained with the existing gear ratios and by taking advantage of the variation of pump efficiency with pump speed. If this is not successful, the behaviour of various sizes of slot jets will be investigated.

BRIDGES.

During the year 111 bridge and culvert projects were investigated. Of these 59 were proposals from shire councils submitting plans and specifications for new works, and the remainder were on the roads under the direct control of the Board. Plans and specifications were prepared for 48 works, which ranged in magnitude from single-cell reinforced concrete box culverts to steel and concrete bridges up to 750 feet in length. The aggregate length of all bridges for which plans were prepared by the Board's staff was 2,545 feet.

The use of electric arc welding as a medium of steel bridge construction has been investigated. Tests indicate that when arc welding is properly done the result obtained is preferable to riveted work because the paint maintenance costs are considerably reduced by the absence of rivet heads. The saving in weight due to the absence of rivet holes is as much as 20 per cent. for highway structures. The welded trusses used in the bridges at Pyke's Creek (see 16th Annual Report) and Sunday Creek (see below) were satisfactory in every respect, and further welded steelwork for the important bridges over the Tambo and Snowy Rivers is now in hand. For bridge work a factor of safety of 6 has been fixed on the weld strength determined by actual test welds. It has been found that there is no difficulty in securing reliable work and that poor work can be seen by inspection. It is interesting to note, however, that work which is obviously very poor still possesses high strength, and one test weld which would have been rejected on sight was strong enough to give a factor of safety of 4, i.e., two-thirds the strength of good work.

During the year the specification adopted by the Board in 1926 for the design of bridges on Board works was revised in the light of local and foreign experience. Particularly during the last decade there has been a much greater tendency to replace the older empirical formulae by more direct mathematical calculations. This tendency leads to very complicated calculations, and frequently, due to the complexity of the mathematics involved, it was necessary to make a series of rather doubtful assumptions which, unless carefully checked by other means, could produce quite incorrect results. The development of the use of scale models with special apparatus by Professor Beggs in the United States of America, provided a means of simplified working in which the most involved problems in indeterminate structures can be simply solved with very great accuracy so that the absolute forces and stresses can be determined. The necessity for the greater accuracy in determining the stresses in structures is apparent from the study of simple timber stringer bridges. The older empirical rules usually adopted provided that the stringer concentration to be provided for was one line of wheels per 4 feet width of bridge width. With the old standard timber bridge construction of stringers spaced at 3 ft. 9 in. centres and cross decking, this meant that each stringer was designed to carry 94 per cent. of a line of wheels. Experiments on a bridge 22 feet wide, with seven stringers having a span of 30 feet, were made, using a deflection measuring apparatus consisting of Ames dials under four stringers at a time. The actual maximum concentration on the stringers did not exceed 35 per cent. of a line of wheels, for decking in good condition. This reduction is due to the distributing effect of the deck planks, a factor not included in the older formula. If such great errors can exist in the calculation of the simplest of all types of bridge, the necessity for further investigation into the actual distribution of forces of more complex structures is urgently required so that the " factor of ignorance " may be considerably reduced. As opportunities occur, tests will be made on the various classes of structures with this object in view.

An intermediate type, between the microscopic method of models used by Professor Beggs and the full-sized actual deflection tests as used for the timber bridge mentioned above, is that used as a check to the distribution of load concentrations for the Swan Reach bridge. Pine pieces were modelled with physical characteristics to scale. As, unfortunately, the Ames dials take an appreciable force to make them register, use was made of a micrometer between two contacts in an electric circuit to determine the deflections under the model girders. By such an arrangement the concentrations on the girders for several systems of cross framing were readily computed and complete influence diagrams readily plotted. The results of these readings on the scale models will be checked on the actual structure when it is completed.

Those bridges which are different from standard construction or are important because of their size are described hereunder.

Sunday Creek.—This crossing is situated about 2 miles south of Seymour, on the Hume Highway, near where the creek joins the Goulburn River. The first known bridge at this site was erected in 1850 and consisted of 40-feet spans with strut and straining piece construction to enable the timber stringers to span this length. This structure was replaced by a second bridge with three 62-feet timber truss spans and three approach stringer spans, in 1893. As the second bridge was only 13 feet wide, had sagged very considerably, and was no longer capable of carrying the legal load limits, it was replaced during this financial year by a new bridge which is shown in Plate No. 1. Detailed bores over the site showed that rock extended all over the area at a depth of 16 feet below low water level, and all foundations were sunk to this level. A continuous superstructure, being the most economical, was adopted, and the span lengths were fixed at 52 feet in each of the end spans, which were unrestrained at the abutment. The two centre spans were made 65 feet. Due to uncertainty of cost in the construction of the piers which were in the stream channel, this portion of the structure was built by day labour under a resident engineer. The main supporting girders were designed as welded trusses, but alternative tenders were invited for riveted plate girders. The lowest tender was for trusses and was accepted. The trusses had a depth of only 5 feet, as this was found to be the most economical depth and was quite stiff enough considering the continuity of the spans. The truss chords consisted of pairs of angles with a space of 6 inches between them. The vertical compression members, which consisted of rolled steel joists of 6-in. by 8-in., 6-in. by 5-in., and 6-in. by 3-in. sections, were welded to the chords and extended between them almost to the top outstanding angle. The diagonal tension members were pairs of flats welded to the outsides of the vertical legs of the chord angles. Splices were arranged at the quarter points of the span where the stress is always low, and consisted of flat plates connected to the truss members by tightly driven turned bolts into drilled and reamed holes. There are three lines of trusses spaced at 8 ft. centres and connected together by means of stiffeners at every second panel point. As white lead, zinc oxide, and linseed oil paints have been found to be disappointing as a protection to steelwork, an experiment was made on this bridge with an aluminium paint. The paint consisted of 4 lb. aluminium dust per gallon of raw linseed oil, with one pint of drier added. The paint was applied as a top coat over two coats of red lead and linseed oil mixed in the proportions of 28 lb. red lead to 1 gallon of raw linseed oil, no drier being added. The result of this experiment will be watched and reported at a later date. The deck of the bridge consists of a concrete slab with provision for expansion at the piers. The wearing surface, or pavement, consists of an extra inch of concrete of the same mix as the structural deck, and placed at the same time. The concrete was placed in longitudinal bays of from 16 to 25 feet between the steel-covered timber templates. Concreting commenced at one kerb for the full length of each section, and was gradually extended across to the other kerb. The concrete was placed slightly above the level of the templates and brought down to the proper level by means of a heavy longitudinal screed which followed up the placing of the concrete. Alternate bays were completed between finished sections, using the completed sections as templates. During the earlier life of the bridge the extra concrete thickness is available to reduce the stresses from loads, and long before the surface is worn down to the theoretical deck thickness, the concrete strength will have increased to much more than the 28-day strength, which is usually used as the criterion to determine design strengths, A departure from the previously used parapet details was made in providing chain mesh in place of the precast dado sections between posts and coping. The mesh is strained up in any desired length with the base in a groove left for the purpose in the kerb. Forms are placed on each side of the mesh. The height of the parapets was reduced from the previously used height of 4 feet above deck level to 3 ft. 6 in. The reduction creates the desirable optical illusion of added width and encourages traffic to keep to the proper traffic lane rather than to keep as close to the centre as possible. The total cost of the bridge proper was £6,396. The cost per square foot is just under 25s. and the cost per lineal foot of bridge, 22 feet wide, is £27 2s. The piers were constructed to provide for widening the crosshead on each side to accommodate another truss when the bridge requires widening at some future date.

Swan Reach.—Preliminary steps were taken to replace the high-level bridge over the Tambo River in section 4 of the Princes Highway East. The original bridge was constructed some years before the Board was constituted, and consisted of four 60-ft. long timber trusses, four stringer approach spans, and a central lift span, as in those days the Tambo River was the main outlet for all trade from the Bruthen and Omeo districts. The supports were driven timber piles, and in December, 1925, the structure collapsed through failure of the piles at water level due to attacks from *toredo.*

Since that date, traffic has been provided for by a temporary low-level bridge. Tenders were called for the construction of abutments and piers for the new bridge in 1930, and these were completed in May, 1931. The new substructure was designed to take advantage of the limiting span of broad-flanged beams and provided for six spans of 62 feet each, with a short span of 40 feet clear between supports, which can be converted into a lift span should river traffic ever warrant it.

Extensive bores down to a depth of over 60 feet showed that the river bed and banks consisted of alluvial silt. The bridge, therefore, could be supported only on driven piles. The total number of piles required for the foundations is more or less fixed irrespective of span length of the superstructure, since the weight to be supported consisted primarily of that of the deck and traffic, and this is varied only to a minor extent by the actual weight of the girders or trusses.

As the total cost of the substructure was largely independent of the span length, the greatest economy would result from the use of the shortest span, which would be sufficient to discharge the floating debris during flood times without endangering the structure. The general form of the piers is shown on Plate No. . The design provides for the use of composite timber and concrete piles supporting a reinforced concrete pier, which extends only a short distance below water level. The form of the piles is that developed by the Melbourne Harbour Trust Commissioners, and provides a strong joint between the timber and concrete portions. The timber piles are dressed at the top to give a small clearance inside the hollow base of the concrete piles. To reduce the maximum weights to be lifted during construction, the timber pile is driven first separately till the top of the pile is about 5 feet above water level, at which stage it is self-supporting. The concrete top pile is then lowered over the timber pile and the joint made with cement mortar, using a band of folded hessian to retain the mortar. The hammer is then rested on the concrete pile and this settles the pile down fairly well on to the timber top. A very few light taps of the hammer are then given to complete the settling process, during which any excess mortar is forced out through the hole provided for the purpose. Driving is then continued in the ordinary way immediately, and the concrete top and the timber base piles are driven as one unit. The maximum length composite pile driven was nearly 90 feet, of which two-thirds was timber.

To prevent trouble from *toredo*, the concrete piles were driven about 6 feet into the bed of the river, and the tops of the timber piles were protected by a layer of copper sheeting. It might be noted that in the old bridge the attacks were confined to the section of the piles from low-water level downwards for only about 4 feet, and that those portions of the piles below this level were in perfect order. This factor was not relied on in the design, but it should give additional security and fully justify the design actually adopted.

It is of interest to note that the pile-driving formula usually used to determine the relationship between bearing capacity of the pile and its penetration during driving gave very variable results. In any formula which is fundamentally sound, different pile penetrations under varying heights of fall of the hammer should for the same pile give equal values to the safe bearing load. The tests made by the Resident Engineer showed, however, that the calculated bearing load on the pile could be increased by 50 per cent. by doubling the drop of the hammer. This result is attributable in part to the energy absorbed by the timber packing in the helmet on the concrete pile, and in part to the nature of soil resistance.

As recently pointed out by Professor Terzaghi in United States of America, the resistance to driving of piles through water-saturated silt is partly due to toe resistance and partly due to the skin friction of the pile. The former is mainly from the force required to squeeze water out of the silt below the toe of the pile. As time is an essential element in the removal of water from such fully saturated silts, it naturally follows that there are large differences in the effects produced by a blow and by the static load which the pile will ultimately have to support. The momentary resistance to squeezing out the water is many times that actually existing under static conditions. On the other hand the expelled water under pressure may escape up the sides of the pile and thereby considerably reduce the value of the skin friction during driving. Accordingly, no great reliance is placed on the pile formulae, and in the present elementary state of foundation science reliance has been placed on the known supporting values of piles driven under similar soil conditions. To enable some data to be secured for use in similar circumstances, accurate settlement figures from the superstructure load (steel girders and concrete deck slab) will later be ascertained, and the physical characteristics of the soil recorded.

The present economic situation has caused a revision to be made in the design for the girders, and a contract for the girders was advertised on the basis of fabricated plate girders to avoid the importation of the foreign-made broad-flanged beams. It was found that by careful design of a cantilever and suspended span system the weight of steel could be reduced sufficiently to obtain satisfactory girders made of Australian produced materials except for the web plates. The girders will be electrically arc welded, with a saving of weight of approximately 15 per cent. on riveted girders, and of 35 per cent. on broad-flanged beams. It is anticipated that the new bridge will be completed during the financial year 1931–32.

Snowy River.—A contract was completed for the reinforced concrete piers and abutments for a bridge over the Snowy River, on the Bonang–Gelantipy road. The total length of the bridge is 750 feet from centre to centre of abutment rockers, and consists of two end spans of 105 fee each, and four central spans of 135 feet each. All foundations are on solid granite, which outcrop

over the central 350 feet of the site and is found at depths up to 15 feet over the remainder of the site. The piers consist of a concrete core 4 feet in diameter, hooped with steel and with vertical reinforcements. Outside the circular core, the concrete is octagonal, except that one face is omitted and the adjoining faces are produced to form a 90-degrees cut water, which is protected by a steel angle.

The bases of the piers are 8 feet square. Although uplift is avoided for all normal forces on the piers, a series of 1 inch diameter bars is grouted into holes carried down 5 feet into the solid granite. Abutments consist of tied box sections with the tie supported to carry earth loads as a propped beam. A construction photo of the site is shown on Plate No. 17.

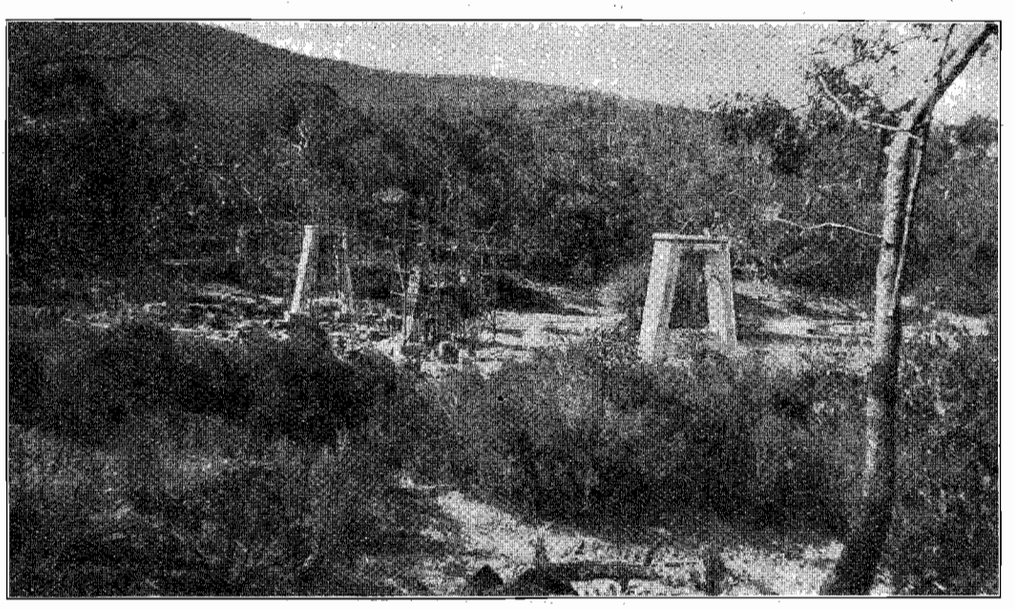


Plate No. 17.—Substructure, Snowy River Bridge.

Merriman's Creek.—A departure from previous practice has been made for some special bridges where local conditions such as floating timber or difficulty of stream foundations, required a longer span than that obtainable with either simple stringer or rolled steel joist construction. Previously the standard method was to use a timber truss, and standard designs were prepared for trusses of 60 feet and 80 feet spans. The objections to such structures are the relatively large cost with respect to first cost and maintenance, and also the inherent defects of rotting at the joints, and shrinkage of timbers resulting in sagging. To overcome the difficulties a type of structure shown in Plate No. 7 has been used at three appropriate sites. This particular structure has a clear span of 66 feet and is essentially similar to a two-span timber stringer bridge except that the usual centre pier is replaced by four round timbers and two round steel hangers. Contracts let for three such structures indicate that the extra cost is approximately £40 to £50 greater than if a centre pier of driven piles were used, and is actually less where submerged rock would necessitate coffer dams for setting the bases of the piles. The additional cost of a timber truss bridge of 66-ft. span would have been approximately £400. No experience is available on the maintenance of these structures, but it is considered that the framed portion should outlast the remainder of the structure. Replacement of any part can be performed by propping the centre of the bridge during favorable weather and stream conditions. Adjustment for sagging is extremely simple and may be done by screwing up on the centre hanger.

Big River.—In the construction of the Eildon Weir–Jamieson road, in the shire of Mansfield, it was necessary to bridge the Big River at a crossing upstream from the submerged township site formerly known as Darlingford. As the dead water stored by the Eildon Weir normally extends for some miles up the Big River, the site for the bridge would have been fixed by the relative costs of a long bridge with foundations in the deep water, relatively expensive, but on a short route across the Big River Valley, and a shorter bridge some miles upstream where the stored water was shallow, but which included 13½ miles extra roadwork. However, after the partial failure of the Eildon Weir it was necessary for all stored water to be released, and hence the cost of a bridge near Darlingford could be reduced to such an extent that this crossing was the more economical. The foundations were started when the water was confined to a narrow deep channel, and the substructure was brought up as quickly as possible to keep the work above the rising water during the storage which followed the strengthening of the weir. The bridge is 240 feet long and consists of six spans each of 40 feet. The supports are reinforced concrete piers having a maximum height of 55 feet. The beams consist of three lines of 24-in. rolled steel joists. The

deck is of timber and is laid with the planks parallel to the axis of the bridge on cross beams which cantilever out on each side beyond the outer lines of girders. The bridge is shown on Plate No. 18. On the same road nine other timber bridges were constructed over the smaller tributaries of the Goulburn River crossed by the road.

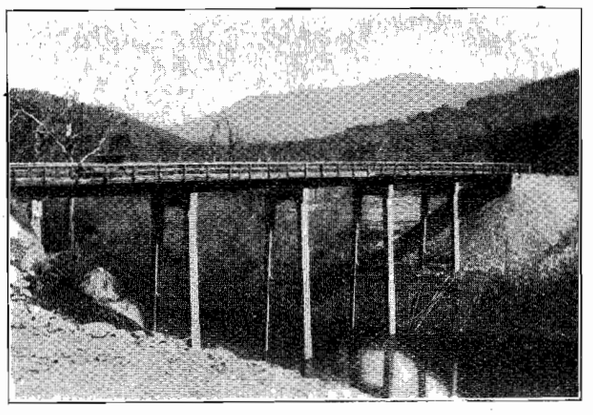


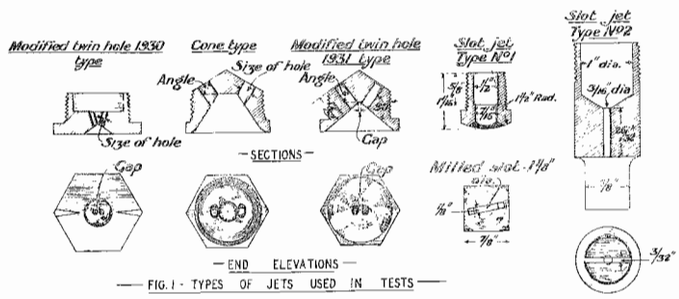
Plate No. 18.—Big River Bridge.

Loddon River at Bridgewater—Calder Highway.—The superstructure of this bridge was reconstructed during the year. The old bridge was built approximately 60 years ago, and except for the decking and some stringers, was in fair order. As no alternative crossing exists within many miles of this site and as the construction of a temporary bridge would have been very costly because the river at this place is 300 feet wide, due to a weir downstream, the work on the superstructure was done in half widths. The method adopted was to cut off all decking at the outer edge of the centre stringer and construct a temporary kerb on this line. Three lines of stringers were then put into place in the stripped portion, using the old stringers as far as they were sound. Half-length crossbeams were placed over these stringers, and decking and kerb completed, and traffic turned to the completed half. The use of longitudinal decking, as described in the last annual report, greatly facilitated the operation, as the decking for the half width was laid completely in position without the necessity for double handling or using half width decking. The total cost of the new superstructure, 20 feet wide, was £2,000.

Narrow Bridges.—The improved surfaces and alignment and increased formation widths of roads, and the general increase in normal speed of traffic, have intensified the danger which exists at narrow bridges. Those structures, which are intermediate in width between the requirements of a single traffic lane and double traffic lane, call for particular attention. Where such structures are in reasonably good order it is economical to widen them. One such structure on the Hume Highway, near Chiltern, was a reinforced concrete girder bridge of 25 feet span, only 14 ft. 6 in. wide. An " S " curve had been introduced into the approaches to give a square crossing to the small stream. The curve has now been eliminated and the bridge widened to 24 feet. The old galvanized pipe handrails were necessarily taken down, and on the new work more substantial reinforced concrete handrails were erected. Another narrow bridge, that over the Werribee River on the Western Highway, near Ballan, was the scene of several accidents. This structure was widened with timbers available from the old bridge, which had been dismantled when the Pyke's Creek Reservoir was raised. The original width of 14 feet was increased to 24 feet. On the Princes Highway East narrow bridges were widened at Springvale, at Pakenham, and over Eumemmering Creek near Dandenong.

Yours obediently,

L. F. LODER,
Chief Engineer.



— FIG. 1 - TYPES OF JETS USED IN TESTS —

— VICTORIAN COUNTRY ROADS BOARD. —

Tests of lateral distribution of water and tars of various viscosities from jets used on mechanical sprayers.

Jets either single, or a series on a manifold, discharged into a box divided into compartments 1½ inches wide. Depth in each compartment has been plotted vertically. Horizontal divisions represent compartments.

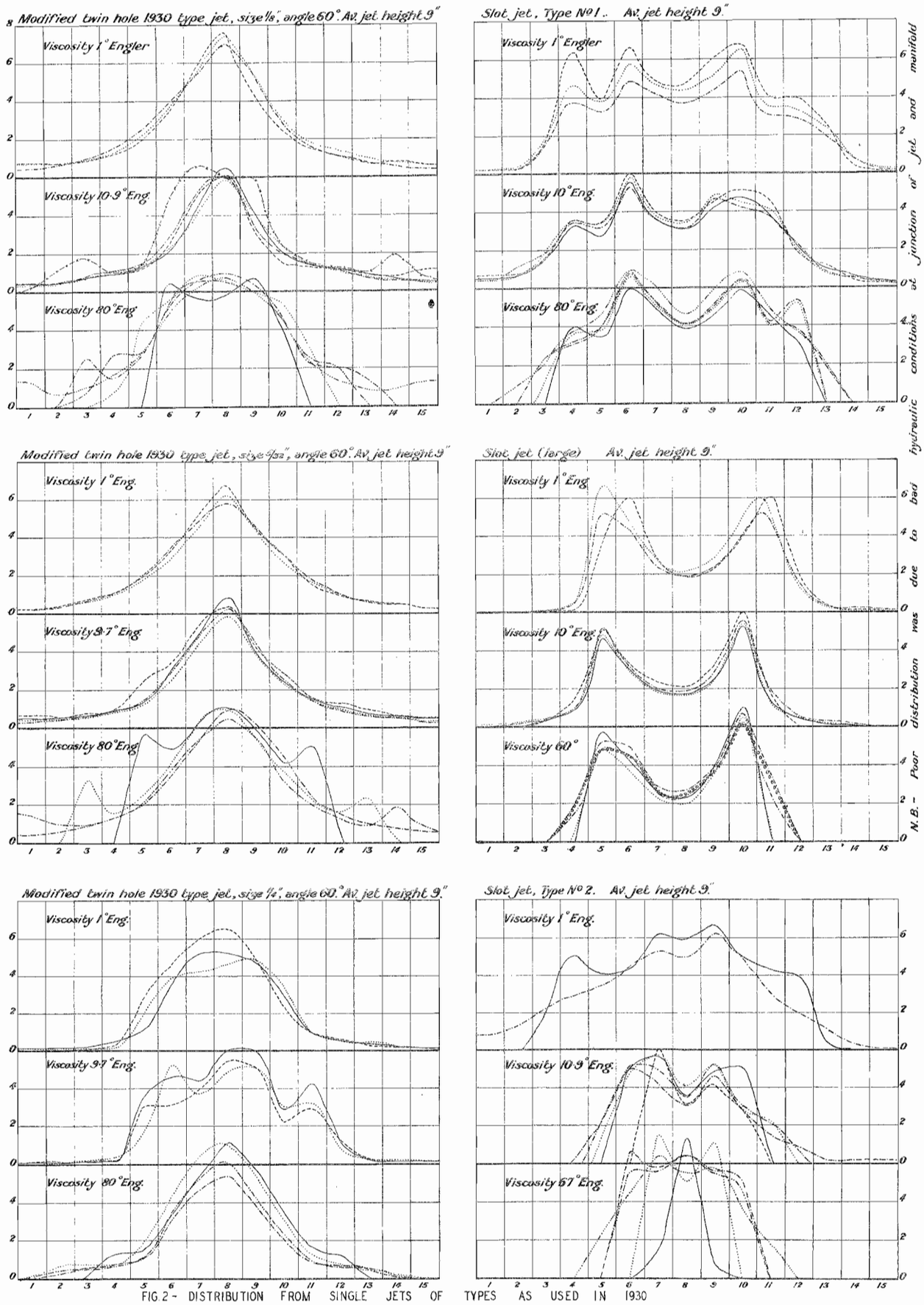


FIG. 2 - DISTRIBUTION FROM SINGLE JETS OF TYPES AS USED IN 1930

FIG. 3

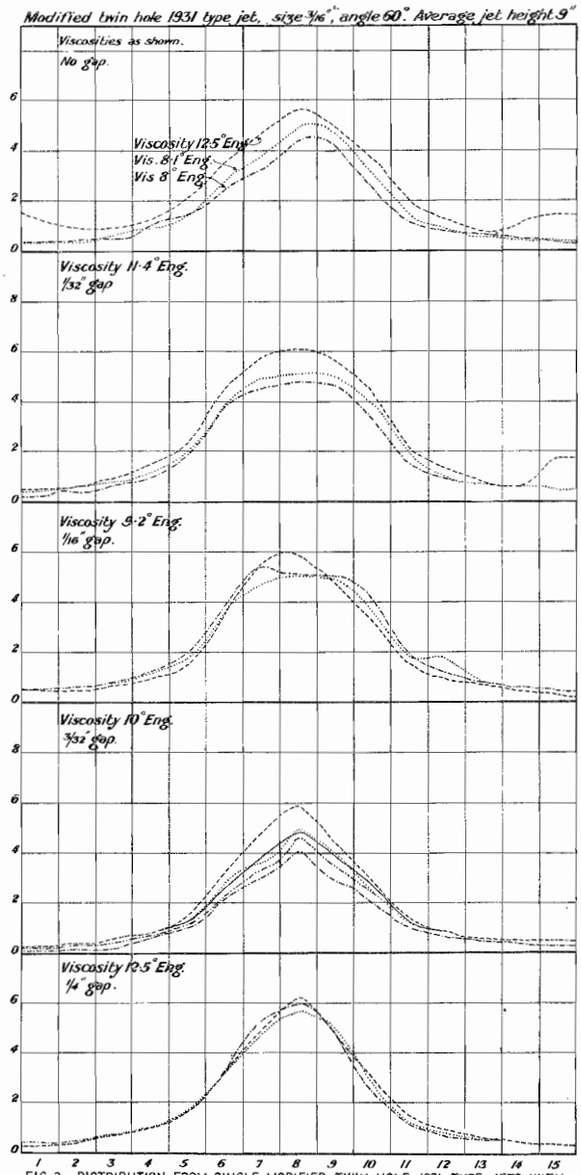


FIG. 3 -DISTRIBUTION FROM SINGLE MODIFIED TWIN HOLE 1931 TYPE JETS WITH VARYING GAPS.

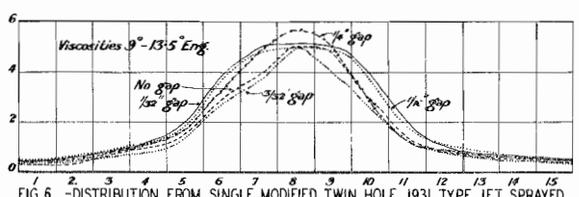


FIG. 6 -DISTRIBUTION FROM SINGLE MODIFIED TWIN HOLE 1931 TYPE JET, SPRAYED AT A CONSTANT PRESSURE OF 30 LBS PER SQ. INCH. VARYING GAPS.

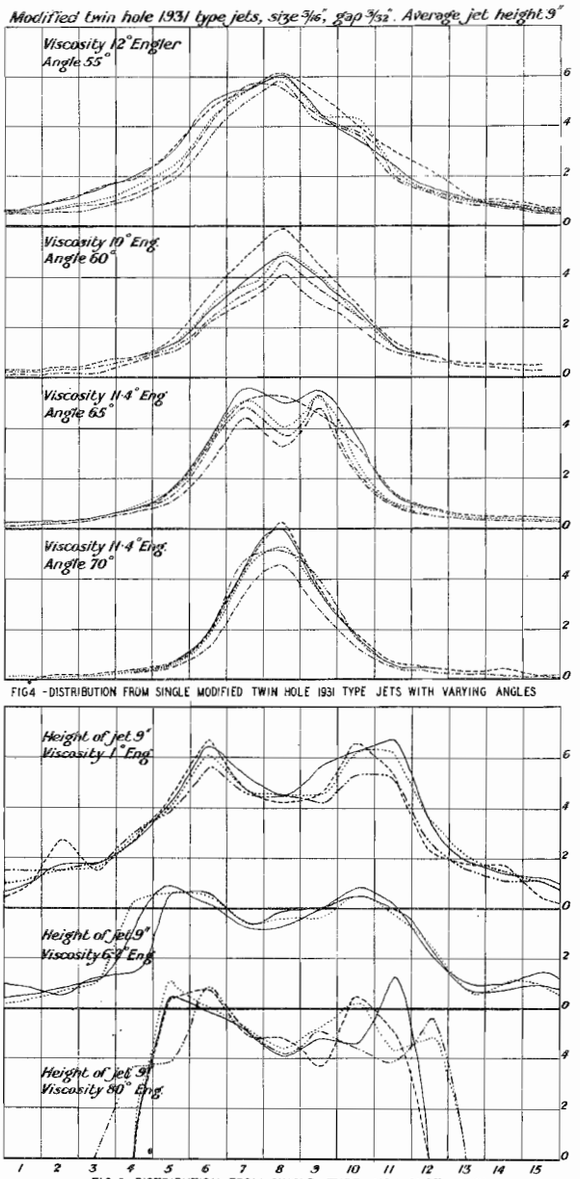


FIG 4 -DISTRIBUTION FROM SINGLE MODIFIED TWIN HOLE 1931 TYPE JETS WITH VARYING ANGLES

FIG. 5-DISTRIBUTION FROM SINGLE TYPE No 1 SLOT JETS

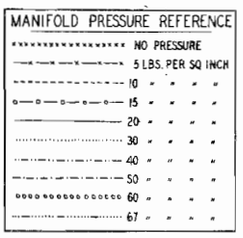


FIG. 7

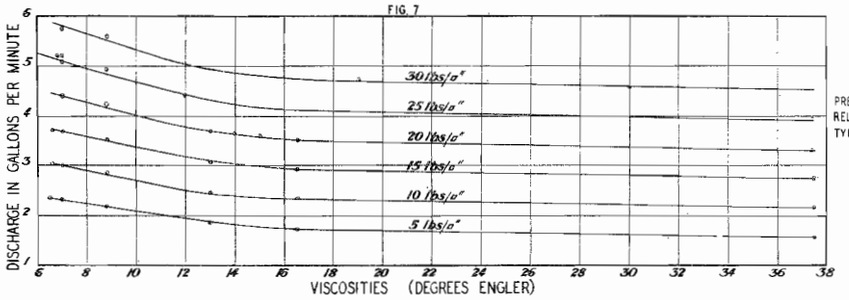


FIG
PRESSURE-VISCOSITY-DISCHARGE RELATION FOR TWIN HOLE 1931 TYPE JETS, SIZE 5/32".

FIG. 8

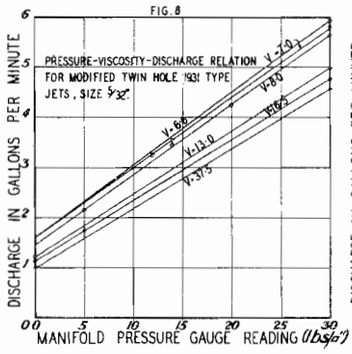


FIG. 9

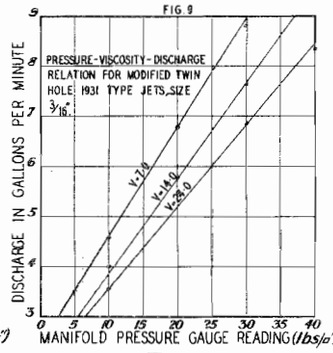


FIG 10

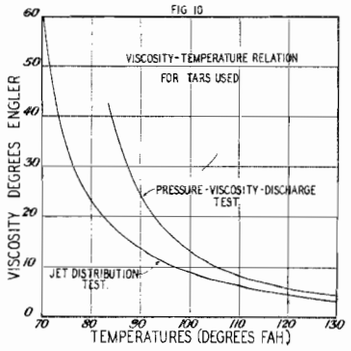


FIG. 4

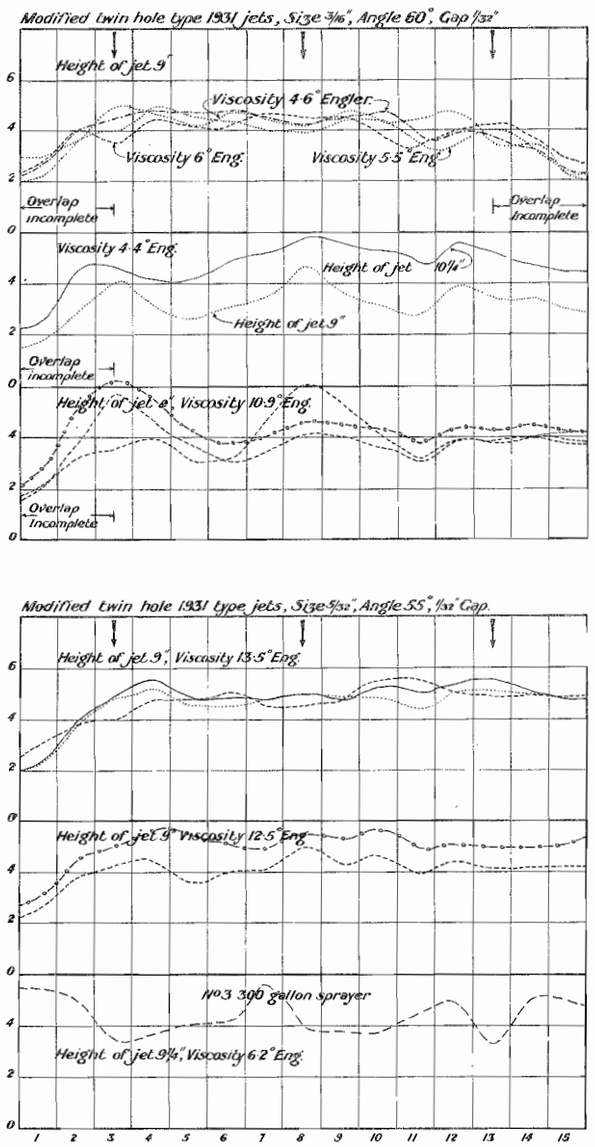


FIG 11 DISTRIBUTION FROM A SERIES OF OVERLAPPING JETS. JETS CENTRED OVER COMPARTMENTS 3,8,13,ETC. AS INDICATED. COMPLETE OVERLAP FROM COMPARTMENT 4 TO THE RIGHT ONLY.

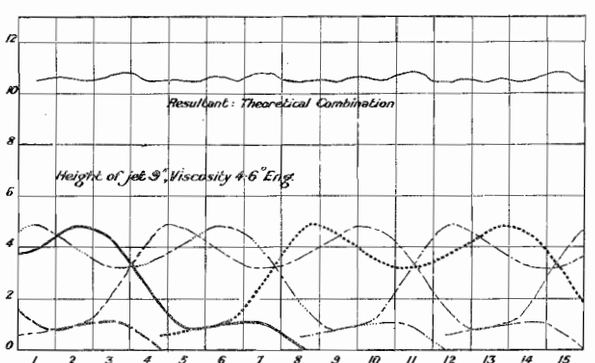


FIG.12-THEORETICAL DISTRIBUTION FROM TYPE Nº 1 SLOT JETS SPACED 5¾" CENTRES

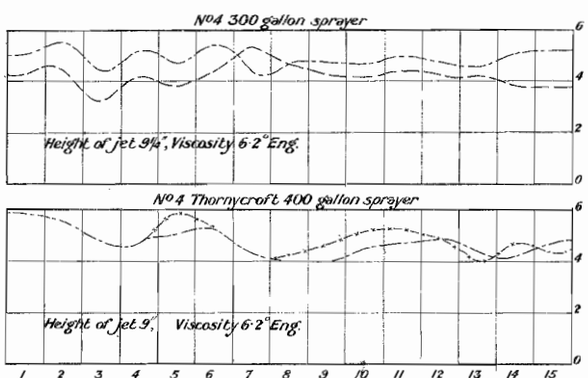


FIG.13-DISTRIBUTION FROM TYPE Nº 1 SLOT JETS SPACED 5¾" CENTRES

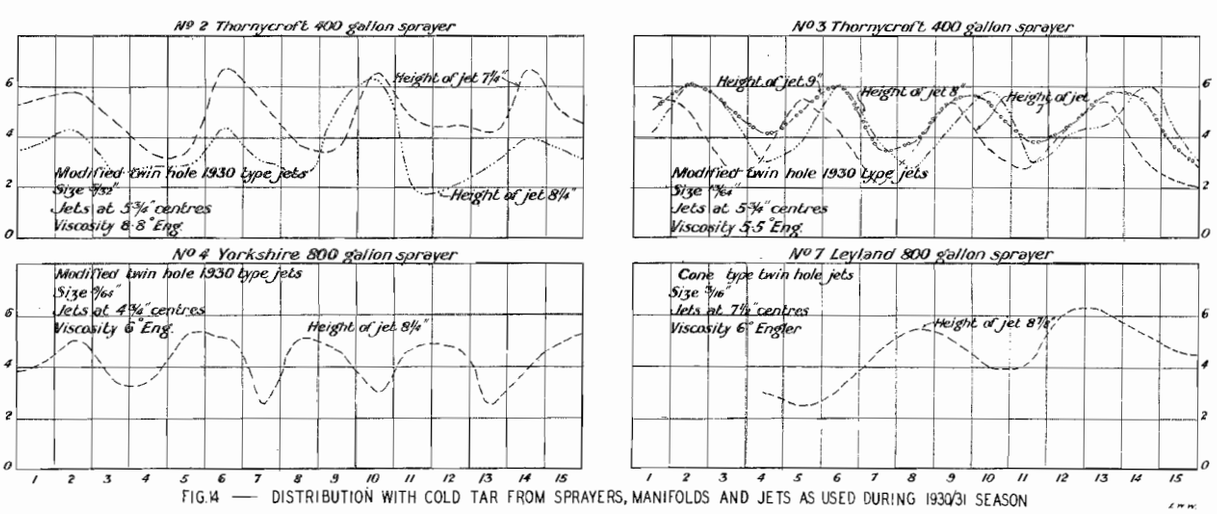


FIG.14 — DISTRIBUTION WITH COLD TAR FROM SPRAYERS, MANIFOLDS AND JETS AS USED DURING 1930/31 SEASON

FIG. 5.

APPENDIX A.

COUNTRY ROADS BOARD FUND.

Dr. RECEIPTS. *Cr.*

		£ s. d.	£ s. d.	£ s. d.
1930.				
July 1.	To Balance			23,676 3 2
1931.				
June 30.	,, Motor Car Act No. 3741—			
	Registration Fees	1,040,645 9 2		
	Licence Fees	57,065 17 0		
	Fines	15,364 3 3		
		1,113,075 9 5		
	Less Refunds and Cost of Administration	53,881 6 5		
			1,059,194 3 0	
	,, Motor Omnibus Act No. 3742—			
	Fees and Fines	3,799 0 1		
	Less Refunds	8 2 7		
			3,790 17 6	
	,, Country Roads Act No. 3662—			
	Registration of Traction Engines	1,122 0 0		
	,, Width of Tyres Administration—			
	Fees and Fines 589 19 0			
	Less Refunds 4 0 0			
		585 19 0		
		1,707 19 0		
	,, Acts Nos. 3662, 3741 and 3742—			
	Costs	207 9 7		
			1,915 8 7	
	,, Municipalities Repayments—			
	Permanent Works	122,398 5 4		
	Maintenance	188,973 3 9		
			311,371 9 1	
	,, Hire of Plant	38,437 1 0		
	,, Stores and Materials	126,881 10 7		
	,, Sundries	108,183 17 5		
			273,502 9 0	
				1,649,774 7 2
	,, Act No. 3235—Item 4—Tourist Vote			342 11 0
	,, Act No. 3866—Relief of Unemployment		142,047 9 5	
	,, Act No. 3866—Construction of Roads for Isolated Settlers		3,608 10 2	
				145,655 19 7
	,, Migrants Grant—Childers Settlement Road			65 18 3
	,, Migration Developmental Roads Act No. 3828			4,086 2 3
	,, Great Ocean Road—Airey's River Bridge Approaches			180 0 0
	,, Great Ocean Road—Ryan's Job			341 2 4
	,, F.A.R. Trust—Recoup			16,734 17 3
	,, Calder Memorial Avenue—Tree Planting			50 0 0
				1,840,907 1 0

PAYMENTS.

		£ s. d.	£ s. d.	£ s. d.
1931.				
June 30.	By Maintenance—(Appendix)	922,617 5 11		
	Less Refunds	91,439 1 4		
			831,178 4 7	
	,, Interest and Sinking Fund (Municipalities Repayments)			119,451 6 5
	,, Recoup to Revenue Act No. 3944—			
	Interest—Main Roads	128,639 16 4		
	Developmental Roads	180,852 4 10		
	,, Sinking Fund Contributions	23,516 14 5		
			333,008 15 7	
	,, Stores and Materials			130,636 15 3
	,, Federal Aid Roads Act Commission and Sinking Fund			7,942 9 8
	,, Motor Expenses			3,401 16 8
	,, Plant Purchase—Repairs, &c.			19,910 7 3
	,, Storeyard			8,799 18 8
	,, Sundry Debtors			41,683 0 4
	,, Suspense Account			8,046 11 4
	,, General Expenditure (Salaries, &c.)			68,027 0 4
	,, Act No. 3235—Item 4—Tourist Vote			342 11 0
	,, Act No. 3866—Construction of Roads for Unemployment Relief	157,889 1 3		
	Less Refunds	15,443 0 6		
			142,446 0 9	
	,, Act No. 3866—Construction of Roads for Isolated Settlers 3,733 12 2			
	Refund 300 0 0			
		4,033 12 2		
	Less Refunds	59 3 6		
			3,974 8 8	
	,, Construction of Roads under Migrants Grant—Closer Settlement Board			55 16 0
	,, Construction of Migration Developmental Roads—			
	Act No. 3828	5,448 3 0		
	Less Transfer to Developmental Roads Account Act No. 3662	1,362 0 9		
			4,086 2 3	
	,, Great Ocean Road—Airey's River Bridge (Approaches)	274 10 8		
	Less Refunds	118 6 4		
			156 4 4	
	,, Great Ocean Road—Ryan's Job	369 1 2		
	Less Refunds	27 18 10		
			341 2 4	
	,, F.A.R. Trust	17,373 14 0		
	Less Refunds	659 6 10		
			16,714 7 2	
	,, Repayment to Public Account			100,000 0 0
	Balance			704 2 5
				1,840,907 1 0

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COUNTRY ROADS BOARD FUND—*continued.*

RECONCILIATION STATEMENT.

Dr.	£ s. d.		*Cr.* £ s. d.
Balance as per Country Roads Board Accounts	704 2 5	Balance as per Treasury Books	62 0 5
Add Outstanding Transfers	25 1 1	*Add* Outstanding Transfers	1,935 19 8
			1,998 0 1
		Deduct Accounts in Transit	1,268 16 7
	729 3 6		729 3 6

REVENUE ACCOUNT, 30TH JUNE, 1931.

Dr. 1931.		£ s. d.	£ s. d.	£ s. d.	1930.		£ s. d.	£ s. d.	*Cr.* £ s. d.
June 30.	To Maintenance Works—General		606,091 5 2		July 1.	By Balance			327,203 15 1
	Wood's Point Road	2,906 15 9			1931.				
	Wood's Point Road	2,617 18 1			June 30.	By Motor Car Act No. 3741—			
	Mt. Buffalo Road	826 18 6				Registration Fees	1,040,645 9 2		
	Walhalla Road	1,285 14 7				Licence Fees	57,065 17 0		
	State Highways	217,449 12 6				Fines	15,364 3 3		
			225,086 19 5				1,113,075 9 5		
				831,178 4 7		*Less* Refunds and Cost of Administration	53,881 6 5		
	,, Contribution to Sinking Fund		29,862 16 8					1,059,194 3 0	
	,, Interest on Loans		89,588 9 9			,, Country Roads Act No. 3662—			
				119,451 6 5		Registration of Traction Engines		1,122 0 0	
	,, Recoup to Revenue Act No. 3944—					Forfeited Deposits		40 11 4	
	Interest—					Plans, Sale of		169 9 0	
	Main Roads	128,639 16 4				Plant Earnings	35,689 15 0		
	Developmental Roads	180,852 4 10				*Deduct* Working Costs	23,357 17 1		
			309,492 1 2					12,331 18 7	
	To Sinking Fund—					Rents		513 7 1	
	Main Roads	10,196 8 7				Royalty on Gravel and Metal		824 14 11	
	Developmental Roads	13,320 5 10				Sale of Old Roads		321 6 10	
			23,516 14 5			Storeyard Account		3,635 19 11	
				333,008 15 7		Timber, &c., Revenue Account		58 14 4	
	,, Audit Fee		475 12 0			,, Maintenance Works—			
	,, Experimental Section		1,457 17 10			Contributions payable by Municipalities	179,148 2 10		
	,, Federal Aid Commission, 2 per cent.		4,620 11 4			*Adjustment*	498 2 9		
	,, Instruments Account		44 2 6					178,650 0 1	
	,, Fidelity Guarantee		156 4 8			,, Permanent Works—			
	,, Motor Expenses		5,476 11 4			Contributions payable by Municipalities	137,279 5 6		
	,, New Offices, Exhibition Building Approaches		329 1 8			*Adjustment*	1 11 9		
	,, New Storeyard		152 9 8					137,280 17 3	
	,, Office Expenses		1,990 1 6			,, *Federal Aid Roads Act* 1926—			
	,, Office Furniture		202 17 5			Commission, 2 per cent.		8,344 4 10	
	,, Patrolmens' Cottages		1,635 9 7			Commission 1½ per cent. F.A.R. 7/7ths		1,804 9 4	
	,, Plans Purchase		989 19 4			Federal Relief		1,861 18 0	
	,, Plant Purchase		5,679 19 2			F.A.R. Sinking Fund, State		30 14 10	
	,, Postages and Telegrams		1,782 7 4						1,406,184 9 4
	,, Gravel Sites and Metal Investigation		489 9 6						
	,, Printing and Stationery		1,390 7 8						

REVENUE ACCOUNT, 30TH JUNE, 1931—*continued.*

Dr. *Cr.*

1931.		£ s. d.	£ s. d.	£ s. d.	£ s. d.
June 30.	To Record Survey		722 7 3		
	,, Salaries		43,405 6 7		
	,, Storage Sites		36 4 9		
	,, Telephones		368 1 5		
	,, Testing Materials		421 3 4		
	,, Travelling Expenses		2,390 19 5		
	,, Width of Tyres and Motor Omnibus Act	6,713 10 6			
	Less Fees, Fines, and Costs	4,586 4 7			
			2,127 5 11		
	,, Direction Boards and Warning Signs		1,376 16 10		
	,, Traffic Census		2 1 9		
	,, Advertising, *Government Gazette*		317 4 2		
	,, Investigation Surveys		115 18 0		
	,, Works Film		27 11 4		
	,, Operator, Chairman's Lecture		2 16 0		
	,, Transport Charges, R. 31, Benambra–Corryong Road		1 16 0		
	,, Law Costs, Test Case, R.31 Work		11 2 6		
	,, Supervision, R.31 Work		15 8 6		
	,, Survey Plans and Specifications, Mollongghip Road, R.31		50 0 0		
	,, Experimental Bitumen Sealing Apparatus		36 3 3		
				78,301 9 6	
	,, F.A.R. Trust, Expenditure			16,714 7 2	
	,, Balance			354,734 1 2	
				1,733,388 4 5	1,733,388 4 5

BALANCE-SHEET AT 30TH JUNE, 1931.

Liabilities.	£ s. d.	Assets.	£ s. d.	£ s. d.
Contractors' Deposits	6,883 7 10	Country Roads Board Fund	704 2 5	
Sundry Liabilities	10,955 14 10	Transfers Outstanding	25 1 1	
Sinking Fund	352,536 13 4			729 3 6
Revenue Account	354,734 1 2	Maintenance Expenditure		
		Contributions payable by Municipalities	179,148 2 10	
		Contributions in Arrears	9,171 12 1	
				188,319 14 11
		Permanent Works—		
		Contributions payable by Municipalities	137,279 5 6	
		Contributions in Arrears	13,048 5 8	
				150,327 11 2
		Federal Aid Roads Act 1926—		
		Special Advance		2,165 13 6
		Outstanding Accounts		3,238 4 11
		Materials, Stock—		
		Storeyard	18,027 5 6	
		Branches	2,882 2 6	
				20,909 8 0
		Investment Account for Redemption of Loans		352,586 13 4
		Trust Account		6,883 7 10
	725,159 17 2			725,159 17 2

COUNTRY ROADS BOARD LOAN ACCOUNT, ACT No. 3662.

1931.	RECEIPTS.	£ s. d.	1930.	PAYMENTS.	£ s. d.	£ s. d.
June 30.	To Proceeds of Loans	78,281 0 0	July 1.	By Balance		640 19 9
			1931.			
			June 30.	,, Permanent Works (Appendix)	57,025 1 4	
				Deduct Refunds	2,164 2 6	
						54,860 18 10
				,, Public Account (Advances Account)		9,542 16 3
				Balance		13,236 5 2
		78,281 0 0				78,281 0 0

RECONCILIATION.	£ s. d.	£ s. d.
Treasury Balance	13,891 2 8	
Add Outstanding Credits	17 16 1	
		13,908 18 9
Deduct Accounts in Transit		672 13 7
		13,236 5 2

BALANCE-SHEET AS AT 30TH JUNE, 1931.

LIABILITIES.	£ s. d.	£ s. d.	ASSETS.	£ s. d.
Interest on Permanent Works	.. .. ..	32,628 10 11	Permanent Works Expenditure to Date	4,613,759 10 3
Loan Securities Issued	4,669,297 3 4		Interest Capitalized on Permanent Works Act No. 3662	32,628 10 11
Deduct Discount	42,301 7 11		Country Roads Board Loan Account	13,236 5 2
		4,626,995 15 5		
		4,659,624 6 4		4,659,624 6 4

DEVELOPMENTAL ROADS LOAN ACCOUNT, ACT No. 3662.

1931.	RECEIPTS.	£ s. d.	1930.	PAYMENTS.	£ s. d.	£ s. d.
June 30.	To Proceeds of Loans	248,696 0 0	July 1.	By Balance		904 17 6
	,, Public Account (Advances Account)	9,096 1 10	1931.			
			June 30.	,, Expenditure (Appendix)	157,442 17 2	
				Less Refunds	2,307 2 9	
						155,135 14 5
				,, Public Account (Advances Account)		101,723 2 4
				Balance		28 7 7
		257,792 1 10				257,792 1 10

RECONCILIATION.	£ s. d.	£ s. d.
Treasury Balance	73 16 2	
Add Outstanding Credits	91 5 0	
		165 1 2
Deduct Accounts in Transit		136 13 7
		28 7 7

BALANCE-SHEET AS AT 30TH JUNE, 1931.

Liabilities.	£ s. d.	£ s. d.
Loan Securities Issued	6,142,238 18 4	
Deduct Discount	74,677 13 6	
		6,067,561 4 10
Treasury Developmental Railways, Act No. 3662 (2944)	11,188 15 11	
Consolidated Revenue Act No. 3662 (2985)	33,504 8 1	
		44,693 4 0
Interest, Act No. 3662 (3255)	70,367 6 4	
Arrears of Interest, Act No. 3662 (3255)	7,179 5 0	
Contributions Postponed	16,341 13 9	
		93,888 5 1
Public Account (Advances Account)		9,096 1 10
		6,215,238 15 9

Assets.	£ s. d.	£ s. d.
Permanent Works Expenditure		6,076,628 19 1
Contributions Payable by Municipalities, Act No. 3662 (Nos. 2944 and 2985)	38,500 0 0	
Contributions Payable by Municipalities in Arrears	6,193 4 0	
		44,693 4 0
Contributions Payable by Municipalities, Act No. 3662 (3255)	86,709 0 1	
Contributions Payable in Arrears	7,179 5 0	
		93,888 5 1
Developmental Roads Loan Account		28 7 7
		6,215,238 15 9

DEVELOPMENTAL ROADS INTEREST, ACT No. 3662 (Nos. 2944, 2985, AND 3255).

1931. Receipts.	£ s. d.	£ s. d.
June 30. To Interest Contributed by Municipalities—		
No. 2944	9,473 3 9	
No. 2985	28,203 13 6	
No. 3255	61,040 16 6	
		98,717 13 9
		98,717 13 9

1931. Expenditure.	£ s. d.
June 30. By Payments to Treasury	98,717 13 9
	98,717 13 9

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. I certify that the statements submitted are correct.

J. A. NORRIS,
Auditor-General,
29th October, 1931.

SUMMARY OF BOARD'S ASSETS AS AT 30TH JUNE, 1931.

	£ s. d.
Patrolmen's Cottages	12,715 8 11
Workshop Fittings, Tools, &c.	2,086 17 8
Motor Car Tools, &c.	140 16 7
Furniture and Fittings	4,897 7 2
Testing Laboratory Equipment	351 9 6
Furniture, &c., Motor Registration Branch	4,631 18 0
Works Film	227 8 0
Survey Instruments	390 0 0
Pistols	44 0 0
Motor Cars—Motor Cycles, including Police Motor Cycles	4,772 2 0
Motor Car Accessories	30 0 0
Loadometers	1,600 0 0
Boards Storeyard, No. 1	4,811 16 10
,, ,, No. 2	1,180 0 0
	37,879 4 8
Working Plant	57,557 0 0
Total	95,436 4 8

E. J. HICKS, Accountant,
28th October, 1931.

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, 1930.

Name of Municipality.	Permanent Works.		Maintenance.
	Principal.	Interest.	Amount.
	£ s. d.	£ s. d.	£ s. d.
Alberton Shire ..	1,164 17 4	25 9 4	2,899 2 4
Alexandra Shire ..	684 3 8	13 13 0	1,789 11 7
Arapiles Shire ..	555 13 5	11 17 0	632 6 6
Ararat Borough ..	..	..	240 7 11
Ararat Shire ..	0 4 4*	..	3,439 4 7
Avoca Shire ..	..	..	1,046 14 4
Avon Shire ..	..	..	920 19 7
Bacchus Marsh Shire	..	..	1,440 16 2
Bairnsdale Shire ..	51 7 9	1 6 4	686 6 3
Ballan Shire ..	..	..	880 8 5
Ballarat City ..	64 13 5	1 19 4	..
Ballarat Shire ..	129 6 9	3 18 9	2,147 13 3
Bannockburn Shire	..	..	947 8 11
Barrarbool Shire ..	..	..	620 6 10
Bass Shire ..	2,214 19 1	56 5 8	1,399 10 4
Beechworth Shire	171 1 4	4 17 7	511 14 2
Belfast Shire ..	..	..	2,515 5 4
Bellarine Shire ..	..	..	2,941 7 11
Benalla Shire ..	38 10 6	1 7 10	1,509 10 9
Berwick Shire ..	446 1 10	13 0 5	1,583 18 0
Bet Bet Shire ..	932 1 0	18 3 5	628 19 6
Birchip Shire ..	1,220 17 5	24 3 3	104 4 4
Blackburn and Mitcham Shire	..	..	1,460 13 8
Borung Shire ..	2,505 14 1	47 13 4	4,099 10 5
Braybrook Shire ..	..	..	709 13 0
Bright Shire ..	..	..	704 19 8
Broadford Shire ..	5 4 11*	0 0 10	40 17 4
Broadmeadows Shire	..	..	480 2 9
Bulla Shire ..	..	..	927 18 8
Buln Buln Shire ..	1,071 10 9	25 5 9	1,347 10 5
Bungaree Shire ..	129 6 9	3 18 9	746 14 9
Buninyong Shire	77 14 0	0 17 0	558 6 2
Castlemaine Borough	..	..	738 1 5
Charlton Shire ..	466 0 5	17 4 10	1,304 17 7
Chelsea City ..	..	..	541 11 4
Chiltern Shire ..	..	..	141 4 0
Clunes Borough ..	..	..	47 6 0
Cohuna Shire ..	..	..	195 15 3
Colac Shire ..	1,546 3 1	11 14 10	1,181 8 6
Corio Shire ..	990 6 10	14 8 3	1,436 16 7
Cranbourne Shire	769 16 6	13 13 7	3,122 14 11
Creswick Borough	..	..	60 7 8
Creswick Shire ..	..	..	489 7 7
Dandenong Shire ..	..	..	448 9 2
Daylesford Borough	969 7 0	22 6 0	277 19 6
Deakin Shire ..	..	..	1,275 2 2
Dimboola Shire ..	1,393 2 9	20 18 4	1,108 8 9
Donald Shire ..	866 9 9	21 5 6	635 8 3
Doncaster and Templestowe Shire	782 0 3	22 14 5	1,777 13 0
Dundas Shire ..	348 11 3	6 9 4	5,370 9 2
Dunmunkle Shire	5,203 4 7	108 18 5	2,098 0 1
Eaglehawk Borough	..	..	231 7 3
East Loddon Shire	484 14 1	9 14 7	129 1 2
Echuca Borough	458 11 4	8 10 6	389 6 5
Eltham Shire ..	232 19 0	7 9 6	1,366 12 8
Euroa Shire ..	2,035 3 0	7 6 2	439 13 3
Ferntree Gully Shire	494 8 3	10 4 1	2,141 5 2
Flinders Shire ..	2,371 1 10	54 10 1	3,220 5 8
Footscray City ..	..	..	94 15 10
Frankston and Hastings Shire	4 16 5*	0 1 11	3,270 4 11
Carried forward	30,880 4 8	611 7 11	73,495 17 1

Name of Municipality.	Permanent Works.		Maintenance.
	Principal.	Interest.	Amount.
	£ s. d.	£ s. d.	£ s. d.
Brought forward	30,880 4 8	611 7 11	73,495 17 1
Geelong City ..	..	..	25 17 9
Gisborne Shire ..	573 13 5	14 6 6	352 2 3
Glenelg Shire ..	880 8 3	10 10 6	1,728 4 0
Glenlyon Shire ..	163 7 2	3 0 8	1,176 15 5
Goulburn Shire ..	1,170 18 4	22 9 1	455 5 5
Grenville Shire ..	..	..	1,868 4 5
Hamilton Town ..	..	..	719 7 4
Hampden Shire ..	..	..	5,541 12 8
Healesville Shire ..	390 16 2	14 2 4	704 16 3
Heidelberg Shire	..	..	1,330 12 10
Heytesbury Shire	310 3 2	0 14 11	1,195 2 11
Horsham Borough	..	..	1,038 11 1
Huntly Shire ..	723 13 8	18 16 7	545 12 5
Inglewood Borough	..	..	104 5 7
Kara Kara Shire ..	2,216 18 2	41 5 5	2,799 1 7
Karkarooc Shire ..	1,389 3 11	28 4 1	1,216 3 9
Keilor Shire ..	..	..	615 1 3
Kilmore Shire ..	..	..	278 0 2
Koroit Borough ..	..	..	444 6 1
Korong Shire ..	3 12 5*	0 2 3	314 3 11
Korumburra Shire	..	..	2,937 8 5
Kowree Shire ..	537 8 11	8 14 2	2,118 2 4
Kyneton Shire ..	..	..	744 13 3
Lawloit Shire ..	1,274 19 0	19 2 5	1,187 11 9
Leigh Shire ..	251 17 6	4 3 5	758 3 8
Lexton Shire ..	..	..	340 17 9
Lillydale Shire ..	3,809 6 9	99 10 2	1,440 8 5
Lowan Shire ..	743 17 0	10 15 8	1,149 8 10
Maffra Shire ..	7 19 3*	0 3 0	2,734 1 2
Maldon Shire ..	879 19 6	27 18 11	447 14 9
Mansfield Shire ..	325 10 1	8 1 3	957 8 5
Marong Shire ..	884 15 0	28 1 9	1,430 14 7
Maryborough Borough	..	..	77 10 11
Melton Shire ..	..	..	236 12 8
Metcalfe Shire ..	..	..	234 15 0
Mildura Shire ..	1,498 3 3	33 12 1	1,641 10 5
Mildura Town ..	..	..	143 1 3
Minhamite Shire ..	..	..	4,200 0 10
Mirboo Shire ..	454 12 3	0 15 0	528 15 3
Moorabbin Shire ..	..	..	1,038 6 11
Mordialloc City ..	..	..	319 6 6
Mornington Shire	..	..	1,133 19 7
Mortlake Shire ..	..	..	4,867 11 4
Morwell Shire ..	1,178 10 1	23 3 7	875 5 6
Mount Rouse Shire	..	..	3,482 16 2
Mulgrave Shire ..	..	..	787 6 0
McIvor Shire ..	194 4 9	..	1,074 8 6
Narracan Shire ..	2,509 12 9	24 15 4	999 17 0
Newham and Woodend Shire	930 2 8	19 9 7	169 0 4
Newstead and Mt. Alexander Shire	..	..	626 8 4
Numurkah Shire	821 3 11	27 1 0	1,727 3 8
Oakleigh City ..	..	..	949 9 7
Omeo Shire ..	1,289 7 0	27 15 11	598 9 11
Orbost Shire ..	1,489 17 2	23 15 8	880 10 0
Otway Shire ..	..	..	359 15 8
Oxley Shire ..	295 16 6	7 1 10	430 2 9
Phillip Island Shire	..	..	561 6 9
Port Fairy Borough	..	..	339 12 10
Portland Shire ..	312 12 6	5 9 10	1,201 2 5
Carried forward	58,392 15 2	1,164 10 10	141,680 3 7

* Liability paid in full.

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

Name of Municipality.	Permanent Works.						Maintenance.		
	Principal.			Interest.			Amount.		
	£	s.	d.	£	s.	d.	£	s.	d.
Brought forward	58,392	15	2	1,164	10	10	141,630	3	7
Preston City ..	..			..			834	16	5
Pyalong Shire ..	..			..			1,102	14	9
Queenscliff Borough	..			..			160	12	9
Ringwood Borough	263	11	4	7	13	3	745	14	4
Ripon Shire ..	..			..			2,315	5	8
Rochester Shire ..	2,394	2	10	64	4	2	661	3	4
Rodney Shire ..	2,508	14	3	51	12	7	2,919	16	11
Romsey Shire ..	582	15	1	8	13	5	611	4	0
Rosedale Shire ..	196	6	7	5	10	7	649	15	9
Rutherglen Shire	17	2	11	0	11	1	1,023	8	1
Sale Town ..	..			..			686	4	7
Sebastopol Borough	..			..			387	11	9
Seymour Shire ..	457	16	10	14	19	10	897	9	11
Shepparton Borough	..			..			1,241	9	5
Shepparton Shire	1,911	13	1	22	1	5	2,518	1	3
South Barwon Shire	..			..			609	12	4
South Gippsland Shire	3,944	0	0	78	18	2	947	18	11
St. Arnaud Borough	..			..			177	3	8
Stawell Borough ..	11	9	0	0	6	10	281	5	0
Stawell Shire ..	2,032	19	0	44	17	11	1,235	6	10
Strathfieldsaye Shire	..			..			607	18	7
Swan Hill Shire ..	2,576	4	6	48	16	6	2,578	12	4
Talbot Shire ..	..			..			325	1	0
Tambo Shire ..	49	9	6	1	14	4	718	19	9
Towong Shire ..	411	15	8	15	5	9	709	17	6
Carried forward	75,750	15	9	1,529	16	8	166,627	8	5

Name of Municipality.	Permanent Works.						Maintenance.		
	Principal.			Interest.			Amount.		
	£	s.	d.	£	s.	d.	£	s.	d.
Brought forward	75,750	15	9	1,529	16	8	166,627	8	5
Traralgon Shire ..	..			..			749	6	8
Tullaroop Shire ..	1,032	13	8	32	18	9	1,027	3	7
Tungamah Shire ..	2,700	0	5	39	10	1	739	1	4
Upper Murray Shire	169	2	11	1	11	0	304	12	9
Upper Yarra Shire	..			..			712	11	4
Violet Town Shire	1,304	8	4	12	5	5	88	7	2
Walpeup Shire ..	1,514	2	1	43	2	1	1,704	14	2
Wangaratta Borough	..			..			1	7	7
Wangaratta Shire	67	2	11	0	11	0	450	7	1
Wannon Shire ..	..			..			1,711	15	8
Waranga Shire ..	1,528	13	2	37	7	7	3,188	4	9
Warragul Shire ..	11	13	6	0	2	7	1,980	14	6
Warrnambool Shire	301	0	0	1	12	6	6,923	3	3
Werribee Shire ..	..			..			178	1	5
Whittlesea Shire ..	2,008	7	4	52	12	7	1,286	12	2
Wimmera Shire ..	219	15	5	1	18	9	740	6	5
Winchelsea Shire	1,506	5	3	25	11	3	1,236	1	11
Wodonga Shire ..	..			..			244	13	5
Wonthaggi Borough	..			..			757	13	11
Woorayl Shire ..	1,237	7	5	18	0	0	3,559	16	5
Wycheproof Shire	744	9	8	14	14	8	765	10	9
Yackandandah Shire	933	7	5	14	13	3	662	3	11
Yarrawonga Shire	555	12	2	22	7	8	1,173	6	6
Yea Shire ..	301	7	0	9	19	1	810	8	9
Total ..	91,886	4	5	1,858	14	11	197,623	13	10

APPENDIX C.

COUNTRY ROADS BOARD.

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION AND MAINTENANCE OF MAIN ROADS FOR THE YEAR ENDING 30th JUNE, 1931.

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
ALBERTON SHIRE—				
Balook–Traralgon Road	..		312 0 4	
Balook–Yarram Road	Bd. 431 5 10		..	
Boolarra–Welshpool Road	..		Bd. 190 18 8	
Carrajung–Gormandale Road	..		1,334 18 11	
Foster–Yarram Road	..		103 18 0	
Grand Ridge Road	..		461 2 10	
Grand Ridge Road	Bd. 288 1 9		Bd. 182 10 0	
Sale–Yarram Road	0 13 6		1,076 6 5	
Yarram–Boolarra Road	..		1,902 9 7	
Yarram–Port Albert Road	..		858 13 9	
Yarram–Won Wron Road	..		220 7 11	
		720 1 1		6,643 6 5
ALBERTON AND MORWELL SHIRES (Joint Works)—				
Boolarra–Welshpool Road	..		Bd. 55 1 6	
				55 1 6
ALBERTON, MORWELL, AND SOUTH GIPPSLAND SHIRES (Joint Works)—				
Grand Ridge Road	..		Bd. 272 12 8	
				272 12 8
ALBERTON, MORWELL, AND TRARALGON SHIRES (Joint Works)—				
Grand Ridge Road	..		Bd. 16 16 2	
				16 16 2
ALEXANDRA SHIRE—				
Cathkin–Mansfield Road	..		765 3 4	
Healesville–Alexandra Road	163 3 2		1,130 14 0	
Upper Goulburn Road	..		1,051 12 10	
Yarck Road	70 8 1		292 4 5	
		233 11 3		3,239 14 7
ARAPILES SHIRE—				
Horsham–Hamilton Road	..		683 16 7	
Horsham–Natimuk–Edenhope Road	808 19 6		333 15 5	
		808 19 6		1,017 12 0
ARARAT BOROUGH—				
Ballarat–Stawell Road	..		772 8 9	
				772 8 9
ARARAT SHIRE—				
Ararat–Elmhurst Road	..		1,737 11 8	
Ararat–Warrnambool Road	..		3,893 16 3	
Ballarat–Hamilton Road	..		3,743 5 2	
Maroona–Glenthompson Road	..		1,971 5 8	
				11,345 18 9
AVOCA SHIRE—				
Ararat Road	..		183 2 10	
Ballarat–St. Arnaud Road	..		459 16 6	
Bealiba Road	..		85 15 3	
Landsborough Road	..		12 7 6	
Maryborough Road	..		124 1 10	
				865 3 11
AVON SHIRE—				
Dargo Road (Section "A")	..		222 14 11	
Dargo Road (Section "B")	..		333 11 2	
Maffra–Sale Road	..		126 11 5	
Maffra–Stratford Road	..		32 16 10	
Prince's Highway	..		163 9 5	
				879 3 9
BACCHUS MARSH SHIRE—				
Ballarat Road	..		330 5 3	
Geelong–Bacchus Marsh Road	..		1,500 16 2	
Gisborne Road	..		2,023 2 4	
				3,854 3 9
BAIRNSDALE SHIRE—				
Bulumwaal–Tabberabbera Road	..		759 6 11	
Prince's Highway	..		259 9 10	
				1,018 16 9
Carried forward	..	1,762 11 10	..	29,980 19 0

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

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	1,762 11 10	..	29,980 19 0
BALLAN SHIRE—				
Ballarat Road	..		276 7 0	
Daylesford Road	..		1,198 3 5	
Gordon–Meredith Road	..		144 13 4	
Mount Wallace Road	..		1,204 4 11	
				2,823 8 8
BALLARAT SHIRE—				
Ballarat–Lexton Road	..		3,647 7 3	
Maryborough–Ballarat Road	..		1,662 17 2	
				5,310 4 5
BALLARAT AND BUNGAREE SHIRES (Joint Works)—				
Ballarat–Creswick Road	..		Bd. 255 16 1	
				255 16 1
BANNOCKBURN SHIRE—				
Geelong–Ballarat Road	..		1,287 16 6	
Geelong–Ballarat Road	Bd. 72 12 6		Bd. 1,295 3 3	
Gordon–Meredith Road	..		43 13 6	
Inverleigh Road	..		2,203 1 11	
Shelford–Bannockburn Road	..		276 15 8	
		72 12 6		5,106 10 10
BANNOCKBURN AND BUNINYONG SHIRES (Joint Works)—				
Geelong–Ballarat Road	..		Bd. 578 14 0	578 14 0
BARRABOOL SHIRE—				
Airey's Inlet Road	..		344 16 11	
Anglesea Road	..		1,750 10 7	
Hendy Main Road	..		207 8 8	
				2,302 16 2
BARRABOOL AND SOUTH BARWON SHIRES (Joint Works)—				
Torquay Road	..		2,710 3 6	
				2,710 3 6
BASS SHIRE—				
Almurta Road	..		420 0 1	
Almurta–Grantville Road	..		258 9 10	
Dalyston–Wonthaggi Road	..		406 14 0	
Inverloch–Wonthaggi Road	..		710 8 6	
Korumburra–Wonthaggi Road	204 6 6		756 10 5	
Main Coast Road	794 1 5		937 10 3	
Wonthaggi–Loch Road	1,018 16 9		848 11 2	
		2,017 4 8		4,338 4 3
BASS AND WONTHAGGI SHIRES (Joint Works)—				
Loch–Wonthaggi Road	..		165 14 0	
				165 14 0
BEECHWORTH SHIRE—				
Beechworth Road	..		806 3 8	
Bright Road	..		86 18 6	
Everton–Myrtleford Road	..		317 8 10	
Stanley Road	..		244 16 6	
				1,455 7 6
BEECHWORTH AND WANGARATTA SHIRES (Joint Works)—				
Everton–Myrtleford Road	..		140 10 0	
				140 10 0
BELFAST SHIRE—				
Hamilton Road	..		1,482 2 0	
Penshurst Road..	..		2,115 14 6	
				3,597 16 6
BELLARINE SHIRE—				
Barwon Heads–Ocean Grove Road	..		0 10 6	
Barwon Heads–Ocean Grove Road	..		Bd. 3 9 6	
Geelong–Portarlington Road	..		1,278 12 8	
Geelong–Portarlington Road	..		Bd. 252 15 1	
Geelong–Queenscliff Road	..		121 0 0	
Geelong–Queenscliff Road	..		Bd. 3,941 13 6	
				5,598 1 3
BENALLA SHIRE—				
Benalla–Mansfield Road	112 10 8		576 6 3	
Gooroombat Road	..		1,606 1 5	
Gooroombat –Thoona Road	..		493 13 6	
Greta Road	..		93 6 8	
Lima Road	..		37 10 1	
Sydney Road	..		1,333 18 8	
Tatong–Toombullup Road	..		189 12 11	
		112 10 8		4,330 9 6
BERWICK SHIRE—				
Beaconsfield–Emerald Road	..		1,439 3 7	
Gembrook Road	..		327 0 11	
Gembrook–Beenak Road	..		59 19 8	
Hallam–Emerald Road	0 12 2		1,111 16 3	
Nar-nar-goon–Longwarry Road	..		631 13 2	
Princes' Highway	..		Bd. 12 11 0	
Woori Yallock–Pakenham–Koo-wee-rup Road ..	Bd. 39 4 10		1,239 3 4	
		39 17 0		4,821 7 11
Carried forward	..	4,004 16 8	..	73,516 3 7

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

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	4,004 16 8	..	73,516 3 7
BET BET SHIRE—				
Avoca–Bealiba Road	Bd. 7 15 4		460 13 3	
Betley Road	..		243 0 10	
Dunolly Road	..		218 1 1	
		7 15 4		921 15 2
BIRCHIP SHIRE—				
Beulah–Birchip–Wycheproof Road	366 10 0		432 10 2	
Donald–Birchip–Sealake Road	..		193 18 8	
		366 10 0		626 8 10
BLACKBURN AND MITCHAM SHIRE—				
Main Healesville Road	..		3,057 2 9	
				3,057 2 9
BORUNG SHIRE—				
Birchip Road	136 16 7		955 3 0	
Dimboola Road	6 5 6		1,563 14 10	
Hopetoun Road	1,125 19 2		1,834 16 1	
Minyip Road	842 14 11		978 19 5	
Rainbow Road	9 1 10		2,057 6 7	
		2,120 18 0		7,389 19 11
BRAYBROOK SHIRE—				
Ballarat Road	..		291 11 6	
Prince's Highway	..		Bd. 252 10 5	
				544 1 11
BRIGHT SHIRE—				
Bright Road	..		658 8 4	
Harrietville Road	..		434 6 8	
Mount Buffalo Road	..		Bd. 826 18 6	
				1,919 13 6
BRIGHT AND OMEO SHIRES (Joint Works)—				
Bright–Omeo Road	..		Bd. 1,980 15 2	
				1,980 15 2
BROADFORD SHIRE—				
Sydney Road	..		Bd. 31 7 11	
				31 7 11
BROADMEADOWS SHIRE—				
Sydney Road	..		398 1 6	
				398 1 6
BROADMEADOWS AND KEILOR SHIRES (Joint Works)—				
Lancefield Road	..		1,241 5 1	
				1,241 5 1
BULLA SHIRE—				
Melbourne–Lancefield Road	..		2,501 2 8	
Sunbury Road	..		133 13 8	
The Gap Road	..		186 18 11	
				2,821 15 3
BULLA AND KEILOR SHIRES (Joint Works)—				
Melbourne–Lancefield Road	..		34 0 7	
				34 0 7
BULN BULN SHIRE—				
Bloomfield Road	..		4 17 6	
Fumina Road	..		112 14 5	
Longwarry–Drouin Road	..		1,882 3 9	
Loch Valley Road	..		28 2 7	
Main Neerim "A" Road	..		584 18 6	
Main Neerim "B" Road	..		478 14 4	
Main Neerim "C" Road	1,054 8 10		964 16 2	
Main South Road	..		1,046 19 8	
Neerim East Road	..		64 2 10	
Prince's Highway	..		336 11 0	
Westernport Road	10 12 6		330 7 3	
		1,065 1 4		5,834 8 0
BUNGAREE SHIRE—				
Daylesford–Ballarat Shire	..		2,475 8 8	
				2,475 8 8
BUNINYONG SHIRE—				
Ballarat–Rokewood Road	..		316 4 6	
Elaine–Mount Mercer Road	..		100 8 5	
Geelong–Ballarat Road	..		2,603 16 4	
Geelong–Ballarat Road	..		Bd. 2,516 6 5	
				5,536 15 8
CHELSEA CITY—				
Point Nepean Road	..		592 15 6	
				592 15 6
CASTLEMAINE BOROUGH—				
Melbourne–Bendigo Road	..		368 8 8	
				368 8 8
CHARLTON SHIRE—				
Bendigo Road	..		819 7 6	
Donald Road	900 8 10		1,052 8 6	
St. Arnaud Road..	..		273 18 11	
		900 8 10		2,145 14 11
Carried forward	..	8,465 10 2	..	111,436 2 7

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

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	8,465 10 2	..	111,436 2 7
CHILTERN SHIRE—				
Barnawartha–Howlong Road	208 10 4		..	
Chiltern–Howlong Road	..		137 15 3	
Rutherglen–Wodonga Road	..		258 9 9	
Sydney Road	..		314 7 7	
		208 10 4		710 12 7
CLUNES BOROUGH—				
Maryborough–Ballarat Road	..		68 18 4	
				68 18 4
COLAC SHIRE—				
Colac–Beech Forest Road	201 16 3		898 15 9	
Ballarat Road	..		8,557 16 11	
Cressy–Inverleigh Road	..		15 1 1	
Prince's Highway	..		206 1 10	
		201 16 3		9,677 15 7
CORIO SHIRE—				
Ballarat Road	..		504 10 1	
Fyansford Road	..		8 4 10	
Geelong–Bacchus Marsh Road	..		5,964 11 6	
Prince's Highway	330 18 4		Bd. 62 6 11	
Prince's Highway (F.A.R. Exp.)	8 18 11		..	
		339 17 3		6,539 13 4
CRANBOURNE SHIRE—				
Koo-wee-rup–Pakenham Road	..		760 4 6	
Lang Lang–Nyora Road	..		67 2 5	
Main Coast Road	Bd. 1,528 8 10		14,627 13 0	
Westernport Road	81 17 0		383 12 7	
		1,610 5 10		15,838 12 6
CRESWICK SHIRE—				
Castlemaine–Ballarat Road	..		1,439 8 9	
Daylesford–Ballarat Road	..		259 13 0	
				1,699 1 9
CRESWICK BOROUGH—				
Castlemaine–Ballarat Road	..		112 4 8	
				112 4 8
COHUNA SHIRE—				
Cohuna–Leitchville Road	..		301 0 0	
Murray River Valley Road	..		534 19 4	
				835 19 4
DANDENONG SHIRE—				
Cheltenham Road	..		241 9 3	
Prince's Highway	..		1,067 0 2	
				1,308 9 5
DANDENONG AND CRANBOURNE SHIRES (Joint Works)—				
Dandenong–Frankston Road	..		172 18 1	
				172 18 1
DAYLESFORD BOROUGH—				
Ballan Road	..		503 14 3	
Ballarat Road	..		211 12 6	
Castlemaine Road	..		40 3 8	
Hepburn–Daylesford Road	..		243 14 5	
Malmsbury–Daylesford Road	..		834 15 0	
Daylesford–Ballarat Road	Bd. 4 6 0		..	
		4 6 0		1,833 19 10
DEAKIN SHIRE—				
Echuca–Cornella Road	..		758 15 3	
Echuca–Picola Road	..		933 10 7	
Kyabram–Nathalia Road	..		1,578 7 11	
Kyabram–Tongala Road	..		347 18 6	
Rochester–Kyabram Road	..		715 1 5	
				4,333 13 8
DEAKIN AND NUMURKAH SHIRES (Joint Works)—				
Echuca–Picola Road	..		32 10 0	
Kyabram–Nathalia Road	..		0 8 5	
				32 18 5
DEAKIN AND RODNEY SHIRES (Joint Works)—				
Kyabram–Tongala Road	..		371 4 11	
Rochester–Kyabram Road	..		420 8 9	
				791 13 8
DIMBOOLA SHIRE—				
Horsham Road	..		292 18 2	
Rainbow Road	..		1,271 18 8	
Rainbow Rises Road	..		2 12 11	
Warracknabeal Road	60 5 4		629 12 2	
		60 5 4		2,197 1 11
DIMBOOLA AND KARKAROOC SHIRES (Joint Works)—				
Hopetoun–Rainbow Road	..		709 14 4	
Rainbow Road	11 14 7		..	
		11 14 7		709 14 4
DONALD SHIRE—				
Donald–Charlton Road	47 10 5		939 5 6	
Donald–Minyip Road	..		604 10 9	
Marnoo Road	..		24 16 11	
St. Arnaud–Birchip Road	127 11 2		2,020 17 10	
		175 1 7		3,589 11 0
Carried forward	..	11,077 7 4	..	161,889 1 0

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

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	11,077 7 4	..	161,889 1 0
DONALD AND CHARLTON SHIRES (Joint Works)—				
Donald–Charlton Road	316 0 8	316 0 8	..	
DONCASTER AND TEMPLESTOWE SHIRES—				
Doncaster Road	..		2,931 5 4	
Heidelberg–Warrandyte Road	..		3,158 13 2	
Warrandyte–Ringwood Road	Bd. 83 3 7	83 3 7	1,103 19 10	7,193 18 4
DUNDAS SHIRE—				
Hamilton–Dunkeld Road	999 11 0		3,902 0 7	
Hamilton–Horsham Road	5 9 3		3,695 19 7	
Hamilton–Mount Gambier Road	..		2,889 18 6	
Hamilton–Port Fairy Road	..		3,920 6 6	
Hamilton–Portland Road	..		1,776 14 7	
Hamilton–Warrnambool Road	..	1,005 0 3	3,636 3 9	19,821 3 6
DUNMUNKLE SHIRE—				
Minyip–Donald Road	..		300 0 0	
Rupanyup–Murtoa Road	..		358 0 2	
Stawell–Warracknabeal Road	311 5 10		3,024 13 11	
Horsham–Murtoa Road	..		1,213 17 6	
Horsham–Murtoa–Minyip Road (F.A.R. Exp.) ..	54 3 8	365 9 6	..	4,896 11 7
EAGLEHAWK BOROUGH—				
Mount Korong Road	..		531 8 6	531 8 6
EAST LODDON SHIRE—				
Dingee Road	..		113 14 11	
Prairie Road	521 19 0		171 1 0	
Mitiamo Road	..	521 19 0	3 13 0	288 8 11
ECHUCA BOROUGH—				
Echuca–Cornella Road	..		197 10 1	
Echuca West Road	..		104 12 10	
Echuca–Wyuna Road	20 18 3	20 18 3	201 5 4	503 8 3
ELTHAM SHIRE—				
Eltham–Yarra Glen Road	..		2,829 15 11	
Hurstbridge–Kinglake Road	16 0 2		1,961 14 5	
Whittlesea–Kinglake Road	..		43 8 6	
Yarra Glen–Glenburn Road	..	16 0 2	325 18 8	5,160 17 6
EUROA SHIRE—				
Arcadia Road	..		6 5 10	
Avenel–Longwood Road	..		7 10 9	
Euroa–Arcadia Road	255 10 0		204 2 5	
Euroa–Mansfield Road	..		231 2 0	
Euroa–Strathbogie Road	260 12 4		679 10 5	
Murchison–Shepparton Road	..		179 14 10	
Sydney Road	78 1 0	594 3 4	Bd. 12 5 9	1,320 12 0
EUROA AND VIOLET TOWN TOWNSHIPS (Joint Works)—				
Hume Highway (F.A.R. Exp.)	Bd. 857 14 3	857 14 3	..	
FERN TREE GULLY SHIRE—				
Belgrave–Emerald Road	..		2,049 17 0	
Emerald Road	13 18 0		717 19 7	
Main Fern Tree Gully Road	..		2,204 13 7	
Monbulk Road	..		634 12 11	
Olinda Road	..	13 18 0	2,211 19 7	7,819 2 8
FLINDERS SHIRE—				
Hastings–Flinders Road	1,087 14 6		3,111 17 0	
Mornington–Flinders Road	499 9 0		2,783 10 11	
Point Nepean Road	67 14 5		9,163 0 10	
Stony Point Road	..	1,654 17 11	1,938 9 2	16,996 17 11
FLINDERS AND FRANKSTON AND HASTINGS SHIRES (Joint Works)—				
Hastings–Flinders Road	Bd. 780 0 3	780 0 3	..	
FOOTSCRAY CITY—				
Prince's Highway	..		Bd. 286 6 5	286 6 5
FRANKSTON AND HASTINGS SHIRE—				
Frankston–Flinders Road	..		1,751 4 0	
Frankston–Dandenong Road	..		2,738 16 7	
Point Nepean Road	..		1,775 9 6	6,265 10 1
GEELONG CITY AND SOUTH BARWON SHIRE (Joint Works)—				
Prince's Highway (Barwon Bridge)	..		Bd. 127 15 9	127 15 9
Carried forward	..	17,306 12 6	..	233,101 2 5

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

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	17,306 12 6	..	233,101 2 5
GISBORNE SHIRE—				
Bacchus Marsh Road	..		478 5 2	
Gisborne Station	..		32 16 9	
Melbourne–Bendigo Road	..		Bd. 147 4 6	
				658 6 5
GLENELG SHIRE—				
Casterton–Mt. Gambier Road (F.A.R. Exp.) ..	220 18 5		..	
Coleraine–Casterton Road	..		751 13 10	
Dergholm Road	145 0 0		1,107 18 7	
Mount Gambier Road	543 18 8		3,933 7 5	
Portland–Casterton Road	..		1,187 7 4	
Wando Vale Road	..		304 5 3	
		909 17 1		7,284 12 5
GLENLYON SHIRE—				
Ballan Road	227 6 0		428 16 10	
Ballarat Road	..		574 0 7	
Castlemaine–Daylesford Road	..		353 8 0	
Daylesford–Hepburn Road	..		74 13 5	
Malmsbury–Daylesford Road	..		1,483 18 11	
		227 6 0		2,914 17 9
GOULBURN SHIRE—				
Avenel–Longwood Road	..		121 0 2	
Goulburn Valley Road	..		2,211 5 9	
Murchison–Shepparton Road	..		133 18 2	
Vickers Road	..		107 4 2	
				2,573 8 3
GRENVILLE SHIRE—				
Ballarat–Hamilton Road	..		4,959 7 11	
Cressy Road	..		97 12 5	
Lismore Road	..		397 3 2	
Pitfield Road	..		361 17 0	
				5,816 0 6
HAMILTON TOWN—				
Ararat Road	..		272 12 2	
Coleraine Road	..		899 0 3	
Port Fairy Road	..		196 18 6	
Portland Road	..		149 2 10	
				1,517 13 9
HAMILTON TOWN AND DUNDAS SHIRE (Joint Works)—				
Hamilton–Warrnambool Road	..		214 18 10	
				214 18 10
HAMPDEN SHIRE—				
Camperdown–Ballarat Road	..		15,328 13 5	
Caramut–Lismore Road	..		5,175 7 6	
Lismore–Cressy Road	..		2,005 3 4	
Prince's Highway	..		198 7 6	
Prince's Highway	85 15 5		2,582 7 0	
Terang–Mortlake Road	..		1,133 11 2	
		85 15 5		26,423 9 11
HEALESVILLE SHIRE—				
Healesville–Alexandra Road	5 10 6		2,234 0 8	
Healesville–Woori Yallock Road	600 0 0		479 5 6	
Marysville Road	..		512 1 8	
		605 10 6		3,225 7 10
HEIDELBERG SHIRE—				
Greensborough–Hurstbridge Road	..		2,098 4 4	
Heidelberg–Warrandyte Road	..		58 1 2	
Main Heidelberg–Eltham Road	..		1,645 2 3	
Main Whittlesea Road	..		14 17 9	
				3,816 5 6
HEYTESBURY SHIRE—				
Camperdown–Cobden Road	..		1,714 2 3	
Cobden–Port Campbell–Princetown Road	466 11 1		498 15 5	
Cobden–Port Campbell–Princetown Road	..		Bd. 1,877 18 3	
Peterborough–Port Campbell Road	..		1 17 4	
Timboon–Port Campbell Road	..		41 14 3	
Timboon–Port Campbell Road	..		Bd. 10 16 3	
		466 11 1		4,145 3 9
HORSHAM BOROUGH—				
Dimboola–Horsham Road	..		1,676 8 11	
Dooen Road	..		579 16 3	
Hamilton Road	..		258 9 6	
Natimuk Road	..		161 10 0	
Western Highway	..		1,697 17 7	
				4,374 2 3
HUNTLY SHIRE—				
Bendigo–Echuca Road	..		747 15 5	
Heathcote–Elmore Road	..		231 9 3	
				979 4 8
INGLEWOOD BOROUGH—				
Bendigo–Charlton Road	..		109 11 2	
				109 11 2
Carried forward	..	19,601 12 7	..	297,154 5 5

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

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	19,601 12 7	..	297,154 5 5
KARA KARA SHIRE—				
Avoca–St. Arnaud Road	..		3,229 5 5	
Charlton Road	..		167 10 4	
Navarre Road	715 2 11		839 8 3	
St.Arnaud–Donald Road	1,929 10 9		2,868 12 10	
		2,644 13 8		7,104 16 10
KARKAROOC SHIRE—				
Hopetoun–Rainbow Road	..		822 6 9	
Hopetoun–Warracknabeal Road	54 2 6		848 9 9	
Hopetoun–Woomelang–Sealake Road ..	435 12 0		661 9 9	
Rainbow–Beulah–Birchip Road	88 0 0		1,092 8 1	
		577 14 6		3,424 14 4
KEILOR SHIRE—				
Melbourne–Bendigo Road	..		103 2 11	
				103 2 11
KERANG SHIRE—				
Koondrook Road	..		62 8 5	
				62 8 5
KILMORE SHIRE—				
Heathcote Road	..		189 5 2	
Lancefield–Kilmore Road	..		142 6 8	
Sydney Road	..		Bd. 370 17 2	
				702 9 0
KILMORE AND ROMSEY SHIRES (Joint Works)—				
Lancefield–Kilmore Road	..		189 18 8	
Sydney Road	..		..	
				189 18 8
KILMORE AND PYALONG SHIRES (Joint Works)—				
Heathcote Road	..		221 14 6	
				221 14 6
KOROIT BOROUGH—				
Koroit–Warrnambool Road	..		263 7 3	
				263 7 3
KORONG SHIRE—				
Charlton–Bendigo Road	..		55 8 9	
Borung–Hurstbridge Road	..		344 18 1	
Serpentine Road	..		220 11 0	
				620 17 10
KORUMBURRA SHIRE—				
Bena–Poowong Road	..		687 12 5	
Korumburra–Drouin Road	..		1,158 13 6	
Korumburra–Leongatha Road	Bd. 8 6 6		3,292 1 1	
Korumburra–Warragul Road	..		1,763 15 10	
Korumburra–Wonthaggi Road	..		3,912 1 7	
Lang Lang–Nyora Road	..		345 8 6	
Loch–Wonthaggi Road	..		226 19 4	
Nyora–Poowong Road	..		1,100 11 4	
Poowong–Ranceby Road	..		856 1 5	
		8 6 6		13,343 5 0
KOWREE SHIRE—				
Booroopki Road	321 15 10	..	405 18 3	
Booroopki–Frances Road	285 19 6	..	266 13 5	
Edenhope–Goroke Road	180 0 0	..	381 8 11	
Hamilton–Edenhope–Apsley Road	..		1,184 13 0	
Horsham–Hamilton Road	..		10 0 0	
		787 15 4		2,248 13 7
KYNETON SHIRE—				
Calder Highway	Bd. 34 1 9		..	
Daylesford Road	..		12 3 9	
Melbourne–Bendigo Road	..		227 19 5	
Redesdale Road	..		632 13 5	
Trentham Road	..		405 7 1	
Tylden–Woodend Road	..		159 4 0	
		34 1 9		1,437 7 8
LAWLOTT SHIRE—				
Broughton Road	522 1 4		840 7 4	
Nhill–Kaniva Border Road	..		149 13 2	
South Lillimur Road	..		873 2 9	
Yearinga Road	..		787 6 9	
		522 1 4		2,650 10 0
LEIGH SHIRE—				
Ballarat–Rokewood Road	..		165 17 1	
Cressy–Inverleigh Road	..		249 18 4	
Cressy–Rokewood Road	..		276 3 1	
Inverleigh–Shelford Road	..		36 4 8	
Rokewood–Shelford Road	..		170 18 9	
Shelford–Bannockburn Road	..		80 1 9	
Werneth Road	..		72 18 3	
				1,052 1 11
LEIGH AND COLAC SHIRES (Joint Works]—				
Cressy–Inverleigh Road	..		119 13 6	
				119 13 6
Carried forward	..	24,176 5 8		330,699 6 10

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

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	24,176 5 8	..	330,699 6 10
LEXTON SHIRE—				
Avoca–Ararat Road	..		276 19 11	
Avoca–Ballarat Road	..		530 16 1	
				807 16 0
LILLYDALE SHIRE—				
Evelyn–Lillydale Road	..		335 14 8	
Main Healesville Road	2,871 6 8		8,730 18 4	
Main Warburton Road	55 18 6		1,835 9 5	
Monbulk Road	..		725 16 2	
Monbulk Road, M.M.B.W. Section	..		72 10 1	
Mount Dandenong Road	..		1,232 1 7	
Yarra Glen Road	..		2,542 2 3	
		2,927 5 2		15,474 12 6
LOWAN SHIRE—				
Dimboola–Kaniva Road	..		354 12 9	
Goroke Road	..		377 5 8	
Lorquon West Road	761 8 0		1,116 18 8	
Yanac Road	21 10 6		1,019 16 2	
		782 18 6		2,868 13 3
MAFFRA SHIRE—				
Boisdale–Briagalong Road	..		848 13 6	
Briagalong–Dargo Road	..		8 6 10	
Bushy Park–Valencia Creek Road	..		253 0 4	
Licola Road	4 12 0		362 14 8	
Maffra–Sale Road	..		1,450 19 11	
Maffra–Stratford Road	..		481 14 1	
Tinamba–Boisdale Road	..		1,431 11 8	
Tinamba–Newry Road	27 12 0		1,991 9 6	
Traralgon–Maffra Road	..		701 6 10	
		32 4 0		7,529 17 4
MAFFRA AND AVON SHIRES (Joint Works)—				
Maffra–Stratford Road	..		358 8 4	
				358 8 4
MALDON SHIRE—				
Baringhup Road	..		193 19 3	
Castlemaine–Maldon Road	..		518 17 3	
Castlemaine–Newstead Road	..		183 16 0	
Eddington Bridge Road	..		15 0 4	
Maldon–Eddington Road	..		856 9 5	
Newstead Road	..		88 18 7	
				1,857 0 10
MANSFIELD SHIRE—				
Euroa–Merton Road	..		4 0 0	
Mansfield Road	..		1,357 18 8	
Mansfield–Tolmie Road	..		217 13 10	
Mansfield–Woodspoint Road	..		861 19 6	
Mansfield–Woodspoint Road	..		Bd. 2,906 15 9	
				5,348 7 9
MARONG SHIRE—				
Bendigo–Bridgewater Road	5 18 0		1,810 13 7	
Bendigo–Eddington Road	..		1,536 12 0	
Bendigo–Serpentine Road	..		711 3 11	
		5 18 0		4,058 9 6
MARYBOROUGH BOROUGH—				
Avoca Road	..		390 1 0	
Ballarat Road	..		49 11 0	
Castlemaine Road	..		29 15 3	
Castlemaine–Maryborough Road	..		Bd. 1,035 11 6	
Eddington Road	..		58 19 1	
				1,563 17 10
MELTON SHIRE—				
The Gap Road	..		162 16 6	
Toolern Road	..		46 12 3	
				209 8 9
METCALFE SHIRE—				
Kyneton–Redesdale Road	..		248 11 2	
				248 11 2
MILDURA SHIRE—				
Deakin Avenue	..		136 15 9	
Irymple Road	546 4 5		856 7 2	
Melbourne Road	17 10 4		3 14 5	
Wentworth Road	404 0 0		1,032 2 9	
		967 14 9		2,029 0 1
MILDURA TOWN—				
Deakin Avenue	..		63 19 10	
Langtree Avenue	..		34 14 10	
Punt Road	..		16 6 11	
Tenth Street	..		5 12 3	
				120 13 10
MINHAMITE SHIRE—				
Hamilton–Macarthur–Port Fairy Road	..		6,538 19 11	
Warrnambool–Hawkesdale–Penshurst Road	..		7,318 0 9	
				13,857 0 8
Carried forward	..	28,892 6 1	..	387,031 4 8

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

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	28,892 6 1	..	387,031 4 8
MIRBOO SHIRE—				
Allambee East–West Tarwin Road	..		68 17 9	
Boolarra South Road	..		65 17 10	
Mardan Road	1,105 1 9		206 6 5	
Mirboo–Allambee East Road	..		364 10 9	
Mirboo–Leongatha Road	..		105 11 9	
Mirboo South Road	..		524 2 8	
		1,105 1 9		1,335 7 2
MOORABBIN SHIRE—				
Point Nepean Road	..		315 18 11	
Centre Dandenong Road	..		1,655 16 2	
				1,971 15 1
MORDIALLOC CITY—				
Point Nepean Road	..		1,313 2 9	
				1,313 2 9
MORNINGTON SHIRE—				
Point Nepean Road	..		189 19 1	
Point Nepean Road	..		Bd. 4,245 1 7	
				4,435 0 8
MORTLAKE SHIRE—				
Caramut–Lismore Road	..		4,232 12 3	
Mortlake–Ararat Road	..		3,978 6 7	
Mortlake–Warrnambool Road	..		2,819 19 6	
Terang–Mortlake Road	..		331 16 3	
				11,362 14 7
MORWELL SHIRE—				
Boolarra–Foster Road	..		59 19 2	
Boolarra–Morwell Road	..		1,638 2 11	
Boolarra–Welshpool Road	290 11 0		Bd. 532 11 1	
Boolarra–Foster Road	..		Bd. 293 14 10	
Jeeralang West Road	802 7 4		259 6 11	
Princes Highway	..		110 10 2	
		1,092 18 4		2,894 5 1
MOUNT ROUSE SHIRE—				
Ballarat–Hamilton Road	..		2,680 12 10	
Hamilton–Dunkeld Road	..		454 17 1	
Hamilton–Penshurst Road	..		3,384 7 7	
Maroona–Glenthompson Road	..		5 12 6	
Penshurst–Caramut Road	..		1,498 12 9	
				8,024 2 9
MULGRAVE SHIRE—				
Ferntree Gully Road	..		156 6 2	
				156 6 2
McIVOR SHIRE—				
Heathcote–Elmore Road	..		228 10 3	
Heathcote–Redesdale Road	45 14 11		466 12 5	
Kilmore–Heathcote–Bendigo Road	..		3,437 14 4	
		45 14 11		4,132 17 0
NARRACAN SHIRE—				
Princes Highway	..		621 13 7	
Princes Highway, F.A.R. Exp.	86 1 11		..	
Trafalgar–Thorpdale Road	..		832 17 2	
Trafalgar–Willowgrove Road	..		607 6 5	
Moe–Yallourn Road	..		861 18 0	
Yarragon–Leongatha Road	..		517 2 2	
Yarragon–Shady Creek Road	..		78 17 9	
Walhalla Road	905 1 8		416 18 3	
Walhalla Road	..		Bd. 1,285 14 7	
		991 3 7		5,222 7 11
NEWHAM AND WOODEND SHIRE—				
Lancefield Road	..		23 3 10	
Melbourne–Bendigo Road	..		Bd. 214 10 3	
Tylden Road	Bd. 786 19 2		6 19 11	
		786 19 2		244 14 0
NEWHAM AND WOODEND AND KYNETON SHIRES (Joint Works)—				
Tylden Road	..		19 5 5	
				19 5 5
NEWSTEAD AND MT. ALEXANDER SHIRE—				
Castlemaine–Daylesford Road	..		885 6 0	
Castlemaine–Maryborough Road	..		411 4 11	
Creswick Road	..		431 11 7	
Maldon Road	..		19 16 2	
				1,747 18 8
NEWTOWN AND CHILWELL TOWN—				
Fyansford Road	73 12 11		..	
		73 12 11		
NEWTOWN AND CHILWELL TOWN AND CORIO SHIRE (Joint Works)—Fyansford Road	19 10 3		..	
		19 10 3		
Carried forward	..	33,007 7 0	..	429,891 1 11

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

Municipality and Road.	Permanent Works.		Maintenance,	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	33,007 7 0	..	429,891 1 11
NUMURKAH SHIRE—				
Echuca–Picola Road	..		685 11 9	
Murray Valley Road	140 0 0		289 12 2	
Nathalia–Kyabram Road	..		1,168 9 0	
Nathalia North Road	..		1,806 14 11	
Nathalia–Picola Road	..		60 10 1	
Numurkah–Nathalia Road	15 15 6		94 1 7	
Numurkah–Tumgamah Road	62 7 6		88 7 1	
Shepparton–Numurkah–Cobram Road	180 14 3		251 11 9	
		398 17 3		4,444 18 4
NUMURKAH AND DEAKIN SHIRES (Joint Works)—				
Echuca–Picola Road	..		131 18 8	
				131 18 8
OAKLEIGH CITY—				
Ferntree Gully Road	..		602 6 11	
Princes Highway	..		2,090 2 4	
Princes Highway (Concrete Section)	..		87 15 4	
				2,780 4 7
OMEO SHIRE—				
Benambra Road	976 13 4		755 17 0	
Day Avenue	..		214 1 8	
		976 13 4		969 18 8
ORBOST SHIRE—				
Cann Valley Road	..		987 0 1	
Cann Valley Road (F.A.R. Reimbursed)	581 15 6		..	
Genoa–Gipsy Point Road	..		325 15 6	
Marlo Road	419 17 0		526 15 0	
Princes Highway	..		64 18 0	
Wangarabelle Road	..		857 5 5	
		1,001 12 6		2,761 14 0
OXLEY SHIRE—				
Bright Road	47 11 10		911 14 6	
Greta–Glenrowan Road	..		182 10 2	
Oxley Road	..		192 15 0	
		47 11 10		1,286 19 8
OXLEY SHIRE AND WANGARATTA BOROUGH (Joint Works)—				
Oxley Road	..		0 2 1	
				0 2 1
OTWAY SHIRE—				
Beech Forest–Apollo Bay Road	..		1 0 8	
Beech Forest–Apollo Bay Road	..		Bd. 230 9 1	
Beech Forest–Mount Sabine Road	..		Bd. 53 18 8	
Cape Patten Road	..		Bd. 531 5 11	
Carlisle–Gellibrand Road	..		2 7 5	
Carlisle–Gellibrand Road	..		Bd. 367 8 10	
Forrest–Apollo Bay Road	..		2 17 11	
Forrest–Apollo Bay Road	..		Bd. 990 0 1	
Lavers Hill–Glenaire Road	..		Bd. 102 7 8	
Lavers Hill–Princetown Road	..		Bd. 1,011 0 4	
				3,292 16 7
PHILLIP ISLAND SHIRE—				
Newhaven Road	..		534 11 10	
Phillip Island Road	..		519 1 5	
Ventnor Road	..		449 2 9	
				1,502 16 0
PORT FAIRY BOROUGH—				
Hamilton Road	..		115 13 7	
Prince's Highway (Portland)	..		93 16 0	
Prince's Highway (Warrnambool)	..		173 6 4	
				382 15 11
PORTLAND SHIRE—				
Heath Road	..		628 19 6	
Portland–Casterton Road	80 14 0		692 17 4	
Portland–Hamilton Road	..		1,324 17 9	
		80 14 0		2,646 14 7
PRESTON CITY—				
Epping Road	..		3,935 14 4	
Whittlesea Road	..		564 5 8	
				4,500 0 0
PYALONG SHIRE—				
Kilmore–Heathcote–Bendigo Road	..		326 17 1	
				326 17 1
PYALONG AND KILMORE SHIRES (Joint Works)—				
Kilmore–Heathcote–Bendigo Road	..		0 10 0	
				0 10 0
QUEENSCLIFF BOROUGH—				
Geelong Road	..		982 12 3	
Point Lonsdale Road	..		19 2 11	
				1,001 15 2
RINGWOOD BOROUGH—				
Main Healesville Road	..		536 5 0	
Mount Dandenong Road	..		268 3 8	
Warrandyte Road	..		532	
				1,336 10 9
Carried forward	..	35,512 15 11	..	457,257 14 0

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

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	35,512 15 11	..	457,257 14 0
RINGWOOD BOROUGH AND DONCASTER AND TEMPLESTOWE SHIRE (Joint Works)—				
Warrandyte Road	Bd. 83 3 7		278 4 5	
		83 3 7		278 4 5
RIPON SHIRE—				
Ballarat–Ararat Road	..		32 5 2	
Ballarat–Hamilton Road	..		2,356 18 10	
Skipton Road	..		1,471 1 7	
				3,860 5 7
RIPON AND HAMPDEN SHIRES (Joint Works)—				
Ballarat–Hamilton Road	..		240 10 0	
				240 10 0
ROCHESTER SHIRE—				
Murray River Valley Road (F.A.R. Exp.)	921 17 3		..	
Rochester–Bamawm Prairie Road	116 4 7		591 11 1	
Timmering Road	..		312 16 5	
		1,038 1 10		904 7 6
RODNEY SHIRE—				
Kyabram–Nathalia Road	..		464 4 11	
Kyabram–Tongala Road	..		8 8 7	
Mooroopna–Undera Road	..		1,087 17 5	
Shepparton–Rochester–Wycheproof–Rainbow Road (F.A.R. Exp.)	80 8 0		..	
Shepparton–Tatura Road	..		3,245 12 6	
Tatura–Byrneside–Kyabram Road	..		3,670 1 11	
Tatura–Murchison Road	863 11 1		512 7 9	
		943 19 1		8,988 13 1
RODNEY SHIRE AND SHEPPARTON BOROUGH (Joint Works)—				
Shepparton–Tatura Road	..		4,219 12 10	
				4,219 12 10
ROMSEY SHIRE—				
Lancefield–Kilmore Road	..		579 4 0	
Melbourne–Lancefield Road	..		779 0 1	
Woodend–Lancefield Road	761 6 0		180 1 5	
		761 6 0		1,538 5 6
ROSEDALE SHIRE—				
Prince's Highway	..		85 13 5	
Sale–Yarram Road	..		381 3 9	
Seaspray Road	..		411 19 4	
Traralgon–Gormandale Road	..		193 19 9	
Willung Road	..		48 9 10	
				1,121 6 1
ROSEDALE AND ALBERTON SHIRES (Joint Works)—				
Carrajung–Gormandale Road	..		3 6 2	
				3 6 2
RUTHERGLEN SHIRE—				
Barnawartha–Howlong Road	380 7 3		..	
Chiltern–Howlong Road	..		84 3 1	
Rutherglen–Wahgunyah Road	4 6 10		522 12 8	
Springhurst–Rutherglen Road	..		565 17 10	
Wodonga Road	..		518 19 7	
Yarrawonga Road	..		447 9 2	
		384 14 1		2,139 2 4
RUTHERGLEN AND WANGARATTA SHIRES (Joint Works)—				
Yarrawonga Road	..		39 7 6	
				39 7 6
SALE TOWN—				
Prince's Highway	..		97 8 9	
Sale–Longford Road	..		413 3 3	
				510 12 0
SEBASTOPOL BOROUGH—				
Ballarat–Rokewood Road	..		Bd. 1,040 19 0	
				1,040 19 0
SEYMOUR SHIRE—				
Avenel–Longwood Road	..		70 8 3	
Goulburn Valley Road	..		115 14 9	
Hume Highway (F.A.R. Exp.)	7 3 7		..	
Seymour–Yea Road	..		27 8 7	
Seymour–Yea Road	..		Bd. 117 9 6	
Sydney Road	..		Bd. 94 9 8	
Upper Goulburn Road	2 17 8		261 6 0	
		10 1 3		686 16 9
SEYMOUR AND GOULBURN SHIRES (Joint Works)—				
Goulburn Valley Road	..		100 0 0	
				100 0 0
SHEPPARTON BOROUGH—				
Shepparton–Nagambie Road	..		663 9 1	
Shepparton–Nalinga Road	..		56 1 9	
Shepparton–Numurkah Road	..		484 0 6	
				1,203 11 4
Carried forward	..	38,734 1 9	..	484,132 14 1

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

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	38,734 1 9	..	484,132 14 1
SHEPPARTON BOROUGH AND RODNEY SHIRE (Joint Works)—				
Shepparton–Tatura Road	..		31 3 6	
Shepparton–Mooroopna Road	..		46 4 7	
				77 8 1
SHEPPARTON SHIRE—				
Dookie–Nalinga Road	..		18 12 10	
Lemnos Road	..		3,082 15 3	
Shepparton–Nagambie Road	..		90 5 10	
Shepparton–Nalinga Road	17 9 5		132 0 9	
Shepparton–Numurkah Road	106 12 0		2,186 10 6	
		124 1 5		5,510 5 2
SOUTH BARWON SHIRE—				
Barwon Heads Road	..		2,386 19 0	
Prince's Highway	..		214 13 3	
Torquay Road	..		165 10 1	
				2,767 2 4
SOUTH BARWON AND BELLARINE SHIRES (Joint Works)—				
Barwon Heads–Ocean Grove Road	..		30 0 0	
				30 0 0
SOUTH GIPPSLAND SHIRE—				
Boolarra–Foster Road	..		553 8 4	
Boolarra–Welshpool Road	..		464 10 11	
Falls Road	..		99 12 0	
Foster–Boolarra Road	560 1 1		..	
Foster–Yarram Road	38 3 6		1,408 0 4	
Main South Gippsland Road	..		1,395 9 5	
Sale–Foster Road (F.A.R. Exp.)	651 19 3		..	
Stony Creek–Dollar Road	..		119 3 6	
Toora–Gunyah Road	..		792 17 9	
Turton's Creek Road	..		246 9 9	
Boolarra–Welshpool Road	Bd. 158 4 1		Bd. 60 5 0	
		1,408 7 11		5,139 17 0
SOUTH GIPPSLAND AND WOORAYL SHIRES (Joint Works)—				
Boolarra–Foster Road	..		267 2 9	
Main South Gippsland Road	..		480 3 3	
Stony Creek–Dollar Road	..		49 0 6	
				796 6 6
ST. ARNAUD BOROUGH—				
Avoca–St. Arnaud Road	..		769 14 1	
Charlton Road	..		19 9 4	
Navarre Road	..		209 18 10	
St. Arnaud–Donald Road	..		395 7 6	
				1,394 9 9
STAWELL BOROUGH—				
Ararat–Stawell Road	..		52 4 6	
Glenorchy Road	..		12 18 10	
Stawell–Grampians Road	..		18 19 0	
				84 2 4
STAWELL SHIRE—				
Landsborough Road	..		258 4 6	
Marnoo Road	140 12 1		314 11 6	
Navarre Road	3 9 1		429 15 2	
Stawell–Grampians Road	..		816 10 0	
Stawell–Glenorchy–Horsham Road	28 4 11		988 16 8	
Stawell–Warracknabeal Road	604 7 3		471 15 6	
		776 13 4		3,279 13 4
STAWELL AND KARA KARA SHIRES (Joint Works)— ..				
Navarre Road	..		0 6 3	
				0 6 3
STRATHFIELDSAYE SHIRE—				
Heathcote–Bendigo Road	..		975 10 1	
Mandurang Road	..		251 12 2	
Strathfieldsaye Road	..		445 4 3	
				1,672 6 6
SWAN HILL SHIRE—				
Euston Road	678 5 4		1,626 3 3	
Murray River Valley Road (F.A.R. Exp.)	1,078 16 7		..	
Nyah–Ouyen Road	299 19 1		226 8 1	
Ouyen–Piangil Road (F.A.R. Exp.)	65 9 4		..	
Swan Hill Road	..		847 8 0	
Ultima Road	..		481 1 9	
Ultima–Sea Lake Road	..		223 6 3	
		2,122 10 4		3,404 7 4
TALBOT SHIRE—				
Maryborough–Avoca Road	..		15 13 8	
Maryborough–Ballarat Road	..		627 13 1	
				643 6 9
TAMBO SHIRE—				
Bairnsdale–Bruthen Road	..		141 9 10	
Bruthen–Omeo Road	..		20 14 10	
Mossiface Road	..		37 10 0	
Nowa Nowa–Buchan–Gelantipy Road	..		2,025 7 7	
Prince's Highway	..		Bd. 140 17 5	
				2,365 19 8
Carried forward	..	43,165 14 9	..	511,298 5 1

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

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	43,165 14 9	..	511,298 5 1
TOWONG SHIRE—				
Murray Valley Road	..		1,661 1 0	
Omeo Road	..		133 9 11	
				1,794 10 11
TRARALGON SHIRE—				
Prince's Highway	..		23 12 0	
Traralgon–Balook Road	..		490 12 6	
Traralgon–Gormandale Road	..		873 8 4	
Traralgon–Jeeralang Road	..		571 2 6	
Traralgon–Maffra Road	527 15 4		107 17 7	
		527 15 4		2,066 12 11
TULLAROOP SHIRE—				
Avoca Road	..		851 10 3	
Ballarat Road	..		67 4 5	
Castlemaine–Maryborough Road	..		Bd. 8,157 4 4	
Eddington Road	..		1,245 6 9	
Natte Yallock Road	..		108 3 0	
				10,429 8 9
TUNGAMAH SHIRE—				
Cobram–Katamatite Road	..		1,048 18 10	
Cobram South Road	..		62 17 3	
Cobram–Strathmerton Road	10 2 10		42 5 0	
Numurkah–Tungamah–Wilby Road	4 13 10		433 19 10	
St James Road	482 17 5		222 16 10	
Yarrawonga–Cobram Road	425 17 0		769 15 4	
		923 11 1		2,580 13 1
UPPER MURRAY SHIRE—				
Corryong Road	..		631 17 3	
Tintaldra Road	618 8 0		235 15 6	
		618 8 0		867 12 9
UPPER YARRA SHIRE—				
Don Road	..		1,639 7 3	
Warburton Road..	19 17 6		1,117 0 1	
Warburton Road..	..		Bd. 4,518 1 10	
Woods Point Road	..		Bd. 2,617 18 1	
		19 17 6		9,892 7 3
VIOLET TOWN SHIRE—				
Shepparton Road	481 10 0		50 12 9	
Sydney Road	..		Bd. 4 4 4	
Violet Town–Dookie Road	..		109 18 2	
		481 10 0		164 15 3
WALPEUP SHIRE—				
Ouyen–Pinnaroo Road	1,631 13 1		1,672 3 8	
Mildura Road	..		1 7 10	
		1,631 13 1		1,673 11 6
WANGARATTA BOROUGH—				
Beechworth Road	..		590 5 5	
Sydney Road	Bd. 2,800 0 0		1,687 15 3	
		2,800 0 0		2,278 0 8
WANGARATTA BOROUGH AND WANGARATTA SHIRE (Joint Works)—				
Sydney Road	..		27 3 0	
				27 3 0
WANGARATTA SHIRE—				
Beechworth Road	..		535 16 0	
Rutherglen Road	..		199 10 11	
Wangaratta–Myrtleford Road	..		120 0 7	
Yarrawonga Road	641 13 7		202 17 11	
		641 13 7		1,058 5 5
WANGARATTA AND BEECHWORTH SHIRES (Joint Works)—				
Beechworth Road	..		12 4 3	
				12 4 3
WANNON SHIRE—				
Coleraine–Harrow–Apsley Road	..		723 4 7	
Hamilton–Coleraine–Casterton Road	..		2,320 9 10	
Wannon Bridge Road	..		854 12 3	
				3,898 6 8
WANNON AND GLENELG SHIRES (Joint Works)—				
Hamilton–Coleraine–Casterton Road	..		28 0 1	
				28 0 1
WARANGA SHIRE—				
Colbinabbin–Moora Road	..		968 13 9	
Elmore–Colbinabbin Road	..		781 15 8	
Heathcote–Elmore Road	..		2,253 0 2	
Murchison–Rushworth Road	..		538 2 10	
Tatura Road	..		34 6 4	
				4,575 18 9
WARANGA AND GOULBURN SHIRES (Joint Works)—				
Murchison–Rushworth Road	..		29 1 2	
				29 1 2
WARANGA AND HUNTLY SHIRES (Joint Works)—				
Heathcote–Elmore Road	..		141 7 7	
				141 7 7
Carried forward	..	50,810 3 4	...	552,816 5 1

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

Municipality and Road.	Permanent Works. Amount.	Permanent Works. Total.	Maintenance. Amount.	Maintenance. Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	50,810 3 4	..	552,816 5 1
WARRAGUL SHIRE—				
Bloomfield Road	..		3,172 12 3	
Brandy Creek Road	..		3,096 3 7	
Darnum–Allambee Road	..		917 8 3	
Prince's Highway	..		878 11 7	
Warragul–Korumburra Road	..		3,117 18 3	
Warragul–Leongatha Road	1 18 6		194 3 8	
		1 18 6		11,376 17 7
WARRNAMBOOL SHIRE—				
Allansford–Nirranda Road	..		1,554 4 11	
Caramut–Lismore Road	..		3,117 19 6	
Framlingham Road	418 9 9		1,688 2 11	
Garvoc–Laang Road	..		1,429 17 9	
Mortlake Road	..		3,828 10 11	
Peterborough Road	141 13 8		1,440 15 11	
		560 3 5		13,059 11 11
WERRIBEE SHIRE—				
Geelong–Bacchus Marsh Road	..		431 16 1	
Prince's Highway	..		148 1 9	
				579 17 10
WHITTLESEA SHIRE—				
Epping Road	..		1,051 19 5	
Main Whittlesea Road	392 14 10		1,663 1 5	
Wallan Road	..		172 12 0	
Whittlesea–Kinglake Road	66 0 4		446 16 11	
		458 15 2		3,334 9 9
WIMMERA SHIRE—				
Dooen Road	..		230 14 9	
Horsham –Murtoa Road	..		263 12 6	
Horsham–Wal Wal Road	..		286 17 3	
Natimuk Road	273 0 0		301 11 3	
		273 0 0		1,082 15 9
WIMMERA AND ARAPILES SHIRES (Joint Works)—				
Horsham–Hamilton Road	..		579 3 3	
				579 3 3
WIMMERA AND ARAPILES SHIRES AND HORSHAM BOROUGH—				
Horsham–Hamilton Road	..		583 4 2	
				583 4 2
WINCHELSEA SHIRE—				
Birregurra–Forrest Road	21 3 6		360 7 10	
Lorne Road	..		960 13 9	
Lorne Road	..		Bd. 64 7 7	
Prince's Highway	..		20 14 3	
Prince's Highway	..		Bd. 4,640 7 2	
		21 3 6		6,046 10 7
WODONGA SHIRE—				
Kiewa–Wodonga Road	..		14 3 9	
Sydney Road	..		1,579 18 10	
Tallangatta Road	..		766 3 4	
Wodonga–Yackandandah Road	..		412 9 3	
				2,772 15 2
WONTHAGGI BOROUGH—				
Loch–Wonthaggi Road	..		630 12 6	
Wonthaggi–Inverloch Road	..		1,362 12 3	
Wonthaggi–Korumburra Road	..		101 10 2	
				2,094 14 11
WOORAYL SHIRE—				
Farmers Road	..		1,673 19 3	
Inverloch–Leongatha Road	..		2,797 6 2	
Inverloch–Wonthaggi Road	..		189 2 5	
Leongatha–Yarragon Road	511 10 0		1,373 16 5	
Lower Tarwin Road	..		961 7 5	
Main South Gippsland Road	..		3,334 15 8	
Mardan Road	..		258 17 7	
Turtons Creek Road	..		148 16 3	
Warragul–Leongatha Road	..		63 2 8	
Wild Dog Valley	0 3 2		36 7 0	
		511 13 2		10,837 10 10
WOORAYL AND MIRBOO SHIRE (Joint Works)—				
Turtons Creek Road	..		7 6 9	
				7 6 9
WYCHEPROOF SHIRE—				
Birchip–Sealake Road	..		231 2 0	
Birchip–Wycheproof Road	..		925 15 1	
Sealake–Ultima Road	40 2 7		43 12 10	
Woomelang–Sealake Road	..		22 13 11	
Wycheproof–Sealake Road	..		29 6 0	
		40 2 7		1,252 9 10
YACKANDANDAH SHIRE—				
Dederang Road	49 14 4		364 6 7	
Gundowring Road	26 0 3		1,141 15 9	
Kiewa–Wodonga Road	61 6 11		338 13 6	
Yackandandah–Wodonga Road	..		570 1 8	
		137 1 6		2,414 17 6
Carried forward	..	52,814 1 2	..	608,838 10 11

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

Municipality and Road.	Permanent Works.		Maintenance.	
	Amount.	Total.	Amount.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	..	52,814 1 2	..	608,838 10 11
YARRAWONGA SHIRE—				
Peechelba Road	..		17 8 3	
Wangaratta–Yarrawonga Road	3,067 14 5		2,216 11 10	
Yarrawonga–Cobram Road	..		530 6 9	
Yarrawonga–Rutherglen Road	..		22 19 9	
		3,067 14 5		2,787 6 7
YARRAWONGA, RUTHERGLEN, AND WANGARATTA SHIRES (Joint Works)—				
Yarrawonga–Rutherglen Road	..		26 3 0	
				26 3 0
YEA SHIRE—				
Upper Goulburn Road	1 16 9		1,016 11 8	
Whittlesea–Kinglake Road	6 5 6		..	
Yea–Glenburn Road	320 1 2		1,001 18 2	
		328 3 5		2,018 9 10
YEA AND BROADFORD SHIRES (Joint Works)—				
Upper Goulburn Road	..		23 11 0	
				23 11 0
YEA AND ELTHAM SHIRES (Joint Works)—				
Yarra Glen–Glenburn Road	..		33 9 0	
				33 9 0
YEA AND ALEXANDRA SHIRES (Joint Works)—				
Upper Goulburn Road	..		1 1 9	
				1 1 9
		56,209 19 0		613,728 12 1
Suspense	..	1,349 0 2		
		54,860 18 10		
STATE HIGHWAYS.				
Prince's Highway West	..		36,740 16 10	
Prince's Highway East	..		49,656 19 0	
Western Highway	..		31,717 2 8	
Calder Highway	..		34,859 3 6	
Northern Highway	..		10,481 1 7	
Hume Highway	..		38,916 13 1	
Omeo Highway	..		15,077 15 10	
				217,449 12 6
Total	..	54,860 18 10	..	831,178 4 7

APPENDIX D.

COUNTRY ROADS BOARD.

STATEMENT OF EXPENDITURE IN CONNEXION WITH CONSTRUCTION OF DEVELOPMENTAL ROADS FOR YEAR ENDED 30TH JUNE, 1931.

Municipality and Road.	Act No. 3662 (3255). Amount.	Total.
	£ s. d.	£ s. d.
ALBERTON SHIRE—		
Albert River Road	194 0 4	
Ballook–Traralgon Road ..	172 1 5	
Blackwarri–Yarram Road ..	1,015 17 6	
Carrajung–Gormandale Road	341 16 3	
Gelliondale Road	161 12 6	
Whitelaw's Track Road ..	152 6 0	
		2,037 14 0
ALEXANDRA SHIRE—		
Terip Terip Road	55 12 10	
		55 12 10
ARAPILES SHIRE—		
Arapiles–Grassy Flat Road ..	314 19 11	
Miga Lake–Gymbowen Road	120 11 5	
		435 11 4
BACCHUS MARSH SHIRE—		
Parwan Road	1,160 12 0	
		1,160 12 0
BAIRNSDALE SHIRE—		
Bairnsdale–Bengworden Road	1,009 6 0	
Bullumwaal–Tabberabbera Road	8 6 0	
Calulu–Boggy Creek Road ..	542 19 8	
		1,560 11 8
BALLAN SHIRE—		
Blakeville Road	205 14 11	
Bungeeltap Road	299 15 7	
Moorarbool West Road ..	192 1 10	
		697 12 4
BALLAN AND BUNINYONG SHIRES (Joint Works)—		
Boundary Road	32 7 1	
		32 7 1
BASS SHIRE—		
Dalyston–Glen Forbes Road..	829 4 4	
Glen Alvie Road	688 14 2	
Kernot–Krowera Road ..	338 15 0	
Sheepways Road	1,305 18 0	
Wonthaggi–Loch Road ..	63 19 7	
		3,226 11 1
BEECHWORTH SHIRE—		
Hillsborough Road ..	445 17 4	
		445 17 4
BENALLA SHIRE—		
Molyullah–Tatong Road ..	219 4 11	
		219 4 11
BERWICK SHIRE—		
Beaconsfield–Emerald Road ..	213 18 7	
Cockatoo–Gembrook Road ..	360 1 8	
Emerald Road	76 5 0	
Garfield–Catani Road ..	232 13 4	
Nar-nar-goon–Gembrook Road	117 19 9	
Tynong–Tonimbuk Road ..	88 1 10	
		1,089 0 2
BIRCHIP SHIRE—		
Berriwillock Road	270 9 4	
Curyo West Road	95 16 0	
		366 5 4
BORUNG SHIRE—		
Boolite–Sheephills Road ..	213 15 10	
Brim West Road	726 11 10	
Donald–Warracknabeal Road	613 12 7	
Lah West Road	0 2 5	
Brim East Road	611 6 4	
		2,165 9 0
BORUNG AND KARKAROOC SHIRES (Joint Works)—		
Galaquil West Road ..	257 1 5	
		257 1 5
BRIGHT SHIRE—		
Happy Valley Road ..	1,017 0 5	
Kiewa Valley Road ..	1,324 4 8	
Myrtleford–Yackandandah Road	578 0 11	
		2,919 6 0
Carried forward ..	..	16,668 16 6

Municipality and Road.	Act No. 3662 (3255). Amount.	Total.
	£ s. d.	£ s. d.
Brought forward ..	..	16,668 16 6
BULLA AND BROADMEADOWS SHIRES (Joint Works)—		
Konagaderra Road ..	31 7 0	
		31 7 0
BULN BULN SHIRE—		
Mountain View–McDonald's Track Road	76 11 6	
Neerim North Road ..	1,037 17 1	
Jindivick–Neerim South Road	4 10 0	
Neerim South–Neerim East Road	90 2 0	
		1,209 0 7
BUNINYONG SHIRE—		
Hennessey's Road	990 10 3	
Murphy's Road	744 7 0	
		1,734 17 3
BUNINYONG AND BALLAN SHIRES SHIRES (Joint Works)—		
Egerton–Bungal Road ..	1 7 10	
		1 7 10
CHARLTON SHIRE—		
Lake Marmal Road.. ..	119 0 2	
Yeungroon Road	20 5 0	
		139 5 2
COHUNA SHIRE—		
Murray River Valley Road (F.A.R. Exp.)	233 19 10	
Cohuna–Leitchville Road ..	60 17 9	
Cohuna–McMillan's Road ..	690 10 10	
Cohuna–Mead Road ..	509 15 1	
Gannawarra Road	1,007 14 11	
		2,502 18 5
COLAC SHIRE—		
Colac–Forrest Road ..	3,119 19 3	
		3,119 19 3
CORIO SHIRE—		
Geelong–Bacchus Marsh Road	166 9 3	
Little River–Ripley Road ..	0 10 0	
McArthur's Road	678 13 4	
		845 12 7
CRANBOURNE SHIRE—		
Mank's Road	8 7 6	
		8 7 6
DEAKIN SHIRE—		
Echuca–Wyuna Road ..	159 8 6	
Girgarre East Road ..	12 15 4	
Girgarre West Road ..	16 2 11	
Kyabram West Road ..	31 10 0	
Strathallan East Road ..	24 3 4	
Tongala East Road.. ..	205 10 11	
Tongala West Road ..	68 0 0	
		517 11 0
DEAKIN AND RODNEY SHIRES (Joint Works)—		
Kyabram–Stanhope Road ..	288 16 5	
		288 16 5
DIMBOOLA SHIRE—		
Glenlee–Jeparit Road ..	471 3 0	
Pepper Plains Road ..	28 16 10	
		499 19 10
DONALD SHIRE—		
Donald–Minyip Road ..	567 6 8	
Corack East–Donald Road ..	480 15 3	
Jeffcott Road	257 8 3	
Litchfield Road	30 16 2	
Rich Avon Road	31 8 0	
Sheep Hills Road	29 19 11	
Watchem–Warracknabeal Road	213 14 10	
		1,611 9 1
DUNDAS SHIRE—		
Melville Forest Road ..	206 15 0	
		206 15 0
Carried forward ..	..	29,386 3 5

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

Municipality and Road.	Act No. 3662 (3255). Amount.	Total.
	£ s. d.	£ s. d.
Brought forward ..	..	29,386 3 5
DUNMUNKLE SHIRE—		
Marnoo–Donald Road (F.A.R. Exp.)	44 15 1	
Banyena Road	471 18 8	
Lubeck West Road ..	514 5 3	
Marnoo–Rupanyup Road ..	503 15 5	
Minyip–Kewell Road ..	48 13 8	
		1,583 8 1
ELTHAM SHIRE—		
Cottle s Bridge–Strathewan Road	476 16 1	
		476 16 1
EUROA AND GOULBURN SHIRES (Joint Works)—		
Longwood–Ruffy Road ..	384 13 2	
		384 13 2
FERN TREE GULLY SHIRE—		
Emerald Road	7 0 9	
Emerald–Macclesfield Road ..	667 2 6	
		674 3 3
FLINDERS SHIRE—		
Bittern–Dromana Road ..	283 4 11	
Brown s Road	33 0 0	
Red Hills Road	50 16 6	
		367 1 5
FRANKSTON AND HASTINGS SHIRE—		
Hodgin's Road	200 0 0	
		200 0 0
GLENELG SHIRE—		
Glenorchy Estate Road ..	76 18 0	
Merino–Struan–Tahara Road	280 14 0	
		357 12 0
GLENLYON SHIRE—		
Daylesford–Trentham Road ..	781 1 3	
Bullarto South Road ..	702 18 4	
Porcupine Ridge Road ..	79 9 0	
		1,563 8 7
GORDON SHIRE—		
Barrapoort West Road ..	398 7 9	
		398 7 9
GRENVILLE SHIRE—		
Lismore–Pittong Road (F.A.R. Exp.)	652 9 4	
Gillett's Road	310 15 1	
		963 4 5
HAMPDEN SHIRE—		
Vite Vite Road (F.A.R. Exp.)	346 16 5	
Berrybank–Werneth Road ..	0 6 0	
Cundare–Duverney Road ..	721 0 0	
Foxhow Road	18 2 4	
		1,086 4 9
HEALESVILLE SHIRE—		
Buxton–Marysville Road ..	99 10 0	
Myer's Creek Road ..	19 6 6	
		118 16 6
HEYTESBURY SHIRE—		
Timboon–Scott's Creek Road (F.A.R. Exp.)	2 8 8	
Devil's Gully Road ..	104 0 1	
Glenfyne West Road ..	458 7 7	
South Ecklin Road ..	459 10 4	
Timboon–Cowley's Creek Road	173 0 0	
Timboon–Terang Road ..	72 18 9	
Timboon–Scott's Creek Road	157 0 0	
		1,427 5 5
HEYTESBURY AND WARRNAMBOOL SHIRES (Joint Works)—		
Ayersford Road	537 14 8	
		537 14 8
HUNTLY SHIRE—		
Diggora Road	3 12 10	
Drummartin Road	204 10 0	
Holmberg Road	56 12 7	
		264 15 5
KARA KARA SHIRE—		
St. Arnaud–Marnoo Road ..	210 2 11	
		210 2 11
Carried forward ..	..	39,999 17 10

Municipality and Road.	Act No. 3662 (3255). Amount.	Total.
	£ s. d.	£ s. d.
Brought forward ..	..	39,999 17 10
KARKAROOC SHIRE—		
Hopetoun–Lascelles Road ..	564 8 0	
Hopetoun–Yaapeet Road ..	57 0 0	
Wathe Siding Road ..	248 15 2	
Yaapeet–Nypo Road ..	520 5 8	
Yarto–Patchewollock Road ..	588 3 1	
		1,978 11 11
KERANG SHIRE—		
Murray River Valley Road (F.A.R. Exp.)	3,107 8 5	
Murrabit Road	684 14 3	
Murrabit–Myall Road ..	429 10 1	
Murrabit West Road ..	454 15 10	
Winlaton Road	772 5 4	
		5,448 13 11
KORUMBURRA SHIRE—		
Bena–Kongwak Road ..	1,814 9 4	
Briggs Road	12 1 2	
Korumburra South Road ..	108 4 10	
Loch–Nyora Road ..	95 13 7	
New Territory Road ..	74 0 0	
Poowong–Olsen Road ..	229 18 2	
Sheepways Road	1,422 12 9	
Timm's Road	399 10 0	
Witherden's Road	32 13 1	
		4,189 2 11
KORUMBURRA AND WOORAYL SHIRES (Joint Works)—		
Brigg's Road	5 8 10	
		5 8 10
KOWREE SHIRE—		
Little Desert Road (F.A.R. Exp.)	570 1 6	
Banayeo Road	99 8 10	
Edenhope–Natimuk Road ..	37 6 9	
Elderslie Road	194 11 6	
Minimay Road	487 16 11	
Miga Lake–Gymbowen Road	5 0 0	
		1,394 5 6
KORONG SHIRE—		
Borung West Road ..	190 0 0	
Inglewood North Road ..	15 5 11	
Kinypanial Road	17 15 0	
Mysia West Road	463 3 6	
Woolshed Road	75 0 0	
		761 4 5
KYNETON SHIRE—		
Baynton Road	644 0 3	
		644 0 3
LAWLOIT SHIRE—		
Little Desert Road (F.A.R. Exp.)	694 7 10	
Cove Estate Road	501 16 0	
Serviceton South Road ..	524 10 0	
		1,720 13 10
LOWAN SHIRE—		
Diapur–Yanac Road ..	165 0 0	
Netherby Road	200 0 0	
Yanac South Road ..	181 16 9	
		546 16 9
MCIVOR SHIRE—		
Mount Camel Estate Road F.A.R. Exp.)	44 14 8	
Mount Camel Estate Road (F.A.R. Exp.) Lady's Pass	6 10 8	
Baynton Road	855 15 0	
		907 0 4
MAFFRA SHIRE—		
Bundalaguah Road ..	449 11 8	
		449 11 8
MANSFIELD SHIRE—		
Benalla–Mansfield Road ..	34 17 10	
		34 17 10
MARONG SHIRE—		
Newbridge–Shelbourne Road	164 17 11	
Yarraberb Road	176 15 4	
		341 13 3
Carried forward ..	..	58,421 19 3

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

Municipality and Road.	Act No. 3662 (3255). Amount.	Total.
	£ s. d.	£ s. d.
Brought forward ..	..	58,421 19 3
MILDURA SHIRE—		
Murray River Valley Road (F.A.R. Exp.)	375 3 1	
Bambill North Road ..	40 13 9	
Benetook Avenue	187 12 1	
Benetook North Road ..	31 0 0	
Brownport Road	2 13 11	
Colignan Road	194 7 6	
Karrawinna South Road ..	1 15 3	
Karween South Road ..	1 6 2	
Merrinee South Road ..	23 17 5	
Red Cliffs East Road ..	297 12 1	
Red Cliffs South-East Road ..	162 17 5	
Red Cliffs West Road ..	849 0 2	
Werrimull North Road ..	20 12 0	
Werrimull South Road ..	2 14 7	
		2,191 5 5
MIGRATION ROADS—		
Bambill North Road ..	36 9 4	
Bambill South Road ..	26 15 5	
Benetook South Road ..	53 2 9	
Karrawinna North Road ..	1 7 0	
Karrawinna South Road ..	157 11 0	
Meringur North Road ..	1 4 0	
Meringur South Road ..	144 7 0	
Merrinee North Road ..	140 7 6	
Merrinee South Road ..	137 6 3	
Pirlta North Road ..	34 2 8	
Werrimull North Road ..	134 1 10	
Werrimull South Road ..	346 16 1	
Yarrara North Road ..	39 11 10	
Yarrara South Road ..	108 18 1	
		1,362 0 9
MINHAMITE SHIRE—		
Condah–McArthur Road ..	98 4 2	
Nardoo Road	197 9 0	
Orford–St. Helens Road ..	24 7 3	
		320 0 5
MIRBOO SHIRE—		
Mirboo–Yarragon Road ..	14 14 6	
Nicholl's Road	1,660 16 3	
Boolarra–Mirboo Road (F.A.R. Exp.)	442 15 1	
Mount Vernon and Boorool (F.A.R. Exp.)	35 2 10	
Darlimurla–Thorpdale Road	20 7 6	
		2,173 16 2
MORTLAKE SHIRE—		
Vite Vite Road (F.A.R. Exp.)	772 12 3	
		772 12 3
MORWELL SHIRE—		
Boolarra–Morwell Road ..	378 10 0	
Boolarra–Welshpool Road ..	25 14 8	
Middle Creek Road ..	139 11 8	
Thorpdale East Road ..	2,622 6 2	
Tyers Road	592 7 6	
		3,758 10 0
MORWELL AND TRARALGON SHIRES (Joint Works)—		
Walker's Road	73 19 10	
		73 19 10
NARRACAN SHIRE—		
Childer's–Thorpdale Road ..	1,446 5 1	
Coalville–Narracan Road ..	393 13 10	
Darlimurla–Thorpdale Road	102 15 0	
Erica Road	9 8 4	
Mirboo–Yarragon Road ..	2 14 6	
Platina Road	335 10 4	
Shady Creek Road	915 9 6	
Sunny Creek Road	108 8 2	
Thorpdale East Road ..	235 13 7	
Thorpdale–Yarragon Road ..	278 13 0	
Trafalgar–Willowgrove Road	853 6 0	
		4,681 17 4
NEWHAM AND WOODEND SHIRE—		
Campaspe Road	1,166 6 3	
Macedon–Village Settlement Road	16 16 0	
		1,183 2 3
Carried forward ..	..	74,939 3 8

Municipality and Road.	Act No. 3662 (3255). Amount.	Total.
	£ s. d.	£ s. d.
Brought forward ..	..	74,939 3 8
NEWSTEAD AND MOUNT ALEXANDER SHIRE—		
Glengower–Joyce's Creek Road	145 8 9	
		145 8 9
NUMURKAH SHIRE—		
Waaia North Road ..	499 17 5	
Waaia South Road ..	52 18 4	
Wunghnu East Road ..	370 13 4	
		923 9 1
OMEO SHIRE— ..		
Brookville Road	1,419 0 2	
Little River Road	63 11 6	
Reedy Creek Road	28 9 6	
Sandy Creek Road	796 5 6	
Swift's Creek East Road ..	114 0 0	
		2,421 6 8
ORBOST SHIRE—		
Bete Bolong–Waygara Road	359 12 2	
Groves Road	140 9 9	
Lower Bemm Road.. ..	147 8 0	
Mallacoota West Road ..	231 18 10	
		879 8 9
OXLEY SHIRE—		
Boggy Creek Road	86 10 4	
Fifteen-Mile Creek Road ..	325 13 6	
King Valley Road	574 12 5	
		986 16 3
PORTLAND SHIRE—		
Grubbed Connexion Road ..	384 7 2	
Winnap–Drik Drik Road ..	111 10 11	
		495 18 1
PYALONG SHIRE—		
Lancefield–Tooboorac Road ..	0 7 10	
		0 7 10
RIPON SHIRE—		
Trawalla West Road ..	131 1 3	
		131 1 3
ROCHESTER SHIRE—		
Corop Road	332 10 6	
Echuca West Road ..	400 0 0	
Kotta East Road	14 0 0	
		746 10 6
RODNEY SHIRE—		
Mooroopna–Undera Road ..	595 17 2	
Tatura–Toolamba Road ..	72 18 0	
		668 15 2
ROMSEY SHIRE—		
Baynton Road	387 14 9	
		387 14 9
ROSEDALE SHIRE—		
Merriman's Creek Road ..	174 5 10	
		174 5 10
RUTHERGLEN SHIRE—		
Black Swamp Road ..	17 8 1	
		17 8 1
SEYMOUR SHIRE—		
Highlands Road	1,588 10 11	
Hughes Creek Road ..	3 0 10	
		1,591 11 9
SHEPPARTON SHIRE—		
Congupna Road ..	3 5. 0	
Grahamvale Road	27 9 0	
Pine Lodge North Road ..	86 19 0	
		117 13 0
SOUTH GIPPSLAND SHIRE—		
Boys Road	4 10 0	
Dollar–Foster Road ..	442 10 0	
Franklin River Road ..	120 0 0	
O'Grady's Ridge Road ..	353 9 6	
Port Franklin Road ..	744 6 10	
Whitelaw's Track	451 10 5	
Woomera Creek Road ..	352 11 5	
		2,468 18 2
STAWELL SHIRE—		
Marnoo–Donald Road (F.A.R. Exp.)	147 18 7	
Marnoo–St. Arnaud Road ..	30 18 8	
Pomonal Road	475 7 4	
		654 4 7
TAMBO SHIRE—		
Buchan–Gelantipy Road ..	794 18 0	
Buchan South Road ..	187 11 2	
		982 9 2
Carried forward ..	..	88,732 11 4

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

Municipality and Road.	Act No. 3662 (3255). Amount.	Total.
	£ s. d.	£ s. d.
Brought forward ..	..	88,732 11 4
TOWONG SHIRE—		
George's Creek Road ..	70 4 4	
Murray Valley Road ..	12 12 1	
Shelley–Jingellic Road ..	257 18 1	
Tallangatta Creek Road ..	368 18 3	
Yabba Road	631 18 0	
		1,341 10 9
TRARALGON SHIRE—		
Callignee Factory Road ..	301 4 9	
Traralgon Creek Road ..	52 17 9	
Walker's Road	10 0 0	
		364 2 6
TUNGAMAH SHIRE—		
Boweya Road	237 0 0	
Cobram–Katamatite Road ..	0 16 6	
Katandra Road	551 4 0	
Yabba North Road.. ..	407 5 2	
Yabba South Road ..	156 15 0	
Yarroweyah–Tocumwal Road	424 4 6	
Youanmite–Wunghnu Road ..	222 7 0	
		1,999 12 2
UPPER MURRAY SHIRE—		
Murray River Valley Road (F.A.R. Exp.)	471 13 3	
Beetoomba Road	989 12 5	
Thowgla Road	39 14 10	
		1,501 0 6
UPPER YARRA SHIRE—		
Woori Yallock–Cockatoo Road	77 3 3	
		77 3 3
VIOLET TOWN SHIRE—		
Fernhills Road	488 0 2	
		488 0 2
WALPEUP SHIRE—		
Panitya North Road (F.A.R. Exp.)	489 16 6	
Boinka North Road ..	191 13 4	
Boinka South Road ..	177 13 1	
Boorongie North Road ..	527 1 2	
Boulka–Timberoo Road ..	10 7 0	
Carina North Road ..	39 16 9	
Carina South Road ..	49 0 9	
Cowangie Road	224 1 2	
Danya North Road.. ..	609 16 8	
Galah–Timberoo Road ..	15 10 6	
Kattyong Road	523 12 8	
Linga North Road ..	264 4 0	
Murrayville North Road ..	128 8 4	
Murrayville South Road ..	20 7 9	
Nyang South Road ..	247 1 7	
Ouyen–Kulwin Road ..	783 13 1	
Ouyen–Tempy Road ..	443 7 11	
Panitya South Road ..	336 9 9	
Tiega North-East Road ..	20 14 0	
Underbool–Gnarr Road ..	107 15 8	
Underbool–Mamengarook Road	10 0 0	
Underbool South Road ..	0 11 11	
Walpeup–Patchewollock Road	7 15 3	
Walpeup South West Road ..	36 3 9	
Walpeup–North Meridian Road	5 3 6	
		5,270 6 1
Wannon SHIRE—		
Melville Forest Road ..	927 11 8	
		927 11 8
WANGARATTA SHIRE—		
Peechelba Road	462 15 3	
		462 15 3
WARANGA SHIRE—		
Mount Camel Estate Road (F.A.R. Exp.)	1,324 4 7	
Mount Camel–Corop Road ..	1,196 1 6	
		2,520 6 1
WARRAGUL SHIRE—		
Bona Vista–Nilma Road ..	363 6 6	
Ferndale Road	671 9 0	
Lardner–Tetoora Road ..	508 11 10	
Mountain View Road ..	10 17 6	
Nilma–Shady Creek Road ..	252 5 7	
Telegraph Road	90 0 0	
		1,896 10 5
Carried forward ..	..	105,581 10 2

Municipality and Road.	Act No. 3662 (3255). Amount.	Total
	£ s. d.	£ s. d.
Brought forward ..	..	105,581 10 2
WARRNAMBOOL SHIRE—		
Childer's Cove Road ..	675 15 4	
Naringle Road	748 10 4	
Panmure Road	534 17 11	
		1,959 3 7
WERRIBEE SHIRE—		
Exford Road ..	305 4 0	
		305 4 0
WHITTLESEA SHIRE—		
Chadd's Creek Road ..	64 9 4	
Eden Park Road	237 2 3	
		301 11 7
WINCHELSEA SHIRE— ..		
Pennyroyal Road	3 13 9	
		3 13 9
WODONGA SHIRE—		
Beechworth–Wodonga Road	239 3 7	
		239 3 7
WOORAYL SHIRE—		
Buffalo–Waratah Road ..	3 5 0	
Canavan Road	23 4 2	
Coulter's Road	18 2 3	
Dollar–Dumbalk Road ..	1,577 17 5	
Inverloch–Lower Tarwin Road	53 0 9	
Leongatha–Mirboo Road ..	486 18 11	
Mardan Road	406 17 10	
Mardan–Dumbalk Road ..	4 8 0	
Meeniyan–Nerrena Road ..	183 5 9	
Nerrena Road	961 17 11	
		3,718 18 0
WOORAYL AND SOUTH GIPPSLAND SHIRES (Joint Works)—		
Dollar–Dumbalk Road ..	92 11 1	
		92 11 1
WYCHEPROOF SHIRE—		
Culgoa–Lalbert Road ..	256 15 0	
Meridian Road	9 9 7	
Nyarrin Road	6 5 0	
Sealake–Myall Road ..	24 5 0	
Sea Lake–Tyrrell Downs Road	10 10 0	
Berriwillock–Woomelang Road	979 4 8	
		1,286 9 3
YACKANDANDAH SHIRE—		
Dederang–Tawanga Road ..	13 4 5	
Kergunyah Road	1,3 2 7 9	
Running Creek Road ..	514 13 2	
		1,890 5 4
YEA SHIRE—		
Flowerdale Road	419 14 3	
Highlands Road	587 10 10	
		1,007 5 1
Total	..	116,385 15 5

SPECIAL PROVISION.

ALBERTON SHIRE—		
Albert River Road	164 8 10	
Binginwarri–Albert River Road	1,421 13 8	
Binginwarri–Welshpool Road	101 7 10	
Carrajung–Balook Road ..	1,173 2 1	
Madalya Road	377 3 7	
Merriman's Creek Road ..	14 17 11	
Ridge Road	1 6 0	
Devil's Pinch Road ..	138 7 4	
		3,392 7 3
ALEXANDRA SHIRE—		
Maintongoon Road ..	173 1 7	
		173 1 7
BENALLA AND OXLEY SHIRES (Joint Works)—		
Toombullup Road (F.A.R. Exp.)	318 14 0	
		318 14 0
BULN BULN SHIRE—		
Fumina Road (F.A.R. Exp.)	620 6 9	
Duggan North Road ..	467 6 11	
Turner's Road	83 2 0	
		1,170 15 8
Carried forward ..	..	121,440 13 11

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

Municipality and Road.	Act No. 3662 (3255). Amount.	Total.
	£ s. d.	£ s. d.
Brought forward ..	..	121,440 13 11
ELTHAM SHIRE—		
Kinglake–Kinglake East Road	1,810 19 10	
Kinglake Road (F.A.R. Exp.)	751 12 0	
		2,562 11 10
ELTHAM AND YEA SHIRES (Joint Works)—		
Yarra Glen–Glenburn Road (F.A.R. Exp.)	1,232 4 3	
Toolangi–Kinglake Road ..	80 11 8	
		1,312 15 11
HEALESVILLE SHIRE—		
Healesville–Toolangi Road ..	498 13 0	
Toolangi–Kinglake Road (F.A.R. Exp.)	714 6 8	
		1,212 19 8
HEYTESBURY SHIRE—		
Peterborough–Port Campbell Road (F.A.R. Exp.) ..	311 3 5	
Timboon–Nirranda Road (F.A.R. Exp.)	166 12 3	
Eastern Creek Settlement Road	1,002 15 3	
Princetown–Port Campbell Road	50 10 9	
Timboon–Cowley's Creek Road	25 6 6	
Timboon–Curdie's Vale Road	215 2 4	
Timboon–Digney's Siding Road	6 10 0	
Cooriejong Road	428 8 10	
		2,206 9 4
KORUMBURRA SHIRE—		
Trida–Strezlecki Road ..	21 2 2	
Wild Dog–Strezlecki Road (F.A.R. Exp.)	43 12 10	
		64 15 0
MANSFIELD SHIRE—		
Tolmie Road	140 18 9	
		140 18 9
MORWELL AND TRARALGON SHIRES (Joint Works)—		
Jeeralang West Road (F.A.R. Exp.)	Cr. 2 17 6	
		Cr. 2 17 6
MORWELL SHIRE—		
Morwell River Road (F.A.R. Exp.)	1,366 11 3	
Morwell River Road ..	20 9 10	
Linklater's Connexion Road ..	39 3 5	
Middle Creek Road ..	38 5 11	
		1,464 10 5
NARRACAN AND MORWELL SHIRES (Joint Works)—		
Allambee Estate Road (F.A.R. Exp.)	407 1 6	
		407 1 6
NARRACAN SHIRE—		
Walhalla–Matlock Road (F.A.R. Exp.)	774 15 7	
Allambee–Childers Road ..	10 15 10	
Allambee–Thorpdale Road ..	801 2 10	
Leongatha–Yarragon Road ..	62 10 0	
Moe–Moondarra Road ..	488 1 3	
Sunny Creek Road	320 10 2	
		2,457 15 8
OMEO SHIRE—		
Beloka Road	130 19 9	
Swift's Creek–Cassilis Road ..	24 0 0	
		154 19 9
ORBOST AND TAMBO SHIRES (Joint Works)—		
Bonang–Gelantipy Road (F.A.R. Exp.)	917 10 11	
		917 10 11
ORBOST SHIRE—		
Orbost–Buchan Road (F.A.R. Exp.)	1,312 13 4	
Orbost–Delegate Road (F.A.R. (Exp.)	236 13 5	
Combienbar Road	509 17 2	
		2,059 3 11
Carried forward ..	..	136,399 9 1

Municipality and Road.	Act No. 3662 (3255). Amount.	Total.
	£ s. d.	£ s. d.
Brought forward ..	..	136,399 9 1
OTWAY SHIRE—		
Apollo Bay–Wye River Road (F.A.R. Exp.)	1,184 16 8	
Forrest–Apollo Bay Road (F.A.R. Exp.)	533 14 5	
Hordern Vale–Apollo Bay Road (F.A.R. Exp.)	910 18 3	
Laver's Hill–Glenaire Road (F.A.R. Exp.)	756 12 0	
Laver's Hill–Princetown Road (F.A.R. Exp.)	123 3 8	
Mount Sabine–Laver's Hill Road (F.A.R. Exp.) ..	61 6 11	
Wait a While Road ..	31 19 7	
Amiet's Track Road ..	377 1 0	
Apollo Bay–Wye River Road	25 0 0	
Barham Valley Road ..	745 9 6	
Cape Patten Road	87 2 0	
Cobden–Port Campbell–Princetown Road	0 7 10	
Colac–Beech Forest Road ..	1,506 2 5	
Colac–Forest Road ..	19 19 7	
Dehnert's Road	118 9 9	
Ferguson–Charley's Creek Road	197 8 6	
Gellibrand East Road ..	509 12 3	
Hordern Vale Road ..	103 17 7	
Hordern Vale–Apollo Bay Road	80 4 8	
Lardner's Track Road ..	206 0 11	
Laver's Hill–Chapplevale–Devondale Road ..	896 0 5	
Laver's Hill–Princetown Road	116 15 10	
Princetown – Port Campbell Road	733 6 6	
Skene's Creek Road ..	304 9 1	
Sunnyside Road	583 8 2	
Black–Carlisle Road ..	40 3 7	
Black's Road	2 2 0	
Colac–Carlisle Road ..	11 17 5	
Tuxion Road	20 16 0	
		10,288 6 6
OXLEY SHIRE—		
Tolmie–Whitfield Road (F.A.R. Exp.)	2,727 0 2	
Rose River Road	158 7 5	
Whitfield–Tolmie Road ..	367 13 0	
		3,253 0 7
ROSEDALE SHIRE—		
Callignee Estate Road ..	152 8 7	
Callignee South Road ..	1,062 17 8	
		1,215 6 3
ROSEDALE AND TRARALGON SHIRES (Joint Works)—		
Callignee South Road ..	48 15 11	
		48 15 11
SOUTH GIPPSLAND SHIRE—		
McCartin's Road	69 1 0	
Toora–Gunyah Road ..	2,341 10 10	
Toora–Wonyip Road ..	122 17 0	
		2,533 8 10
TRARALGON SHIRE—		
Traralgon Creek Road ..	297 19 2	
Walker's Road	5 2 10	
		303 2 0
TRARALGON AND MORWELL SHIRES (Joint Works)—		
Walker's Road	81 13 3	
		81 13 3
WINCHELSEA SHIRE—		
Cape Patten Road	144 3 10	
		144 3 10
WOORAYL SHIRE—		
Central Road	708 9 4	
Leongatha–Yarragon Road ..	90 5 10	
West Tarwin Valley Road ..	2 13 0	
		801 8 2
MIRBOO SHIRE—		
Mt. Vernon and Boorool Road (F.A.R. Exp.)	67 0 0	
		67 0 0
Total	..	155,135 14 5

APPENDIX E.

COUNTRY ROADS BOARD.

MAIN ROADS.

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED, ROADS CONSTRUCTED AND MAINTAINED UNDER THE PROVISIONS OF THE COUNTRY ROADS ACT 1928 DURING THE YEAR ENDED 30TH JUNE, 1931.

Name of Municipality and Road.	Nature and Locality of Work.	Permanent Surveys Effected.	Permanent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES.			
ALBERTON SHIRE—				
Carrajung–Gormandale Road	Timber bridge and approaches at Greig's Creek	·2	..	..
,, ,, ,,	Resealing with bitural near Yarram	..	..	2
,, ,, ,,	Metal Sheeting at Reville's Hill	..	..	·4
,, ,, ,,	General maintenance	..	..	17·5
Foster–Yarram Road ..	General maintenance	..	..	8
Sale–Yarram Road ..	Timber bridge and approaches at Darriman	·13	..	..
,, ,, ,, ..	Resealing with bitural near Yarram	..	..	2·2
,, ,, ,, ..	General maintenance	..	..	27·6
Traralgon–Balook Road ..	Gravel sheeting near Balook and opposite Allotments 9 and 30B, Section A, Parish of Bulga	..	..	1·5
,, ,, ,, ..	General maintenance	..	..	9
Yarram–Boolarra Road ..	Modified macadam construction, Waverley Corner to Tooloonook	..	..	·7
,, ,, ,, ..	Resealing from Allotment 25A, Parish of Devon, to Waverley Corner	..	..	2·6
,, ,, ,, ..	Metal sheeting and reshaping at Lack River	..	..	2·5
,, ,, ,, ..	General maintenance	..	..	17·5
Yarram–Port Albert Road ..	Resealing with bitural from Yarram to Alberton	..	..	3·7
,, ,, ,, ..	General maintenance	..	..	8.9
Yarram–Wonwron Road ..	General maintenance	..	..	4
ALEXANDRA SHIRE—				
Cathkin–Mansfield Road ..	Scarifying and rolling from Allotment 19 to Allotment 12, Parish of Yarck	..	..	4
,, ,, ,, ..	Patrol maintenance	..	..	11
Healesville–Alexandra Road ..	Reinforced concrete box culvert in Alexandra	—	..	..
,, ,, ,, ..	Bitumen sealing 1·75 miles, scarifying and rolling 4 miles	..	..	5·75
,, ,, ,, ..	General maintenance	..	..	13·25
Upper Goulburn Road ..	Scarifying, rolling, and sheeting with granitic sand	..	..	2
,, ,, ,, ..	General maintenance	..	..	23
Yarck Road	Bitumen sealing	..	..	·32
,, ,, ...	General maintenance	..	..	2·68
ARAPILES SHIRE—				
Horsham–Hamilton Road ..	Gravelling opposite Allotments 16A and 17A, Parish of Mockinya	·38	..	..
,, ,, ,, ..	Gravelling and timber bridge opposite Allotment 43, Parish of Mockinya	·24	..	..
,, ,, ,, ..	Bituminous macadam construction opposite Allotment 216, Parish of Bungalally	..	..	·07
Horsham-Natimuk - Edenhope Road	Gravelling opposite Allotment 28, Parish of Tooan	·3	..	..
,, ,, ,,	Limestone metalling opposite Allotment 31A, Parish of Tooan	..	·19	..
,, ,, ,,	Limestone metalling opposite Allotments 25A and 31A, Parish of Tooan	..	·28	..
,, ,, ,,	Gravelling from Allotment 28 to Allotment 32A, Parish of Tooan	..	·6	..
,, ,, ,,	Limestone metalling from Allotment 25A to Allotment 20F, Parish of Tooan	..	·3	..
,, ,, ,,	Limestone metalling opposite Allotment 25A, Parish of Tooan	..	·3	..
,, ,, ,,	Blinding from Allotment 31A to Allotment 20D, Parish of Tooan	..	..	·89
ARARAT BOROUGH—				
Ballarat–Stawell Road ..	Bitumen sealing at Ararat	..	..	4·66
ARARAT SHIRE—				
Ararat–Elmhurst Road ..	Concrete culvert at Eversley, and general maintenance	..	..	23
Ararat–Warrnambool Road ..	Gravelling at Lake Bolac	..	..	·75
,, ,, ,, ..	Double coat bitumen surfacing between Ararat and Rossbridge, and at Lake Bolac	..	..	3
,, ,, ,, ..	Single coat bitumen surfacing north of Lake Bolac	..	..	2
,, ,, ,, ..	General maintenance	..	..	35
Ballarat–Hamilton Road ..	Single coat bitumen surfacing from Westmere to past Lake Bolac	..	..	·9
,, ,, ,, ..	Double coat bitumen surfacing through Wickliffe	..	..	·75
,, ,, ,, ..	Gravelling at Wickliffe	..	..	·76
,, ,, ,, ..	General maintenance	..	..	24
Maroona–Glenthompson Road	Double coat bitumen surfacing between Willaura and Glenthompson	..	..	1
,, ,, ,,	Double coat bitumen surfacing at Lake Buninjon	..	..	1·5
,, ,, ,,	General maintenance	..	..	23
AVON SHIRE—				
Dargo Road	General maintenance	..	..	45
Prince's Highway	General maintenance	..	..	·75
Maffra–Sale Road	General maintenance	..	..	3
Maffra–Stratford Road ..	General maintenance	..	..	2
BACCHUS MARSH SHIRE—				
Ballarat Road	Spraying and patrol maintenance	..	..	1·2
Geelong–Bacchus Marsh Road	Reconstruction Tilley's Bridge	..	..	·01
,, ,,	Spraying and patrol maintenance	..	..	7·8
Gisborne Road	Repairs to Darley Bridge, forming and gravelling and bitumen surfacing northwards from bridge	..	..	1
,, ...	Patrol maintenance	..	..	9·9
	Carried forward	1·25	1·07	362·03

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND MAIN ROADS MAINTAINED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Work.	Permanent Surveys Effected.	Permanent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*			
	Brought forward	1·25	1·67	362·03
BAIRNSDALE SHIRE—				
Bulumwaal–Tabberabbera Road	Reconstruction and bitumen surfacing from McCulloch Street to Wy Yung Bridge	..	..	·45
,, ,, ,,	General maintenance	..	..	16
Prince's Highway	General maintenance	..	..	3·4
BALLAN SHIRE—				
Ballarat Road	Resealing with bitumen at Ballan	..	..	1
Daylesford Road	Bitumen sealing 1·5 miles and resealing ·35 miles in eight sections, commencing at Western Highway	..	..	1·85
,, ,, ...	Patrol maintenance	..	..	12·78
Gordon–Meredith "A" Road	General maintenance	..	..	4
,, ,, "B" ,,	Gravelling and drainage	..	..	·2
Mount Wallace Road ..	Sealing with bitumen (three sections) 1·85 miles and gravelling ·15 mile	..	..	2
,, ,, ,, ..	General maintenance	..	..	6·25
BALLARAT SHIRE—				
Ballarat–Lexton Road ..	Modified macadam construction in six sections from Allotment 58, Parish of Ercildoun to Allotment 30, Parish of Burrumbeet	..	..	1·7
Ballarat–Maryborough Road	Bitumen sealing of semi-penetrated road in three sections southerly from Miner's Rest	..	..	1·7
BANNOCKBURN SHIRE—				
Geelong–Ballarat Road ..	Gravel sheeting between Batesford and Bannockburn	..	..	5
,, ,, ,, ..	Gravel sheeting between Lethbridge and Green Tent	..	..	3·4
,, ,, ,, ..	General maintenance	..	..	11
Gordons–Meredith Road ..	Gravel sheeting in two sections opposite Allotment 61, and opposite allotments 96 and 70, Parish of Meredith	..	..	·6
,, ,, ,, ..	General maintenance	..	..	2·4
Inverleigh Road	Modified macadam construction between Fyansford and Stonehaven ..	..	..	1·9
,, ,, ...	General maintenance	..	..	15
Shelford Bannockburn Road	General maintenance	..	..	6·5
BARRABOOL SHIRE—				
Airey's Inlet Road	General maintenance	..	..	7
Anglesea Road	General maintenance	..	..	17
Hendy Main Road	General maintenance	..	..	14
BARRABOOL AND SOUTH BARWON SHIRES (Joint Works)—				
Torquay Road	General maintenance	..	..	7·85
BASS SHIRE—				
Almurta Road	Dressing with gravel and patrol maintenance	..	..	5·25
Dalyston–Wonthaggi Road ..	Dressing with gravel and patrol maintenance	..	..	1·63
Almurta Grantville Road ..	Dressing with gravel and patrol maintenance	..	..	3·25
Inverloch–Wonthaggi Road ..	Surfacing with bitural from boundary with Wonthaggi Borough ..	..	..	1·01
,, ,, ..	Dressing with gravel and patrol maintenance	..	..	2·24
Korumburra–Wonthaggi Road	Reinforced concrete culvert and approaches over Powlett River ..	·08	·08	..
,, ,, ,,	Dressing with gravel and patrol maintenance	..	..	7·92
Wonthaggi–Loch Road ..	Reforming and gravelling at Ryanston	·94	·94	..
,, ,, ,, ..	Dressing with gravel and patrol maintenance	..	..	9·06
Main Coast Road	Reforming and gravelling at "Gurdies"	..	..	·94
,, ,, ,, ..	Dressing with gravel and patrol maintenance	..	..	18·26
BASS SHIRE AND WONTHAGGI BOROUGH (Joint Works)—				
Wonthaggi–Loch Road ..	Surfacing with bitural throughout	..	..	·68
,, ,, ,, ..	Dressing with gravel and patrol maintenance	..	..	·75
BEECHWORTH SHIRE—				
Beechworth Road	Reconditioning and general maintenance	..	..	23
Bright Road	General maintenance	..	..	5
Everton–Myrtleford Road ..	Repairs to bridges, reconditioning, and general maintenance from Everton to Gapsted	..	..	20
Stanley Road	General maintenance	..	..	4
BELFAST SHIRE—				
Hamilton Road	Sealing and general maintenance	..	..	3·33
Penshurst Road	Sealing and general maintenance	..	..	3·57
BELLARINE SHIRE—				
Geelong–Portarlington Road ..	General maintenance	..	..	15
,, ,, ,, ..	Reblinding with gravel at Portarlington ·25 mile, and at Curlewis 1·5 miles	..	..	1·75
,, ,, ,, ..	Repairs to scours and reblinding with gravel through Bellarine Hill, and hills at Drysdale and Leopold	..	..	4·25
BENALLA SHIRE—				
Benalla–Mansfield Road ..	Sheeting and patrol maintenance	..	..	22
Goorambat Road	Sheeting, tar spraying short sections, and general maintenance ..	..	..	12
Goorambat–Thoona Road ..	Sheeting and patrol maintenance	..	..	13
Greta Road	Sheeting and patrol maintenance	..	..	1·5
Lima Road	Sheeting and patrol maintenance	..	..	4
Sydney Road	Bitumen spraying and general maintenance at Benalla	..	..	2
BERWICK SHIRE—				
Beaconsfield–Emerald Road ..	Sheeting and sealing with bitumen at Lukes Hill	..	..	·7
,, ,, ,, ..	General maintenance	..	..	5·1
Genbrook Road	General maintenance	..	..	5·5
Gembrook–Beenak Road ..	General maintenance	..	..	2
Hallam–Emerald Road ..	Twin-cell box culvert and approaches at Green's Crossing, Narre Warren North	·08	·08	..
,, ,, ,, ..	Sheeting and sealing with bitumen, north from Prince's Highway ..	..	..	·85
,, ,, ,, ..	General maintenance	..	..	3·5
Nar Nar Goon–Longwarry Road	Sealing with bitumen in Tynong Township	..	..	·5
,, ,, ,,	General maintenance	..	..	11·25
Woori Yallock–Pakenham–Kooweerup Road	Sheeting south of Pakenham	..	..	1·04
,, ,, ,,	Sealing with bitumen at Cockatoo	..	..	·44
,, ,, ,,	General maintenance	..	..	23·56
BET BET SHIRE—				
Avoca–Bealiba Road ..	Gravelling through Archdale	..	..	·23
,, ,, ,, ..	Gravelling opposite Allotment 54A, Parish of Bealiba	..	..	·28
,, ,, ,, ..	General maintenance	..	..	13
Betley–Road	Forming and grading through Bromley	..	..	·54
,, ,, ...	Light sheeting in detached sections, and general maintenance ..	..	..	2·68
Dunolly Road	Resealing opposite Sections 12 and 15, Parish of Dunolly	..	..	·26
,, ,, ...	General maintenance	..	..	
Dunolly–Eddington Road ..	General maintenance	..	..	
BLACKBURN AND MITCHAM SHIRE—				
Main Healesville Road ..	Patrol maintenance	..	..	4·25
BIRCHIP SHIRE—				
Beulah – Birchip – Wycheproof Road	Forming and gravelling 2 miles east of Birchip	2·2	..	.
,, ,, ,,	Earth formation	..	..	
Donald–Birchip–Sea Lake Road	Earth formation	..	..	3·79
	Carried forward	4·55	2·77	787·37

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND MAIN ROADS MAINTAINED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Work.	Permanent Surveys Effected.	Permanent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*			
	Brought forward	4·55	2·77	787·37
BORUNG SHIRE—				
Birchip Road	Bitumen surfacing in two sections opposite Allotment 1A and opposite Allotments 123 and 124, Parish of Werrigar	..	..	2
,, ,, ...	General maintenance	..	..	14
Dimboola Road	Limestone and gravel construction 4¼ miles from Warracknabeal ..	..	..	·94
,, ,, ...	Bitumen surfacing in two sections westerly from Warracknabeal and opposite Allotment 34, Parish of Werrigar	..	..	1.64
,, ,, ...	General maintenance	..	..	7·5
Hopetoun Road	Metalling 1 mile south of Lah	..	1·17	..
,, ,, ...	Bitumen surfacing in two sections at Warracknabeal	..	..	·9
,, ,, ...	General maintenance	..	..	18
Minyip Road	Metalling and gravelling 3½ miles south from Warracknabeal	..	·4	..
,, ,, ...	Bitumen surfacing in two sections at Warracknabeal and opposite Allotment 83, Parish of Warrigar	..	..	1·33
,, ,, ...	General maintenance	..	..	13
Rainbow Road	Limestone metalling 10 miles from Warracknabeal	..	..	·17
,, ,, ...	Limestone and gravel construction 4½ miles from Warracknabeal ..	..	..	·45
,, ,, ...	Bitumen surfacing in two sections north-westerly from Warracknabeal, and from Allotment 24 to Allotment 20, Parish of Werrigar	..	..	1·83
,, ,, ...	General maintenance	..	..	18
BRAYBROOK SHIRE—				
Ballarat Road	General maintenance	..	..	3·3
BRIGHT SHIRE—				
Bright Road	General maintenance	..	..	20
Harrietville Road	General maintenance	..	..	16
BROADMEADOWS SHIRE—				
Lancefield Road	General maintenance	..	..	3·5
Sydney Road	General maintenance	..	..	2
BULLA SHIRE—				
Melbourne–Lancefield Road ..	Bitumen surfacing from 20-mile post to 24-mile post	..	..	4
,, ,, ,, ..	General maintenance	..	..	11
Sunbury Road	General maintenance	..	..	2·75
The Gap Road	General maintenance	..	..	1·5
BULN BULN SHIRE—				
Bloomfield Road	General maintenance	..	..	1
Longwarry–Drouin Road ..	Bitumen sealing from Allotment 63 to Allotment 67, Parish of Drouin West	..	..	1·5
,, ,, ,, ..	General maintenance	..	..	6
Main Neerim "A" Road ..	Bitumen sealing in two sections north-easterly from Prince's Highway and from Allotment 48 to Allotment 15, Parish of Drouin West	..	..	1
,, ,, ,, ..	General maintenance	..	..	8
,, "B" ,, ..	General maintenance	..	..	11·5
,, "C" ,, ..	Reforming and metalling in Allotment 10, Parish of Neerim	·62	·62	..
,, ,, ,, ..	Bitumen sealing from Tarago River to Allotment 98, Parish of Neerim ..	..	..	3·44
,, ,, ,, ..	General maintenance	..	..	5·5
Main South Road	General maintenance	..	..	16
Neerim East Road	General maintenance	..	..	4
Prince's Highway	Bitumen sealing in Drouin	..	..	·41
,, ,, ...	General maintenance	..	..	1
Westernport Road ..	General maintenance	..	..	8
BUNGAREE SHIRE—				
Daylesford Ballarat Road ..	Modified macadam construction ·7 mile, seal coating portion of road semi-penetrated previous year 2·3 miles, and seal coating with bitumen tarred macadam road ·5 mile on various sections over full length	..	..	3·5
BUNINYONG SHIRE—				
Ballarat–Rokewood Road ..	General maintenance	..	..	14
Elaine–Mount Mercer Road ..	General maintenance	..	..	5
Geelong–Ballarat Road ..	Bitumen surfacing from Canadian to Buninyong	..	..	3·53
,, ,, ,, ..	General maintenance from Buninyong to Burnt Bridge	..	..	9
CASTLEMAINE BOROUGH—				
Melbourne–Bendigo Road ..	Resealing with bitumen	..	..	1·24
,, ,, ,, ..	General maintenance	..	..	3·91
CHARLTON SHIRE—				
Donald Road	Forming and gravelling near Lake Wooroonook	·69	·69	..
,, ,, ...	Resheeting with gravel near Lake Wooroonook	..	..	·38
,, ,, ...	Patrol maintenance	..	..	12·75
St. Arnaud Road	Patrol maintenance	..	..	15
CHELSEA CITY—				
Point Nepean Road ..	Patrol maintenance	..	..	5·7
CHILTERN SHIRE—				
Chiltern–Howlong Road ..	Patrol maintenance	..	..	7·1
Rutherglen–Wodonga Road ..	Patrol maintenance	..	..	6·5
Sydney Road	Resealing tarred section	..	..	·33
,, ,, ...	Patrol maintenance	..	..	1·15
CLUNES BOROUGH—				
Maryborough Ballarat Road	Gravelling in sections	..	..	1
,, ,, ,,	General maintenance	..	..	2·75
COHUNA SHIRE—				
Cohuna–Leitchville Road ..	General maintenance near Cohuna	..	..	2·84
Murray River Valley Road ..	General maintenance from Cohuna to Gunbower	..	..	7·09
COLAC SHIRE—				
Colac Ballarat Road ..	Reforming, resheeting, and bitumen surfacing between Irrewarra Road and Ondit	..	..	3·26
,, ,, ,, ..	Bitumen surfacing north of Beeac	..	..	1·53
,, ,, ,, ..	General maintenance	..	..	21·15
Colac–Beech Forest Road ..	General maintenance	..	..	11·25
CORIO SHIRE—				
Ballarat Road	General maintenance	..	..	4·5
Fyansford Road	General maintenance	..	..	·8
Geelong–Bacchus Marsh Road	General maintenance, including bitumen penetration and modified macedam reconditioning 9·4 miles	..	..	14·17
CRANBOURNE SHIRE—				
Kooweerup–Pakenham Road	General maintenance	..	..	5·5
Lang Lang–Nyora Road ..	General maintenance	..	..	4·17
Main Coast Road	Modified macadam surfacing between Cranbourne and Dandenong ..	..	..	3·84
,, ,, ...	Sealing between Cranbourne and Dandenong	..	..	3
,, ,, ...	Double seal coat on sand road between Cranbourne and Tooradin ..	..	..	4
,, ,, ...	Gravelling in preparation for seal coat between Cranbourne and Tooradin	..	..	2
,, ,, ...	Gravelling in preparation for seal coat at Lang Lang	..	..	2
,, ,, ...	General maintenance	..	..	38
,, ,, ...	General maintenance	..	..	9
Westernport Road ..				
CRESWICK SHIRE—				
Castlemaine–Ballarat Road ..	General maintenance	..	..	21
Daylesford–Ballarat Road ..	General maintenance	..	..	12·38
CRESWICK BOROUGH—				
Castlemaine–Ballarat Road ..	General maintenance	..	..	2·46
	Carried forward	5·86	5·65	1,265·31

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND MAIN ROADS MAINTAINED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Work.	Permanent Surveys Effected.	Permanent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*			
	Brought forward	5·86	5·65	1,265·31
DANDENONG SHIRE—				
Cheltenham Road	Patrol maintenance	..	..	6
Dandenong–Frankston Road	Patrol maintenance	..	..	6
Prince's Highway	Reconditioning and patrol maintenance	..	..	2
DAYLESFORD BOROUGH—				
Ballan Road	General maintenance	..	..	1·6
Ballarat Road	General maintenance	..	..	1·05
Castlemaine Road	General maintenance	..	..	·65
Daylesford–Hepburn Road ..	General maintenance	..	..	1·14
Malmsbury–Daylesford Road	Reconditioning and sealing	..	..	·45
,, ,, ,,	General maintenance	..	..	·89
DEAKIN SHIRE—				
Echuca–Cornelia Road ..	Gravelling opposite Allotment 4, Parish of Echuca South	..	..	·62
Echuca–Picola Road ..	Gravelling 3 miles east of Echuca	..	..	·7
Kyabram–Nathalia Road ..	Gravelling from Allotment 26 to Allotment 48B, Parish of Taripta ..	..	..	3
,, ,, ,, ..	Bitumen surfacing from Allotment 60A to Allotment 71, Parish of Taripta	..	..	1
Kyabram–Tongala Road ..	Gravelling from Allotment 1, Section C, to Allotment 2, Section A, Kyabram Estate, Parish of Kyabram	..	..	2·27
Rochester–Kyabram Road ..	Gravelling from Allotment 88 to Allotment 102, Parish of Kyabram ..	..	..	2·25
DEAKIN AND RODNEY SHIRES (Joint Works)—				
Kyabram–Tongala Road ..	Bitumen surfacing opposite Allotments 147A and 147B, Parish of Kyabram	..	..	·56
Rochester–Kyabram Road ..	Bitumen surfacing opposite Allotments 114C and 115, Parish of Kyabram	..	..	·56
DIMBOOLA SHIRE—				
Rainbow Road	Rubbling near Arkona	..	..	·29
Hopetoun–Rainbow Road ..	Resheeting approximately 3 miles north of Rainbow	..	..	·68
Horsham Road	Forming and gravelling, &c., through Dimboola	..	..	·42
Warracknabeal Road ..	Bitumen surfacing 2 to 3 miles north of Dimboola	..	..	1·13
DONALD SHIRE—				
Donald–Charlton Road ..	General maintenance	..	..	14
Donald–Minyip Road ..	General maintenance	..	..	2·5
Marnoo Road	General maintenance	..	..	5
St. Arnaud–Birchip Road ..	General maintenance	..	..	28·5
DONCASTER AND TEMPLESTOWE SHIRE—				
Doncaster Road	Bitumen surfacing from Allotment C, Section 9, to Allotment B, Section 8, Parish of Bulleen	..	..	2
,, ,, ...	General maintenance	..	..	5·9
Heidelberg–Warrandyte Road	Bitumen surfacing at Warrandyte 1·5 miles and at Templestowe 1 mile	..	..	2·5
,, ,, ,,	General maintenance	..	..	9·2
Warrandyte–Ringwood Road	Gravelling 1·13 miles and general maintenance	..	..	3·1
DUNDAS SHIRE—				
Hamilton–Dunkeld Road ..	Modified macadam construction from Allotment 115 to Allotment 117, Parish of Moutajup	·97	·97	..
,, ,, ,, ..	Modified macadam construction in sections from Allotment 7, Section 13, to Allotment 6, Section 23, Parish of Warrayure	..	..	2·44
Hamilton–Horsham Road ..	Waterbound macadam construction with double coat bitumen surfacing 2·19 miles, and gravel sheeting 1·08 miles in sections from Allotment 7, Parish of North Hamilton, to Cavendish	..	..	3·27
Hamilton–Mt. Gambier Road	Modified macadam consttruction from Allotment 5, Section 12, to Allotment 6, Section 11, Parish of Bochara	..	..	1·72
Hamilton–Port Fairy Road ..	Waterbound macadam construction with double coat bitumen surfacing in sections south of Hamilton	..	..	3
Hamilton–Portland Road ..	Waterbound macadam construction with double coat bitumen surfacing in sections from Allotment 4, Section 38, to Allotment 5, Section 30, Parish of Yulecart	..	..	1·02
Hamilton–Warrnambool Road	Modified macadam construction in sections from Allotment 4, Section 3, Parish of South Hamilton, to Pre-emptive Purchase, Parish of Croxton West	..	..	2·6
DUNMUNKLE SHIRE—				
Horsham–Murtoa Road ..	Bitumen surfacing road constructed with Great Western gravel at Murtoa	..	..	2·9
,, ,, ,, ..	Resealing bitumen surfaced road south-east of Minyip	..	..	2·8
Minyip–Donald Road ..	Resealing bitumen surfaced road north-east of Minyip	..	..	·8
Stawell–Warracknabeal Road	Resealing bitumen surfaced road south of Rupanyup	..	..	1·8
,, ,, ,, ..	Bitumen surfacing road constructed with Great Western gravel commencing 1·8 miles south of Marnoo Road	..	..	1·31
,, ,, ,, ..	Bitumen surfacing road constructed with local pit gravel at southern boundary of shire	..	..	·83
EAGLEHAWK BOROUGH—				
Mount Korong Road ..	Reconstruction modified bituminous macadam westerly from Lester Street	..	..	·32
,, ,, ..	Resealing and patching shoulders and pot holes with pre-mixed tarred metal	..	..	·3
EAST LODDON SHIRE—				
Dingee Road	Sand clay forming opposite Allotment 93, Parish of Pompaniel ..	..	..	·35
Prairie Road	Forming and gravelling opposite Allotments 1E and 2, Parish of Dingee	..	·41	..
ECHUCA BOROUGH—				
Echuca–Cornelia Road ..	General maintenance, including light gravelling, south of railway line..	..	..	·6
ELTHAM SHIRE—				
Eltham–Yarra Glen Road ..	Bitumen surfacing at Yarra Glen and between Eltham and Research ..	..	..	3·75
,, ,, ,, ..	Resurfacing, general maintenance, repairs to bridges and culverts, between Lower Plenty and Yarra Glen	..	..	18·25
Hurstbridge–Kinglake Road..	Bitumen surfacing between Wattle Glen and Hurstbridge	..	..	2·64
,, ,, ,, ..	Resurfacing, general maintenance, repairs to bridges and culverts, between Hurstbridge and Kinglake	..	..	13·25
Whittlesea–Kinglake Road ..	General maintenance	..	..	5
Yarra Glen–Glenburn Road ..	Resurfacing and general maintenance between Yarra Glen and Mount Slide	..	..	7
EUROA SHIRE—				
Arcadia Road	Patrol maintenance	..	..	6
Avenel–Longwood Road ..	Patrol maintenance	..	..	3
Euroa–Arcadia Road ..	Sanding near Miepoll	..	·9	..
,, ,, ,, ..	Patrol maintenance	..	..	18
Euroa–Mansfield Road ..	Patrol maintenance	..	..	18
Euroa–Strathbogie Road ..	Patrol maintenance	..	..	20
Murchison–Shepparton Road	Forming, grading, and culverts, opposite Allotments 54 and 55, Parish of Arcadia	..	..	1·48
,, ,, ,,	General maintenance	..	..	8
FERNTREE GULLY SHIRE—				
Belgrave–Emerald Road ..	Widening sections between Emerald and Monbulk Creek trestle bridge..	..	..	1·89
,, ,, ,, ..	General maintenance	..	..	6·73
Emerald Road	General maintenance	..	..	1·63
Main Ferntree Gully Road ..	General maintenance	..	..	10·81
Monbulk Road	General maintenance	..	..	5
Olinda Road	Widening north-east from narrow-gauge railway crossing and north-east from junction with Sherbrooke Road	..	..	1·78
,, ,, ...	General maintenance	..	..	6·25
	Carried forward	6·83	7·93	1,555·79

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND MAIN ROADS MAINTAINED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Work.	Permanent Surveys Effected.	Permanent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*			
	Brought forward	6·83	7·93	1,555·79
FLINDERS SHIRE—				
Hastings–Flinders Road	Timber bridge and approaches at Flinders	..	·14	..
,, ,, ,,	Bitumen surfacing easterly from Balnarring	..	..	1
,, ,, ,,	Bitumen surfacing from Warrengine Creek to Bittern	..	..	·83
,, ,, ,,	General maintenance	..	..	17
Mornington–Flinders Road	Bitumen surfacing commencing approximately 2 miles from Flinders	..	..	5·59
,, ,, ,,	Widening and resheeting at foot of White Hill	..	..	·5
,, ,, ,,	General maintenance	..	..	12
Point Nepean Road	Forming and metalling at St. Paul's Road	·33	..	..
,, ,, ,,	Reconstruction at Finger post Corner	·12	..	..
,, ,, ,,	Decomposed granite construction opposite Allotment 1, Section B, Parish of Wannaeue	..	..	1
,, ,, ,,	Bitumen surfacing at Dromana ·18 mile, northwards from McLean's Hill 1.13 miles, near Rosebud ·25 mile, between Rye and St. Paul's Road 3.22 miles	..	..	4·78
,, ,, ,,	General maintenance	..	..	21·5
Stony Point Road	Scarifying, resheeting, and sealing with duratar from Crib Point to Stony Point	..	..	1
,, ,, ,,	Bitumen surfacing from Hastings–Flinders Road to Naval Base	..	..	2·77
,, ,, ,,	General maintenance	..	..	3
FRANKSTON AND HASTINGS SHIRE—				
Dandenong–Frankston Road	Widening roadway in modified macadam from 11 to 18 feet, with bitumen surfacing, from Mereweather Avenue to Seaford Road	..	..	2·4
,, ,, ,,	General maintenance	..	..	5
Frankston–Flinders Road	General maintenance	..	..	14
Point Nepean Road	General maintenance, short sections of bitumen sealing and concrete culverts	..	..	7·5
GISBORNE SHIRE—				
Bacchus Marsh Road	General maintenance	..	..	9·43
Gisborne Station Road	General maintenance	..	..	1·18
GLENELG SHIRE—				
Coleraine–Casterton Road	Macadam surfacing at Casterton	..	..	·74
Mt. Gambier Road	Metal sheeting near Strathdownie	..	..	·5
GLENLYON SHIRE—				
Ballan Road	Reinforced concrete bridge over Stony Creek, Musk Vale	..	—	..
,, ,,	General maintenance	..	..	4·5
Ballarat Road	General maintenance	..	..	3·5
Castlemaine–Daylesford Road	General maintenance	..	..	13
Daylesford–Hepburn Road	General maintenance	..	..	1
Malmsbury–Daylesford Road	Gravelling and general maintenance	..	..	15·12
GOULBURN SHIRE—				
Avenel–Longwood Road	Sheeting, scarifying, and general maintenance	..	..	8
Goulburn Valley Road	Sheeting, scarifying, and general maintenance	..	..	18
Murchison–Shepparton Road	Sheeting, scarifying, and general maintenance	..	..	2
Vicker's Lane	Sheeting, scarifying, and general maintenance	..	..	1
GRENVILLE SHIRE—				
Ballarat–Hamilton "B" Road	Modified macadam construction from Allotment 4, Section 6, to Allotment 1, Section 7, Parish of Cardigan	..	..	1·8
,, ,, ,,	Modified macadam construction from Allotment F3 to Section 91, Parish of Argyle	..	..	3·1
HAMILTON TOWN—				
Coleraine Road	Remetalling and bitumen penetration from Dundas Shire boundary	..	..	·25
,, ,,	Bitumen resurfacing in two sections at 16·7 chains and at 36·6 chains from Dundas Shire boundary	..	..	·45
Hamilton–Warrnambool Road	Modified macadam construction towards Warrnambool, commencing at 2·08 chains from Ararat Road	..	..	·11
Port Fairy Road	Modified macadam construction towards Port Fairy commencing at railway line	..	..	·04
HAMPDEN SHIRE—				
Camperdown–Ballarat Road	Reshaping and sealing south of Camperdown	..	..	1·75
,, ,, ,,	Reshaping and sealing between Camperdown and Lismore	..	..	20
,, ,, ,,	Reshaping and sealing north of Lismore	..	..	·75
,, ,, ,,	Reshaping and sealing south of Skipton	..	..	2·25
,, ,, ,,	Reshaping and sealing east of Skipton	..	..	3·25
,, ,, ,,	Resealing north of Camperdown	..	..	1·75
,, ,, ,,	General maintenance	..	..	23·25
Caramut–Lismore Road	Reshaping and sealing between Lismore and Derrinallum	..	..	6
,, ,, ,,	Reshaping and sealing east of Darlington	..	..	4
,, ,, ,,	General maintenance	..	..	6
Lismore–Cressy Road	Modified macadam construction in Lismore	..	..	·66
,, ,, ,,	General maintenance	..	..	18
Terang–Mortlake Road	Resealing north-west of Noorat	..	..	3·5
HEALESVILLE SHIRE—				
Healesville–Alexandra Road	Metalling and sealing on existing road	..	..	1·2
Healesville–Woori Yallock Road	Forming and metalling opposite Allotment A5, Parish of Gracedale	..	..	..
Marysville Road	Metalling, &c.	..	..	·4
HEIDELBERG SHIRE—				
Greensborough – Hurstbridge Road	Widening with bitumen penetrated metal between Watsonia and Greensborough	..	..	1·89
,, ,, ,,	Sealing	..	..	3·24
,, ,, ,,	Widening between Greensborough and Sutherland Homes	..	..	·73
,, ,, ,,	General maintenance	..	..	5
Heidelberg–Warrandyte Road	General maintenance	..	..	·47
Main Heidelberg–Eltham Road	Widening with bitumen penetrated metal between Darebin Railway Station and Greensborough Lane	..	..	2·38
,, ,, ,,	General maintenance	..	..	4
Main Whittlesea Road	General maintenance	..	..	1·19
HEYTESBURY SHIRE—				
Camperdown–Cobden Road	General maintenance	..	..	4·84
Cobden–Port Campbell–Princetown Road	Reforming and metalling south from Scott's Creek Bridge	·47	·47	..
,, ,, ,,	General maintenance	..	..	29
Timboon–Port Campbell Road	General maintenance	..	..	6·29
HORSHAM BOROUGH—				
Dimboola–Horsham Road	Widening, resheeting modified macadam, north-west of Natimuk Railway Line	..	..	·25
,, ,, ,,	Sealing with bitumen from Firebrace Street towards borough boundary	..	..	·6
Dooen Road	Sealing with bitumen between Firebrace Street and borough boundary	..	..	·75
Hamilton Road	Sealing with bitumen from Firebrace Street across Wimmera Bridge towards borough boundary at Pound	..	..	·88
Natimuk Road	Sealing with bitumen from Gas Works towards borough boundary	..	..	·75
Western Highway	Widening from 12 to 16 feet, resheeting, and modified macadam treatment	..	..	·38
	Carried forward	7·75	8·54	1,894·78

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND MAIN ROADS MAINTAINED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Work.	Permanent Surveys Effected.	Permanent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*			
	Brought forward	7·75	8·54	1,894·78
HUNTLEY SHIRE—				
Bendigo–Echuca Road ..	General maintenance	..	..	3
Elmore–Heathcote Road ..	Reconstruction in Elmore	..	..	·07
INGLEWOOD BOROUGH—				
Bendigo–Charlton Road ..	General maintenance	..	..	1·5
KARA KARA SHIRE—				
Avoca–St. Arnaud Road ..	Forming and gravelling between Carapooee West and Redbank ..	7·93	7·71	..
,, ,, ,, ..	General maintenance	..	..	23
Navarre Road	General maintenance	..	..	24
Charlton Road	General maintenance	..	..	12
St. Arnaud Donald Road ..	Forming and gravelling between Swanwater and Cope Cope	4·99	2·59	..
,, ,, ,, ..	Bitumen surfacing and general maintenance	..	..	18
KARKAROOC SHIRE—				
Hopetoun–Rainbow Road ..	Clearing, forming, and metalling opposite Allotment 72, Parish of Goyura	·88	..	..
,, ,, ,, ..	General maintenance	..	..	29
Hopetoun–Warracknabeal Road	General maintenance	..	..	20
Hopetoun – Woomelang – Sea Lake Road	Clearing, forming, and metalling opposite Allotment 10, Parish of Nyallo, and opposite Allotment 13, Parish of Cronomby	..	1·13	..
,, ,, ,,	Clearing, forming, and metalling opposite Allotment 14, Parish of Minapre	·57	..	..
,, ,, ,,	General maintenance	..	..	30
Rainbow - Beulah – Birchip Road	General maintenance	..	..	39
KEILOR SHIRE—				
Melbourne–Bendigo Road ..	General maintenance	..	..	1
KILMORE SHIRE—				
Heathcote Road	36-in. diameter pipe culvert at Minogue, and patrol maintenance ..	..	..	3·56
Lancefield–Kilmore Road ..	General sheeting	..	..	·56
,, ,, ,, ..	Patrol maintenance	..	..	1·29
KILMORE AND PYALONG SHIRES (Joint Works)—				
Heathcote Road	Patrol maintenance	..	..	2·99
KILMORE AND ROMSEY SHIRES (Joint Works)—				
Lancefield–Kilmore Road ..	Straightening road at old railway crossing	..	..	·11
,, ,, ,, ..	Patrol maintenance	..	..	2·28
KOROIT BOROUGH—				
Koroit–Warrnambool Road ..	General maintenance	..	..	6
KORONG SHIRE—				
Borung–Hurstwood Road ..	2 inches sanding near Allotment 158, Parish of Kinypaniel	..	..	·47
,, ,, ,, ..	2 inches sanding near Allotment 39, Parish of Kinypaniel	..	..	·4
,, ,, ,, ..	General maintenance	..	..	7
Charlton–Bendigo Road ..	General maintenance	..	..	1·13
Serpentine Road	General maintenance	..	..	10·5
KORUMBURRA SHIRE—				
Bena–Poowong Road ..	Gravel surfacing, commencing ½ mile from Bena	..	..	4·17
,, ,, ,, ..	General maintenance	..	..	6·01
Korumburra–Drouin Road ..	Gravel surfacing, ending at Shire boundary	..	..	2·82
,, ,, ,, ..	Bitumen surfacing, commencing at Ranceby	..	..	1·7
,, ,, ,, ..	Resheeting	..	..	1
Korumburra–Leongatha Road	Resealing, commencing at Korumburra	..	..	1·56
,, ,, ,,	Reconditioning and bitumen surfacing, ending at Shire boundary ..	..	..	3·28
Korumburra–Warragul Road	Resealing north from Korumburra and south from Ranceby (two sections)	..	..	5·34
,, ,, ,,	Gravel sheeting north from Ranceby	..	..	6·66
,, ,, ,,	General maintenance	..	..	13
Korumburra–Wonthaggi Road	Reconditioning and bitumen surfacing commencing 1 and 2¼ miles from Korumburra and near Kongwak (three sections)	..	..	2·74
,, ,, ,,	General maintenance	..	..	13·25
Lang Lang–Nyora Road ..	General maintenance	..	..	5
Loch–Wonthaggi Road ..	General maintenance	..	..	4·64
Nyora–Poowong Road ..	Resealing, commencing at Nyora ·72 mile, gravel surfacing 4·27 miles ..	..	..	4·99
,, ,, ,, ..	General maintenance	..	..	5·99
Poowong–Ranceby Road ..	Resealing, commencing at Poowong ·28 mile, gravel surfacing 3·87 miles	..	..	4·15
,, ,, ,, ..	General maintenance	..	..	4·15
KOWREE SHIRE—				
Booroopki Road	Ironstone metalling and gravelling in Goroke	.14	.14	..
,, ,, ...	Gravelling near junction with Minimay Road	..	..	·55
,, ,, ...	Patrol maintenance	..	..	13·5
Booroopki–Francis Road ..	Gravelling near South Australian Border	..	..	·34
,, ,, ..	General maintenance	..	..	18
Edenhope–Goroke Road ..	Gravelling near Karnak	..	.24	..
,, ,, ,, ..	Patrol maintenance	..	..	28
Hamilton – Edenhope – Apsley Road	Timber footbridge and approaches at Edenhope	..	..	·05
,, ,, ,,	Patrol maintenance	..	..	39
Horsham–Hamilton Road ..	General maintenance	..	..	1
KYNETON SHIRE—				
Daylesford Road	General maintenance	..	..	·66
Melbourne–Bendigo Road ..	Resurfacing at Kyneton	..	..	·75
Redesdale Road	Gravelling northwards from Kyneton Cemetery	..	..	1·33
Trentham Road	Sheeting and metalling	..	..	·2
Tylden–Woodend Road ..	General maintenance	..	..	4·38
LAWLOIT SHIRE—				
Broughton Road	Metalling between Kaniva and Sandsmere	..	.32	..
,, ,, ...	General maintenance	..	..	9·9
Nhill–Kaniva–Border Road ..	General maintenance	..	..	1
South Lillimur Road ..	General maintenance	..	..	6·5
Yearinga Road	General maintenance	..	..	9·7
LEIGH SHIRE—				
Ballarat–Rokewood Road ..	General maintenance	..	..	8
Cressy–Inverleigh Road ..	Reconditioning in Parish of Hesse, general maintenance in Parish of Doroq	..	..	8·5
Cressy–Rokewood Road ..	General maintenance	..	..	11
Inverleigh–Shelford Road ..	General maintenance	..	..	6
Rokewood–Shelford Road ..	General maintenance	..	..	17
Werneth Road	General maintenance	..	..	3
LEIGH AND COLAC SHIRES (Joint Works)—				
Cressy–Inverleigh Road ..	General maintenance	..	..	2·33
LEXTON SHIRE—				
Avoca–Ararat Road ..	Regravelling sections, grading, and general maintenance	..	..	2
Avoca–Ballarat Road ..	Gravelling sections, grading, and general maintenance	..	..	4·5
	Carried forward	22·26	20·67	2,419·28

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND MAIN ROADS MAINTAINED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Work.	Permanent Surveys Effected.	Pern anent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*			
	Brought forward	22·26	20·67	2,419·28
LILLYDALE SHIRE—				
Main Healesville Road	Penetration macadam construction, Rosemount deviation between Lillydale and Coldstream	..	.91	..
,, ,,	Widening 12 feet to 18 feet, Coombe to Yarra Grange	..	..	6
Main Warburton Road	Reconstruction in penetration macadam	..	..	1
Mount Dandenong Road	Widening 12 feet to 16 feet, Kilsyth to Montrose	..	..	2·27
Yarra Glen Road	Redecking timber bridge 1½ miles north of Yering Railway Station	..	..	·01
,, ,,	Reconstruction in penetration macadam north from Main Healesville Road	..	..	1·03
LOWAN SHIRE—				
Lorquon West Road	Forming and metalling opposite Allotment 65, Parish of Woorak	.32	.32	..
,, ,,	Grubbing in sections from Allotment 18 to Allotment 8, Parish of Lorquon	..	..	3·28
,, ,,	Resheeting metal opposite Allotment 69, Parish of Woorak	..	..	·62
,, ,,	Forming opposite Allotment 12, Parish of Lorquon	..	..	·19
Yanac Road	Resheeting gravel opposite Allotment 68, Parish of Yanac-a-Yanac	..	..	·57
MAFFRA SHIRE—				
Boisdale–Briagalong Road	Gravelling near Bushy Park	..	..	1·2
Bushy Park–Valencia Creek Road	Gravelling near McCarthy's	..	..	·45
Licola Road	General maintenance	..	..	40
Maffra–Sale Road	Gravelling and bitumen surfacing near Myrtlebank	..	..	1·5
Stratford–Maffra Road	Gravelling near Beet Road	..	..	1·2
Tinamba–Boisdale Road	Gravelling near Tinamba	..	..	·6
Tinamba–Newry Road	Gravelling and bitumen surfacing from Tinamba to Newry	..	..	3
Traralgon–Maffra Road	Gravelling near Fletcher's	..	..	·45
MALDON SHIRE—				
Baringhup Road	General maintenance and bridge repairs	..		10
Castlemaine–Maldon Road	General maintenance	..	..	10
Castlemaine–Newstead Road	General maintenance	..	..	1
Maldon–Eddington Road	General maintenance	..	..	16
Newstead Road	General maintenance	..	..	6
MANSFIELD SHIRE—				
Euroa–Merton Road	General maintenance	..	..	4·4
Mansfield Road	General maintenance and culvert repairs	..	..	42·7
Mansfield–Tolmie Road	General maintenance	..	..	5·75
Mansfield–Wood's Point Road	Culvert and gravelling 9½ miles, and culverts 7½ and 14 miles from Mansfield	..	..	·11
,, ,,	General maintenance	..	..	18·5
MARONG SHIRE—				
Bendigo–Eddington Road	Construction of two flood crossings at East Shelbourne	..	..	·09
,, ,, ,,	Construction of crossing at West Shelbourne	..	..	·07
,, ,, ,,	General maintenance from Eddington North to East Shelbourne	..	..	12
Bendigo–Bridgewater Road	Resheeting and bitumen penetration at Marong	..	..	1·24
Bendigo–Serpentine Road	Patrol maintenance	..	..	8·5
MARYBOROUGH BOROUGH—				
Avoca Road	Reconditioning	..	..	1·2
Ballarat Road	General maintenance	..	..	1·44
Castlemaine Road	General maintenance	..	..	1·63
Eddington Road	General maintenance	..	..	1·19
MELTON SHIRE—				
The Gap Road	General maintenance	..	..	·9
Toolern Road	General maintenance	..	..	6
METCALFE SHIRE—				
Kyneton–Redesdale Road	General maintenance	..	..	12
MILDURA SHIRE—				
Deakin Avenue	Bitumen sealing and penetrated limestone sheeting	..	..	·78
Irymple Road	Bitumen sealing and penetrated limestone sheeting	..	..	3
Melbourne Road	Bitumen sealing and general maintenance	..	..	1
Wentworth Road	Bitumen surfacing, &c., on limestone metal	..	.81	..
,, ,,	Bitumen sealing and general maintenance	..	..	2·5
MILDURA TOWN—				
Deakin Avenue	General maintenance	..	..	1
Langtree Avenue	General maintenance	..	..	·42
Punt Road	General maintenance	..	..	·48
Tenth Street	General maintenance	..	..	·08
MINHAMITE SHIRE—				
Hamilton – Macarthur – Port Fairy Road	Modified macadam reconstruction, several sections	..	..	6·7
Warrnambool – Hawkesdale – Penshurst Road	Modified macadam reconstruction, several sections	..	..	5·5
MIRBOO SHIRE—				
Allambee East–West Tarwin Road	Patrol maintenance	..	..	4
Boolarra South–Mirboo Road	Patrol maintenance	..	..	4·5
Mardan Road	Metalling near Allotment 51B, Parish of Mardan	·28	·28	..
,, ,,	Patrol maintenance and repairs to bridge	..	..	5
Mirboo–Allambee East Road	Patrol maintenance and painting bridge	..	..	6
Leongatha–Mirboo Road	Patrol maintenance and replacement of culverts	..	..	4
Mirboo South Road	Patrol maintenance and painting bridges	..	..	9·5
MOORABBIN SHIRE—				
Centre Dandenong Road	Modified macadam reconstruction between Point Nepean Road and Moorabbin Road	..	..	·75
,, ,,	General maintenance	..	..	2·04
Point Nepean Road	Modified macadam reconstruction north from 150 feet north of Latrobe Street	..	..	·12
,, ,,	General maintenance	..	..	3·19
MORDIALLOC CITY—				
Point Nepean Road	Concrete kerbing, widening, regrading edges of road, and bitural surfacing south from Parkers Road	..	..	·45
,, ,,	General maintenance	..	..	2·82
MORTLAKE SHIRE—				
Caramut–Lismore Road	Double coat bitumen surfacing in three sections towards Darlington, commencing 5¾, 9½, and 11¾ miles from Mortlake	..	..	5·85
,, ,, ,,	Widening with metal to 16 feet existing 12 feet, bitumen surfaced road from Dunlop Street, Mortlake, towards Darlington	..	..	2·5
,, ,, ,,	Widening with metal to 16 feet existing 12 feet, bitumen surfaced road from 50 chains north-west of Mortlake towards Hexham	..	..	5·12
Mortlake–Ararat Road	Widening with metal to 16 feet existing 12 feet, bitumen surfaced road commencing at Mortlake towards Ararat	..	..	1·1
,, ,, ,,	Widening to 16 feet existing 12 feet metalled road, and resheeting full width with metal commencing 9¾ miles from Mortlake towards Ararat	..	..	3·74
,, ,, ,,	Double coat bitumen surfacing commencing 5 miles from Mortlake towards Ararat	..	..	4·71
	Carried forward	22·86	22·99	2,730·22

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND MAIN ROADS MAINTAINED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Work.	Permanent Surveys Effected.	Permanent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*			
	Brought forward	22·86	22·99	2,730·22
MORTLAKE SHIRE—*continued.*				
Mortlake–Warrnambool Road	Widening with metal to 16 feet existing 12 feet bitumen surfaced road, commencing ¾ mile from Mortlake	..	..	1·26
,, ,, ,,	Widening to 16 feet existing 12 feet metalled road, and resheetlng full width with metal, commencing 9¾ miles from Mortlake towards Warrnan bool	..	..	1·25
,, ,, ,,	Double coat bitumen surfacing in three sections towards Warrnambool, commencing 7¼, 11, and 14 miles from Mortlake	..	..	4·62
Terang–Mortlake Road ..	Widening with metal to 16 feet existing 12 feet bitumen surfaced road, commencing at Mortlake towards Terang	..	..	1·41
MORWELL SHIRE—				
Boolarra–Foster Road ..	General maintenance	..	..	5
Boolarra–Morwell Road ..	Single coat bitumen surfacing metalled road near Yinnar	..	..	3
,, ,, ,, ..	General maintenance	..	..	13
Boolarra–Welshpool Road ..	Widening and sanding from Allotment 19B, Parish of Budgeree, to Budgeree Hotel	1·59	..	..
Jeeralang West Road ..	Sanding at Sonth Hazelwood	1·11	·51	..
,, ,, ..	General maintenance	..	..	17
Prince's Highway	General maintenance	..	..	1·5
MOUNT ROUSE SHIRE—				
Ballarat–Hamilton Road ..	Modified macadam construction in four sections, between Glenthompson and Dunkeld	..	..	2·2
Hamilton–Dunkeld Road ..	Modified macadam construction towards Hamilton, commencing 2¼ miles from Dunkeld	..	..	·44
Hamilton–Penshurst Road ..	Modified macadam construction (six sections)	..	..	3·11
,, ,, ,, ..	Scarifying and reforming	..	..	1
Penshurst–Caramut Road ..	Modified macadam construction at Penshnrst and 5 miles from Penshurst (two sections)	..	..	1·11
MULGRAVE SHIRE—				
Ferntree Gully Road ..	General maintenance	..	..	5
McIVOR SHIRE—				
Heathcote–Elmore Road ..	Forming and gravelling, &c., and culverts opposite Allotment 25, Parish of Knowsleyeast	..	..	·45
Kilmore – Heathcote – Bendigo Road	Construction of six reinforced concrete culverts, and forming and gravelling, and construction of culverts, &c., on Ingham Hill	..	..	1·52
NARRACAN SHIRE—				
Prince's Highway	Bitumen sealing and general maintenance at Yarragon, Trafalgar, and Moe	..	..	1·5
Trafalgar–Thorpdale Road ..	General maintenance, southerly from Trafalgar	..	..	8
Trafalgar–Willowgrove Road	General maintenance	..	..	4
Walhalla Road	General maintenance	..	..	18
Yarragon–Leongatha Road ..	General maintenance	..	..	10
Yarragon–Shady Creek Road	General maintenance, north-west from Yarragon	..	..	3
NEWHAM AND WOODEND SHIRE—				
Lancefield Road	General maintenance	..	..	9·25
Tylden Road	Metalling opposite Allotment 120, Parish of Woodend	·48	·48	..
NEWSTEAD AND MOUNT ALEXANDER SHIRE—				
Castlemaine–Daylesford Road	Gravelling, tarring, and general maintenance	..	..	2
Castlemaine – Maryborough Road	Gravelling, tarring, and general maintenance	..	..	·5
Creswick Road	Gravelling, tarring, and general maintenance	..	..	1·5
Maldon Road	Gravelling, tarring, and general maintenance	..	..	·13
NUMURKAH SHIRE—				
Echuca–Picola Road ..	Clearing from Allotment 6 to Allotment 2, Parish of Kanyapella ..	..	..	2·12
,, ,, ,, ..	Forming between Madowla Park and Stewart's Bridge	..	..	3·28
Murray Valley Road ..	Gravelling opposite Allotments 2 and 28, Section B, Parish of Ulupna..	·28	·28	..
,, ,, ..	Forming, east from Yielima School	..	..	2·26
Nathalia North Road ..	Gravelling to north boundary of Parish of Barwo	..	..	·53
,, ,, ..	Gravelling opposite Allotments 4 and 5, Parish of Barwo	..	..	·47
,, ,, ..	Forming opposite Allotment 49, Parish of Yielima	..	..	·74
Nathalia–Kyabram Road ..	Gravelling, north from Racecourse	..	..	1·24
,, ,, ..	Gravelling from School to McCoy's Bridge	..	..	2·19
Nathalia–Picola Road ..	Gravelling, north from Ball's Weir	..	..	1·5
Numurkah–Tungamah Road	Multiple pipe culvert on Box Creek	..	..	—
OAKLEIGH CITY—				
Ferntree Gully Road ..	Surface painting with bitumen asphaltic penetrated macadam, Section FTG/1	..	..	·15
,, ,, ..	Surface painting with bitumen asphaltic penetrated macadam, Section FTG/2	..	..	·21
,, ,, ..	Surface painting with bitumen reconstruction in asphaltic penetrated macadam, Section FTG/3	..	..	·12
Prince's Highway	Surface painting with bitumen asphaltic penetrated macadam, Section PH/1	..	..	·27
,, ,, ...	General maintenance, asphaltic concrete experimental section, Section PH/2	..	..	·07
,, ,, ...	General maintenance, cement concrete experimental section, Section PH/3	..	..	·23
,, ,, ...	General maintenance, asphaltic penetrated macadam, Section PH/4 ..	..	..	·09
,, ,, ...	Surface painting with bitumen asphaltic penetrated macadam, Section PH/5	..	..	·25
,, ,, ...	Surface painting with bitumen reconstruction in asphaltic penetrated macadam, Section PH/6	..	..	·21
OMEO SHIRE—				
Benambra Road	General maintenance, benching, and superelevating curves	..	..	14
Bright–Omeo Road ..	Forming and metalling at Dinner Plain and Cobungra Hill	..	..	1·16
,, ,, ,, ..	General maintenance	..	..	26
Day Avenue	Sheeting, surfacing with tar and bitumen, and general maintenaucc ..	..	..	1·5
ORBOST SHIRE—				
Cann Valley Road	General maintenance and improvements to curves, including benching..	..	..	29
Genoa–Gipsy Point Road	General maintenance and repairing, and fitting running boards to bridge	..	..	7
Mario Road	Gravelling from end of Whelan's deviation north-westerly towards Orbost	·34	·34	..
,, ,, ...	General maintenance and reforming over section	..	..	9
Prince's Highway	General maintenance	..	..	1·32
Wangarabelle Road ..	General maintenance on worst sections, and construction of bridge over Big Flat Creek	..	..	15
OXLEY SHIRE—				
Bright Road	Reconditioning and gravelling at Whorouly East and Rocky Point ..	..	..	1
,, ,, ...	General maintenance	..	..	25
Greta–Glenrowan Road ..	General maintenance	..	..	8
Oxley Road	General maintenance	..	..	7
PHILLIP ISLAND SHIRE—				
Newhaven Road	Gravelling and general maintenance	..	..	7·88
Phillip Island Road ..	Sheeting with sand and general maintenance	..	..	2·4
Ventnor Road	Sheeting with sand and general maintenance	..	..	4·5
	Carried forward	26·66	24·6	3,026·66

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND MAIN ROADS MAINTAINED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Work.	Permanent Surveys Effected.	Permanent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*			
	Brought forward	26·66	24·6	3,026·66
PORT FAIRY BOROUGH—				
Prince's Highway–Warrnambool Road	General maintenance	..	..	2·6
Prince's Highway–Portland Road	General maintenance	..	..	1·56
Hamilton Road	General maintenance	..	..	1·4
PRESTON CITY—				
Epping Road	General maintenance and reconditioning to north boundary of city ..	..	..	1·13
PYALONG SHIRE—				
Kilmore – Heathcote – Bendigo Road	Patrol maintenance	..	..	11·34
QUEENSCLIFFE BOROUGH—				
Geelong Road	Bitumen sealing from Queenscliffe Post Office	..	..	2·18
,, ,, ...	General maintenance	..	..	3·5
Point Lonsdale Road ..	General maintenance	..	..	1·25
RINGWOOD BOROUGH—				
Main Healesville Road ..	General maintenance	..	..	3·25
Mount Dandenong Road ..	General maintenance	..	..	1·75
Ringwood–Warrandyte Road	General maintenance	..	..	2·5
,, ,, ,,	Tarring	..	..	·75
RIPON SHIRE—				
Ballarat–Ararat Road ..	Patrol maintenance	..	..	1·4
Ballarat–Hamilton Road ..	Resheeting in Skipton	..	..	·29
,, ,, ,, ..	Double coat tar, bitural, and bitumen sealing near Skipton ..	..	..	·79
,, ,, ,, ..	Sealing, east of Carranballac Post Office	..	..	1·23
,, ,, ,, ..	Sealing, 2½ miles west of Carranballac Post Office	..	..	1·17
,, ,, ,, ..	Patrol maintenance	..	..	16
Skipton Road	Double coat tar and bitural sealing near Skipton	..	..	1·17
,, ,, ...	Patrol maintenance	..	..	18
RIPON AND HAMPDEN SHIRES (Joint Works)—				
Ballarat–Hamilton Road ..	Construction of footbridge over Emu Creek, Skipton	..	..	·03
ROCHESTER SHIRE—				
Rochester – Bamawm – Prairie Road	General maintenance and reconditioning between Rochester and Lockington	..	..	8
Timmering Road	General maintenance and reconditioning	..	..	4·5
RODNEY SHIRE—				
Kyabram–Tongala Road ..	Patrol maintenance	..	..	1
Kyabram–Nathalia Road ..	Resheeting and spraying	..	..	·75
,, ,, ,, ..	General maintenance	..	..	1
Mooroopna–Undera Road ..	Bitumen spraying, northerly from Mooroopna and opposite Mooroopna Cemetery	..	..	2·2
,, ,, ,, ..	Patrol maintenance	..	..	8
Shepparton–Tatura Road ..	Modified macadam construction at West Mooroopna	..	..	·94
,, ,, ,, ..	Scarifying and bitumen spraying through Ardmona	..	..	1·88
,, ,, ,, ..	Patrol maintenance	..	..	10
Tatura – Byrneside – Kyabram Road	Bitumen spraying through Byrneside	..	..	2·19
,, ,, ,,	Resheeting and bitumen spraying through Lancaster	..	..	2·2
,, ,, ,,	Patrol maintenance	..	..	18
Tatura–Murchison Road ..	Resheeting and bitumen spraying at Tatura	..	..	·29
,, ,, ,, ..	Patrol maintenance	..	..	13
RODNEY SHIRE AND SHEPPARTON BOROUGH (Joint Works)—				
Shepparton–Tatura Road ..	Resheeting and bitumen spraying	..	..	1·36
,, ,, ,, ..	Reconstruction of Gray's Bridge, ·02 mile, and Extension Bridge, ·07 mile	..	..	·09
,, ,, ,, ..	Bitumen surfacing bridges	..	..	·02
,, ,, ,, ..	Patrol maintenance	..	..	2
ROMSEY SHIRE—				
Lancefield–Kilmore Road ..	Gravelling, ·4 mile, and general maintenance	..	..	9·71
Melbourne–Lancefield Road ..	Gravelling several sections	..	..	1·6
,, ,, ,, ..	General maintenance	..	..	15·85
Woodend–Lancefield Road ..	General maintenance	..	..	5·62
ROMSEY AND KILMORE SHIRES (Joint Works)—				
Lancefield–Kilmore Road ..	General maintenance	..	..	2·25
ROSEDALE SHIRE—				
Carrajung–Gormandale Road	Patrol maintenance	..	..	·75
Prince's Highway	Patrol maintenance	..	..	·91
Sale–Yarram Road ..	Patrol maintenance	..	..	13·8
Seaspray Road	Sheeting with loam ·72 mile, with gravel ·25 mile	..	..	·97
,, ,, ...	Scour repairs at Brewer's Hill, widening causeway, and patrol maintenance	..	..	14·9
Traralgon–Gormandale Road	Patrol maintenance	..	..	4·53
Willung Road	Patrol maintenance	..	..	8
RUTHERGLEN SHIRE—				
Chiltern–Howlong Road ..	General maintenance	..	..	4·25
Rutherglen–Wahgunyah Road	General maintenance	..	..	6·35
Springhurst–Rutherglen Road	General maintenance	..	..	7·3
Wodonga Road	General maintenance	..	..	10·35
Yarrawonga Road	General maintenance	..	..	10·5
RUTHERGLEN AND WANGARATTA SHIRES (Joint Works)—				
Yarrawonga Road	General maintenance	..	..	4·18
ST. ARNAUD BOROUGH—				
Avoca–St. Arnaud Road ..	Two coat bitumen surfacing, ending at borough boundary	..	..	1
Charlton Road	General maintenance	..	..	1·5
Navarre Road	General maintenance	..	..	1·5
St. Arnaud–Donald Road ..	Bitumen resealing, ending at borough boundary	..	..	1·54
SALE TOWN—				
Prince's Highway	General maintenance	..	..	1
Sale–Longford Road ..	General maintenance	..	..	3
SEBASTOPOL BOROUGH—				
Ballarat–Rokeewood Road ..	Scarifying, reshaping, resheeting with quartz, and bitumen surfacing from Burnett Street to southern boundary of borough	..	..	·98
,, ,, ,, ..	General maintenance	..	..	2·33
SEYMOUR SHIRE—				
Avenel–Longwood Road ..	Patrol maintenance	..	..	5·5
Goulburn Valley Road ..	Patrol maintenance	..	..	8·5
Seymour–Yea Road ..	General maintenance	..	..	·5
Sydney Road	Culvert repairs	..	..	..
Upper Goulburn Road ..	Patrol maintenance	..	..	10·5
	Carried forward	26·66	24·6	3,337·04

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND MAIN ROADS MAINTAINED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Work.	Permanent Surveys Effected.	Permanent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*			
	Brought forward	26.66	24.6	3,337·04
SHEPPARTON BOROUGH—				
Shepparton–Nagambie Road	Bitumen surfacing from 1,300 feet south of Sobraon Street to railway line	..	..	·22
,, ,, ,,	Bitumen surfacing from Fraser Street to High Street	..	..	·1
Shepparton–Numurkah Road	Bitumen surfacing from 1,220 feet north of Lightfoot Street to Balaclava Road	..	..	·16
,, ,, ,,	Bitumen surfacing from Fraser Street to Nixon Street	..	..	·21
Shepparton–Mooroopna Road	Bitumen surfacing from Wyndham Street to Goulburn River Bridge ..	..	..	·11
SHEPPARTON SHIRE—				
Dookie–Nalinga Road ..	General maintenance	..	..	8
Pine Lodge Road	Modified macadam construction from Lemnos Road to Grahamvale Road	..	..	1·69
Shepparton–Nagambie Road	General maintenance	..	..	8
Shepparton–Nalinga Road ..	General maintenance	..	..	15
Shepparton–Numurkah Road	Resheeting and tar spraying from Shepparton borough boundary to junction with Nathalia Road	..	..	2·16
,, ,, ,,	General maintenance	..	..	12
SOUTH BARWON SHIRE—				
Barwon Heads Road ..	Single coat bitumen resealing from Barwon Heads Bridge to Hitchcock Avenue	..	..	·23
,, ,, ..	Single coat bitumen surfacing from Ten Mile Finger Post towards Geelong	..	..	3·47
,, ,, ..	Modified macadam construction from Boundary Road	..	..	·42
Torquay Road	General maintenance	..	..	3·4
SOUTH GIPPSLAND SHIRE—				
Boolarra–Foster Road ..	Bridge over Deep Creek	·01	·01	..
,, ,, ,, ..	General maintenance	..	..	12
Boolarra–Welshpool Road ..	General maintenance	..	..	11·4
Falls Road	General maintenance	..	..	5
Foster–Yarram Road ..	Gravelling, &c., from Agnes River towards Welshpool	..	..	2·22
,, ,, ,, ..	General maintenance	..	..	18
Main South Gippsland Road	Gravel sheeting on metalled road from Stony Creek to bridge over Stony Creek	..	..	1·69
,, ,, ,,	General maintenance	..	..	14
Stony Creek–Dollar Road ..	General maintenance	..	..	8
Toora–Gunyah Road ..	Reconstruction with metal of Victoria Street section	..	·2	..
,, ,, ,, ..	General maintenance	..	..	10
Turtons Creek Road ..	Gravel sheeting and patrol maintenance	..	..	5
STAWELL BOROUGH—				
Ararat–Stawell Road ..	General maintenance	..	..	1·5
Glenorchy Road	Gravelling and general maintenance	..	..	1
Stawell–Grampians Road ..	Gravelling and general maintenance	..	..	1
STAWELL SHIRE—				
Stawell–Warraeknabeal Road	Gravelling north of Glenorchy	·82	·82	..
STRATHFIELDSAYE SHIRE—				
Mandurang Road	General maintenance	..	..	9
Strathfieldsaye Road ..	Reconstruction	..	..	·55
,, ,, ..	General maintenance	..	..	9
SWAN HILL SHIRE—				
Euston Road	Forming and limestone metalling 5 miles north of Swan Hill ..	..	1·49	..
,, ,, ...	Forming and limestone metalling at Narrung	..	..	..
,, ,, ...	Forming and limestone metalling 1 mile north of Piangil	..	..	..
,, ,, ...	Forming and limestone metalling 10 miles north of Piangil	..	..	..
,, ,, ...	Forming and limestone metalling north from Piangil	..	4·68	..
,, ,, ...	Patrol maintenance	..	..	65
Nyah–Ouyen Road ..	Forming and limestone metalling 1 mile west of Chinkapook ..	..	1	..
,, ,, ,, ..	Patrol maintenance	..	..	24
Piangil Station Road ..	Patrol maintenance	..	..	·75
Swan Hill Road	Patrol maintenance	..	..	15
Ultima Road	Patrol maintenance	..	..	20
Ultima–Sea Lake Road ..	Patrol maintenance	..	..	19
TALBOT SHIRE—				
Maryborough–Avoca Road ..	Repairing deck of Bung Bong Bridge, regravelling, and general maintenance	..	..	1
Maryborough–Ballarat Road	Regravelling north and south from Talbot, and general maintenance ..	..	..	3
TAMBO SHIRE—				
Bairnsdale–Brnthen Road ..	General maintenance	..	..	1
Bruthen–Omeo Road ..	General maintenance	..	..	1
Mossiface Road	General maintenance	..	..	2
Nowa Nowa–Buchan–Gelantipy Road	General maintenance	..	..	34
TOWONG SHIRE—				
Murray Valley Road ..	Forming and gravelling deviations at Talgarno Post Office	·9	·9	..
,, ,, ..	Patrol maintenance	..	..	45
Omeo Road	Patrol maintenance	..	..	1·5
TRARALGON SHIRE—				
Prince's Highway	General maintenance	..	..	1·5
Traralgon–Balook Road ..	General maintenance	..	..	5
Traralgon–Gormandale Road	Double coat bitumen surfacing from Allotment 8, Parish of Loy Yang, towards Sheepwash Creek	..	..	2
,, ,, ,,	General maintenance	..	..	6
Traralgon–Jeeralang Road ..	Double coat bitumen surfacing	..	..	1·35
,, ,, ,, ..	General maintenance	..	..	6·5
Traralgon–Maffra Road ..	Flood crossing and gravelling Scarn Bridge approach	·74	·53	..
,, ,, ,, ..	General maintenance	..	..	3
TULLAROOP SHIRE—				
Avoca Road	Reconditioning	..	..	5·5
Ballarat Road	General maintenance	..	..	4·25
Eddington Road	Reconditioning and general maintenance	..	..	9
Natte Yallock Road ..	Reconditioning and general maintenance	..	..	3·75
TUNGAMAH SHIRE—				
Cobram–Katamatite Road ..	Timber bridge over Boosey Creek at Katamatite	·01	·01	..
,, ,, ,, ..	Reforming and metalling at Katamatite	·57	·57	..
,, ,, ,, ..	Patrol maintenance	..	..	1·02
Cobram South Road ..	Patrol maintenance	..	..	4·36
Cobram–Strathmerton Road..	Patrol maintenance	..	..	6·32
Numurkah–Tungamah–Wilby Road	Timber bridge over Broken Creek near Katamatite	·01	·01	..
,, ,, ,,	Patrol maintenance	..	..	30·7
St. James Road	Timber bridge over Broken Creek at Yundool	·02	·02	..
,, ,, ...	Patrol maintenance	..	..	8·98
Yarrawonga–Cobram Road ..	Reforming and gravelling, running deck, and fencing on Dainton's Bridge and approach, at Cobram	·96	96	..
,, ,, ,, ..	Patrol maintenance	..	..	14·6
UPPER MURRAY SHIRE—				
Corryong Road	General maintenance	..	..	16·75
Tintaldra Road	General maintenance	..	..	14·25
	Carried forward	30·7	35·8	3,878·65

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND MAIN ROADS MAINTAINED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Work.	Permanent Surveys Effected.	Permanent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*			
	Brought forward	30·7	35·8	3,878·65
UPPER YARRA SHIRE—				
Don Road	Resheeting with gravel and sealing with cold tar and bitural, ·95 mile, bitumen resealing of floodway ·12 mile; north of Launching Place	..	..	1·07
,, ,, ...	General maintenance	..	..	1·15
Warburton Road	General maintenance	..	..	16
VIOLET TOWN SHIRE—				
Shepparton Road	Patrol maintenance	..	..	4
Violet Town—Dookie Road ..	Patrol maintenance	..	..	18
WALPEUP SHIRE—				
Ouyen–Mildura Road ..	Metalling opposite Allotment 23, Parish of Ouyen	..	·61	..
,, ,, ,, ..	Forming opposite Allotment 29, Parish of Nyang	..	·36	..
,, ,, ,, ..	Metalling between Cowangie and Murrayville	..	·73	..
,, ,, ,, ..	Metallling in Tutye	..	·37	..
WANGARATTA BOROUGH—				
Beechworth Road	Bitumen resealing full length	..	..	1
Sydney Road	Bitumen resealing full length	..	..	5·5
WANGARATTA SHIRE—				
Beechworth Road	General maintenance	..	..	12
Ruthergien Road	General maintenance	..	..	3
Wangaratta–Myrtleford Road	General maintenance	..	..	6
Yarrawonga Road	Clearing, boxing, and gravelling opposite Allotments 38C and 37A, Parish of Killawarra	..	·81	..
,, ,, ...	General maintenance	..	..	12·5
WANNON SHIRE—				
Coleraine – Harrow – Apsley Road	Reforming, grading, and metalling ·8 mile, gravelling ·82 mile	..	..	1·62
,, ,, ,,	General maintenance	..	..	35
Hamilton–Coleraine–Casterton Road	Reforming, grading, and metalling	..	..	·81
,, ,, ,,	General maintenance	..	..	18
Wannon Bridge Road ..	Grading, trimming, and metalling	..	..	1
,, ,, ..	General maintenance	..	..	6
WARANGA SHIRE—				
Colbinabbin–Moora Road ..	Bitumen sealing from Allotment 48 to Allotment 44A, Parish of Wanalta	..	..	2·23
,, ,, ,, ..	General maintenance	..	..	5·77
Elmore–Colbinabbin Road ..	Bitumen sealing from Allotment 100D to Allotment 101, Parish of Runnymede	..	..	1·82
,, ,, ,, ..	General maintenance	..	..	9·18
Heathcote Elmore Road ..	Bitumen sealing 2·52 miles, regravelling near Toolleen ·81 mile	..	..	3·33
,, ,, ,, ..	General maintenance	..	..	15·67
Murchison–Rushworth Road..	Regravelling between Rushworth and Moora	..	..	·51
,, ,, ,, ..	General maintenance	..	..	16
Tatura Road	General maintenance	..	..	·96
WARRAGUL—				
Bloomfield Road	General maintenance	..	..	7·5
Brandy Creek Road ..	Bitumen sealing from Allotment 61 to Allotment 19, Parish of Drouin West	..	..	1·69
,, ,, ..	General maintenance	..	..	8
Darnum–Allambee Road ..	Bitumen sealing and general maintenance from Prince's Highway southerly to shire boundary	..	..	4·5
Korumburra–Warragul Road	Bitumen sealing from Allotment 4 to Allotment 54, Parish of Warragul	..	..	·95
,, ,, ,,	General maintenance from Warragul to shire boundary at Strezlecki ..	..	..	12
Leongatha–Warragul Road ..	General maintenance	..	..	8·25
Prince's Highway	Bitumen sealing and general maintenanee through Warragul ..	..	..	1
WARRNAMBOOL SHIRE—				
Caramut–Lismore Road ..	Resheeting between Caramut and Mortlake Shire boundary	..	..	4
,, ,, ,, ..	Double coat bitumen spraying between Caramut and Mortlake Shire boundary	..	..	3
,, ,, ,, ..	Single coat bitumen spraying between Caramut and Mortlake Shire boundary	..	..	1
,, ,, ,, ..	Resealing between Caramut and Mortlake Shire Boundary	..	..	1·5
Framlingham Road ..	Resheeting with metal and double coat bitumen spraying near Prince's Highway	..	..	·75
Garvoc–Laang Road ..	Resheeting with metal and double coat bitumen spraying southwards from Prince's Highway	..	..	1
Mortlake Road	Resheeting with metal and double coat bitumen spraying between Purnin and Ballangeich	..	..	4
Peterborough Road ..	Double coat bitumen spraying southward from junction with Allansford–Nirranda Road	..	..	1·75
WERRIBEE SHIRE—				
Geelong–Bacchus Marsh Road	General maintenance	..	..	2·37
Prince's Highway	General maintenance	..	..	·99
WHITTLESEA SHIRE—				
Epping Road	General maintenance	..	..	10·5
Main Whittlesea Road ..	General maintenance	..	..	14
Wallan Road	General maintenance	..	..	5·75
Whittlesea–Kinglake Road ..	General maintenance	..	..	10·56
WIMMERA SHIRE—				
Dooen Road	Bitumen surfacing opposite Allotments 10 and 11, Parish of Dooen ..	..	..	·86
,, ,, ...	Scour repairs opposite Allotments 9, 11, 23, and 24, Parish of Dooen ..	..	..	·15
Horsham–Murtoa Road ..	Forming and culvert opposite Allotment 114, Parish of Jung Jung ..	..	..	·36
,, ,, ,, ..	Widening and reforming opposite Allotments 104 and 109, Parish of Jung Jung	..	..	·55
,, ,, ,, ..	General maintenance including repairs to scours	..	..	1·8
Horsham–Natimuk Road ..	Forming and gravelling opposite Allotment 241, Parish of Vectis East..	..	·22	..
,, ,, ,, ..	Forming ·46 mile and general maintenance 6·53 miles	..	..	6·99
Horsham–Wal Wal Road ..	General maintenance and construction of two culverts	..	..	2·5
WIMMERA AND ARAPILES SHIRES (Joint Works)—				
Horsham–Hamilton Road ..	General maintenance	..	..	·1
WIMMERA AND ARAPILES SHIRES AND HORSHAM BOROUGH (Joint Works)				
Horsham–Hamilton Road ..	Reconstruction and bitumen surfacing	..	..	·18
WINCHELSEA SHIRE—				
Birregurra Forest Road ..	Resheeting near Birregurra	..	..	·45
,, ,, ,, ..	General maintenance	..	..	9·55
Lorne–Road	Bitumen resealing between Erskine River and Lorne Jetty	..	..	1·16
,, ,, ...	Bitumen surfacing between Railway Station and State School, at Deans Marsh	..	..	1
,, ,, ...	Bitumen surfacing between Erskine Bridge and Jetty	..	..	·57
,, ,, ...	General maintenance	..	..	15
WODONGA SHIRE—				
Kiewa–Wodonga Road ..	Patrol maintenance	..	..	1·1
Murray Valley Road ..	Minor repairs at submerged section	..	..	1·1
Sydney Road	Modified macadam reconditioning ·41 mile and general maintenance ..	..	..	1·4
Tallangatta Road	Modified macadam reconditioning ·61 mile and general maintenance ..	..	..	·88
Wodonga–Yackandandah Road	Sealing ·7 mile and gravelling and general maintenance	..	..	3·25
	Carried forward	30·7	38·9	4,230·78

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND MAIN ROADS MAINTAINED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Work.	Permanent Surveys Effected.	Permanent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*			
	Brought forward	30·7	38·9	4,230·78
WONTHAGGI BOROUGH—				
Loch–Wonthaggi Road ..	Gravel reconstruction and bitural sealing	..	..	·86
Wonthaggi–Inverloch Road ..	Gravel reconstruction and bitural sealing	..	..	·38
Wonthaggi–Korumburra Road	Patrol maintenance	..	..	·82
WOORAYL SHIRE—				
Farmers Road	General maintenance	..	..	13·5
Inverloch–Leongatha Road ..	General maintenance	..	..	16·5
Inverloch–Wonthaggi Road ..	General maintenance	..	..	2·5
Leongatha–Yarragon Road ..	General maintenance	..	..	13
Lower Tarwin Road ..	General maintenance	..	..	12·5
Main South Gippsland Road	General maintenance	..	..	17·5
Mardan Road	General maintenance	..	..	10
Turtons Creek Road ..	General maintenance	..	..	6·75
Warragul–Leongatha Road ..	General maintenance	..	..	7
Wild Dog Valley Road ..	General maintenance	..	..	9
WYCHEPROOF SHIRE—				
Birchip–Sea Lake Road ..	Boxing and limestoning south of Sea Lake	..	..	·19
Birchip–Wycheproof Road ..	Boxing and gravelling west of Wycheproof	..	..	·34
YACKANDANDAH SHIRE—				
Dederang Road	General maintenance	..	..	22
Gundowring Road	Repairs to trnss bridge over Kiewa River and general maintenance ..	..	..	22
Kiewa–Wodonga Road ..	General maintenance	..	..	6
Yackandandah–Wodonga Road	General maintenance	..	..	15·75
YARRAWONGA SHIRE—				
Peechelba Station Road ..	General maintenance	..	..	2
Tungamah–Wilby Road ..	General maintenance	..	..	2
Yarrawonga–Cobram Road ..	General maintenance	..	..	10
Yarrawonga–Rutherglen Road	General maintenance	..	..	·5
Yarrawonga–Wangaratta Road	Forming and metalling south-east from Allotment 28, Parish of Bundalong	..	1·14	..
,, ,, ,,	Double coat bitumen surfacing south-east from Allotment 28, Parish of Bundalong	1·92	1·92	..
,, ,, ,,	Reconditioning and double coat bitumen surfacing easterly to Allotment 28, Parish of Bundalong	..	..	1
,, ,, ,,	General maintenance	..	..	16
YEA SHIRE—				
Upper Goulburn Road ..	Resheeting near Yea ·5 mile, and bitumen sealing near Yea ·25 mile ..	..	..	·75
,, ,, ..	Pipe culvert east of Cotton's Pinch and scarifying and rolling near Brown's	..	..	·25
Yea–Glenburn Road ..	Scarifying and rolling near Quinlan's	..	..	·5
,, ,, ,, ..	Regrading, gravelling, &c., near Glenmore	..	..	·29
,, ,, ,, ..	Timber bridge and approaches opposite Allotment 61A, Parish of Yea ..	·07	..	..
	Total	32·69	41·96	4,440·66
	UNDER DIRECT SUPERVISION OF BOARD.			
ALBERTON SHIRE—				
Boolarra–Welshpool Road ..	Patrol maintenance	..	..	13·5
BALLARAT AND BUNGAREE SHIRES (Joint Works)—				
Ballarat–Creswick Road ..	Mixed in place surfacing between North Ballarat and Creswick Shire boundary. Day labour	..	..	1·46
,, ,, ,, ..	Patrol maintenance	..	..	5·75
BARRABOOL SHIRE—				
Airey's Inlet Road	Forming and gravelling at Airey's Inlet	·39	·39	..
BELLARINE SHIRE—				
Geelong–Queenscliff Road ..	Sealing a gravelled road near Wallington. Day labour	..	..	1·4
,, ,, ,, ..	General maintenance	..	..	15
Geelong–Portarlington Road ..	Construction in modified macadam at Moolap. Day labour	1	1	..
,, ,, ,, ..	General maintenance	..	..	2
BROADFORD SHIRE—				
Main Sydney Road ..	General maintenance through the township of Broadford	..	..	1·5
CRANBOURNE SHIRE—				
Main Coast Road	Construction of a timber bridge and gravelled approaches	·01	·01	..
EUROA SHIRE—				
Main Sydney Road ..	Bituminous surface treatment in Euroa. Day labour	..	..	1·82
FLINDERS AND FRANKSTON AND HASTINGS SHIRES (Joint Works)—				
Hastings–Flinders Road ..	Construction of r.c. bridge and approaches over Warringine Creek ..	·01	·01	..
GOULBURN SHIRE—				
Goulburn Valley Road ..	Scarifying, reshaping and double coat surfacing through Nagambie Township. Day labour	..	..	·86
HAMPDEN SHIRE—				
Princes Highway	Widening and surfacing with bituminous macadam through Township of Terang. Day labour	1	1	..
HEYTESBURY SHIRE—				
Peterborough–Port Campbell Road	Forming and grading between London Bridge and Peterborough ..	1	1	..
KILMORE SHIRE—				
Main Sydney Road	Spraying through the Township of Kilmore, and general maintenance. Day labour	..	..	1·6
MANSFIELD SHIRE—				
Mansfield–Woods Point Road	Construction of two timber bridges over Baker's and Morning Star Creeks	..	·02	..
,, ,, ,,	General maintenance	..	..	40
MARYBOROUGH BOROUGH—				
Castlemaine Road	Reforming, widening, and resheeting between east borough boundary and the railway crossing. Day labour	..	..	1·34
MORNINGTON SHIRE—				
Point Nepean Road ..	Resealing from Main-street, Mornington to Shire boundary. Day labour	..	..	6
NARRACAN SHIRE—				
Walhalla Road	General maintenance	..	..	12
NARRACAN AND MANSFIELD SHIRES (Joint Works)—				
Walhalla–Matlock Road ..	Clearing and forming between Mt. Victor and Johnson's Hill	1·65	1·65	..
NEWHAM AND WOODEND SHIRE—				
Tylden Road	Forming and metalling 2 miles north of Woodend	·48	·48	..
OMEO SHIRE—				
Bright–Omeo Road ..	General maintenance	..	..	28
	Carried forward	5·54	5·56	132·23

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND MAIN ROADS MAINTAINED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Surveys Effected.	Permanent Works Constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles
	UNDER DIRECT SUPERVISION OF BOARD—*continued.*			
	Brought forward	5·54	5·56	132·23
OTWAY SHIRE—				
Beech Forest–Apollo Bay Road	Patrol maintenance	..	..	19
Beech Forest–Laver's Hill Road	Patrol maintenance	..	..	12·5
Beech Forest–Mount Sabine Road	Patrol maintenance	..	..	12–5
Cape Patten Road	Forming and metalling near Flatbottom Creek	·87	·87	..
,, ,, ,, ...	Patrol maintenance	..	..	10
Forrest–Apollo Bay Road ..	Patrol maintenance	..	..	25
Gellibrand–Carlisle Road ..	Construction of a timber bridge	·01	·01	..
,, ,, ,, ..	Patrol maintenance	..	..	11·
Laver's Hill–Glenaire Road ..	Reforming and sanding 1 mile south of Laver's Hill	2·29	2·29	..
,, ,, ,, ..	Patrol maintenance	..	..	2
Princetown Road .. ,, ..	Patrol maintenance	..	..	15
SEBASTOPOL BOROUGH—				
Ballarat–Rokewood Road ..	Reshaping with quartz and sealing in Sebastopol Township. Day labour	·97	·97	..
,, ,, ,, ..	Patrol maintenance	..	..	2·25
SEYMOUR SHIRE—				
Main Sydney Road ..	Spraying through Seymour. Day labour	..	..	·5
,, ,, ,, ..	General maintenance	..	..	1·6
SOUTH GIPPSLAND AND MORWELL SHIRES (Joint Works)—				
Boolarra–Foster Road ..	General maintenance from Boolarra South to Gunyah Junction ..	..	..	8·5
Boolarra–Welshpool Road ..	General maintenance from Greenwood's to southern boundary of the Shire	..	..	16·1
UPPER YARRA SHIRE— ..				
Main Warburton Road ..	Construction in modified macadam from Warburton to Milgrove. Day labour	1	1	..
Woori Yallock–Pakenham–Kooweerup Road	Construction of 2 timber bridges over McCrae's Creek	·01	·01	..
Woods Point Road ..	General maintenance	..	..	38
WANGARATTA BOROUGH—				
Main Sydney Road ..	Construction of bridge over Reedy Creek	·01	·01	..
WINCHELSEA SHIRE—				
Princes Highway	Construction in bituminous macadam in Township of Winchelsea. Day labour	·75	·75	..
,, ,, ...	Construction in modified macadam in Township of Winchelsea. Day labour	·5	·5	..
YEA SHIRE—				
Yarra Glen–Glenburn Road ..	Clearing, forming and gravelling and construction of two bridges near Yea River	·01	·35	..
	Total	11·96	12·32	306·18

APPENDIX F.

COUNTRY ROADS BOARD.

DEVELOPMENTAL ROADS.

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED AND WORKS CONSTRUCTED UNDER THE PROVISIONS OF THE COUNTRY ROADS ACT 1928, DURING THE YEAR ENDED 30TH JUNE, 1931.

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Surveys Effected.	Works Constructed.
		Miles.	Miles.
	UNDER MUNICIPALITIES.		
ALBERTON SHIRE—			
Albert River Road	Earthworks near Stacey's Bridge, ·6 mile, near Allotment 76, Parish of Binginwarri, ·4 mile, through Allotment 18, Parish of Wonyip, ·5 mile	6·4	1·5
Binginwarri–Albert River Road ..	Gravelling from Binginwarri to Allotment 22, Parish of Binginwarri	..	2·5
Binginwarri–Welshpool Road ..	Gravelling from Allotment 2 to Allotment 17, Parish of Binginwarri	..	·6
Blackwarry–Yarram Road ..	Earthworks from Allotment 40A, Parish of Boodyarn, to Allotment 20, Parish of Bulga	..	1·6
Carrajung–Balook Road ..	Forming and gravelling ½ mile south of Carrajung	·5	..
Madalya Road	Clearing, grading, and forming from Allotment 51H to Allotment 71C, Parish of Binginwarri	1·7	..
ARAPILES SHIRE—			
Arapiles–Grassy Flat Road ..	Gravelling opposite Allotments 5 and 6, Parish of Arapiles	..	·75
Miga Lake–Gymbowen Road ..	Loaming and gravelling opposite Allotment 8, Parish of Kalingur	·59	..
" " " ..	Gravelling opposite Allotments 36 and 37, Miga Lake Estate	..	·5
BAIRNSDALE SHIRE—			
Calulu–Boggy Creek Road ..	Forming, gravelling, &c., and culverts near Boggy Creek	..	1
Glenaladale–Lindenow Road ..	Forming, gravelling, &c., and culverts near Mitchell River	·85	..
Lindenow–Meerlieu Road ..	Forming, gravelling, and culverts between Emu Vale and Tom's Creek ..	3	..
BALLAN SHIRE—			
Ballan–Egerton Road	Forming and metalling from Hunterston P.R. to Allotment 7, Section 29, Parish of Gorong	..	·81
Bungeeltap Road	Forming and gravelling in six sections opposite Allotment 16, Section 16, Parish of Yaloak, and Section 2, Parish of Bungeeltap	..	·37
Moorarbool West Road	Forming and gravelling opposite Allotments 2B, 2C, Section 6, and 13C, Section 17, Parish of Moorarbool West	..	·22
BASS SHIRE—			
Kernot–Krowera Road	Reforming and gravelling about 1 mile west of Wonthaggi–Loch Road ..	..	·34
Sheepways Road	Reforming and gravelling in three sections from Allotment 64B, Parish of Jumbunna, to Wonthaggi–Loch Road	..	·68
Wonthaggi–Loch Road	Forming and gravelling landslip through Allotment 52, Parish of Jumbunna ..	·08	·08
BERWICK SHIRE—			
Nar-nar-goon–Gembrook Road ..	Forming deviation of Smith's Hill at Nar-nar-goon North	3·5	1·79
BIRCHIP SHIRE—			
Curyo West Road	Gravelling westerly from Curyo Railway Station	..	·45
BORUNG SHIRE—			
Boolite—Sheep Hills Road ..	Metalling 3¾ miles west of Sheep Hills	·59	..
Brim East Road	Metalling 1½ miles from Brim	..	·91
Galaquil West Road	Limestone metalling, 4½ miles west of Galaquil	·67	·7
" "	Limestone metalling, 1¼ miles west of Galaquil	·5	..
BRIGHT SHIRE—			
Happy Valley Road	Earthworks, draining, and gravelling in five sections in Parish of Barwidgee ..	2·34	2·04
Kiewa Valley Road	Earthworks, draining, and gravelling deviation through Allotments 9 and 11, Section 18, Parish of Mullindolingong	..	·94
Myrtleford–Yackandandah Road	Earthworks, draining, and gravelling near Allotments 4 and 5, Section 6, Parish of Barwidgee	·71	·71
BULN BULN SHIRE—			
Mountain View Road	Reforming and sanding from junction with Main South Road in Allotment 30, Parish of Poowong, to Allotment 18, Parish of Poowong East	1·36	..
Neerim North Road	Reforming and metalling from Allotment 75 to Allotment 179, Parish of Neerim	·96	·96
BUNINYONG SHIRE—			
Hennessy's Road	Metalling about 1 mile south-west of Wallace, Parish of Warrenheip	·72	·43
Murphy's Road	Metalling about 1 mile south-west of Wallace, Parish of Warrenheip	·56	·33
COHUNA SHIRE—			
Cohuna–Mead Road	Forming and gravelling from Murray River Valley Road to Mead	..	·76
Cohuna–McMillan's Road ..	Forming and gravelling opposite Allotment 30, Parish of Gunbower West ..	..	·76
Gannawarra Road	Forming and gravelling from Cohuna to Koondrook Road	..	·87
COLAC SHIRE—			
Colac–Forrest Road	Reforming and gravelling between Boundary Creek and Shire boundary ..	2·87	2·87
CORIO SHIRE—			
McArthur's Road	Forming and metalling opposite Allotments 3 and 4, Parish of Lara	..	·83
DEAKIN SHIRE—			
Girgarre East Road	Forming and gravelling from Allotment 2 to Allotment 1B, Parish of Kyabram	·6	..
DEAKIN AND RODNEY SHIRES (Joint Works)—			
Kyabram–Stanhope Road ..	Forming and gravelling south from junction with Kyabram–Rochester Road ..	1	..
DIMBOOLA SHIRE—			
Glenlee–Jeparit Road	Grading, rubbling, metalling, &c., opposite Allotment 134, Parish of Ni Ni ..	·34	..
DONALD SHIRE—			
Donald–Minyip Road	Forming and gravelling opposite Agricultural College Reserve	·61	·61
DUNDAS SHIRE—			
Melville Forest Road	Forming and gravelling opposite Allotments 3A and 3B, Parish of Urangara ..	·5	·5
DUNMUNKLE SHIRE—			
Banyena Road..	Forming and gravelling, commencing ¾ mile south of Banyena Siding ..	·32	·32
Lubeck West Road	Forming and gravelling, commencing 1¾ miles west of Lubeck	·43	·43
Marnoo–Rupanyup Road ..	Forming and gravelling, commencing 1¾ miles east of Rupanyup	·4	·4
ELTHAM SHIRE—			
Cottles Bridge–Strathewan Road	Construction of timber bridge and approaches at Strathewan	·07	·07
" " " "	Forming and metalling at Strathewan	·21	·1
EUROA SHIRE—			
Longwood–Ruffy Road	Reforming, grading, and gravelling south of Longwood	..	1·11
FERN TREE GULLY SHIRE—			
Emerald–Macclesfield Road ..	Grading and metalling between Emerald Cemetery and Macclesfield	·43	·43
GLENELG SHIRE—			
Dergholm–Elderslie Road ..	Forming and gravelling opposite Allotment 11, Parish of Dergholm	..	·58
Glenorchy Estate Road ..	Forming and metalling east of Merino opposite Allotment 9, Parish of Merino ..	..	·22
Merino–Struan–Tahara Road ..	Forming and gravelling on Harvey's Flat	..	·25
GLENLYON SHIRE—			
Daylesford–Trentham Road ..	Grading, forming, and metalling between North Bullarto and Lyonville ..	·38	..
South Bullarto Road	Grading, forming, and metalling between North Bullarto and Bullarto ..	·32	..
	Carried forward	33·51	31·32

STATEMENT SHOWING MILEAGE OF SURVEYS AND WORKS CONSTRUCTED, ETC.—*continued.*

Names of Municipality and Road.	Nature and Locality of Works.	Permanent Surveys Effected.	Works Constructed.
		Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*		
	Brought forward	33·51	31·32
GRENVILLE SHIRE—			
Gillett's Road	Metalling opposite Allotments 70 and 64, Parish of Commeralghip	..	·43
Pittong Road	Reforming, forming, and gravelling north of Portland Road	..	1·1
,, ,, ...	Reforming, forming, and gravelling opposite Allotments 14, 16, and 17, Parish of Argyle	..	1·44
HAMPDEN SHIRE—			
Cundare–Duverney Road ..	Forming and metalling in two sections, opposite Allotments 37A and 36A, and opposite Allotments 34A and 34B, Parish of Wilgul South	..	·61
HEALESVILLE SHIRE—			
Healesville–Toolangi Road ..	Reforming, grading, and gravelling south-westerly from Toolangi Post Office ..	..	·81
Myers Creek Road	Clearing, forming, and gravelling opposite Allotment 73F, Parish of Tarrawarra	..	·22
HEYTESBURY SHIRE—			
Devil's Gully Road	Reforming and metalling through Allotment 74A, Parish of Jancourt ..	..	·19
Glenfine West Road	Reforming and metalling near Glenfine Railway Station	·34	·34
South Ecklin Road	Reforming and metalling by Lake Elingamite	..	·47
Timboon–Cowley's Creek Road ..	Reforming and metalling from Timber Reserve to Allotment 75D, Parish of Timboon	..	·34
Timboon–Scott's Creek Road ..	Reforming and metalling near Ley's Bridge	..	·38
HUNTLY SHIRE—			
Drummartin Road	Clearing, forming, and gravelling opposite Allotments 100 and 106, parish of Warragamba	·28	..
KARA KARA SHIRE—			
Marnoo–St. Arnaud Road ..	.. ..	·3	
Sandy Creek Road	.. ..	·88	..
Swanwater Road	.. ..	·45	..
KARKAROOC SHIRE—			..
Hopetoun–Lascelles Road ..	Metalling opposite Allotment 26, Parish of Minapre	..	·4
,, ,, ,, ..	Metalling opposite Allotment 27, Parish of Minapre	..	·47
,, ,, ,, ..	Metalling opposite Allotment 22, Parish of Chipric	..	·72
,, ,, ,, ..	Metalling opposite Allotment 23, Parish of Chipric	..	·3
Wathe Siding Road	Forming and metalling opposite Allotment 2, Parish of Dattuck	..	·81
KERANG SHIRE—			
Murrabit–Myall Road	Gravelling at Murrabit	·24	·24
Murrabit West Road	Gravelling at Murrabit	·24	·24
Murray River Valley Road ..	Gravelling to connect with Cohuna Shire	..	1·84
Winlaton Road	Gravelling in Tresco Township	·29	·29
KORONG SHIRE—			
Borung West Road	Forming opposite Allotment 40, Parish of Borung	·19	·19
,, ,, ...	Forming and grading from Allotment 48 to Allotment 69, Parish of Borung ..	1·07	1·07
,, ,, ...	Gravelling, &c., from railway through Borung Township	·19	..
Woolshed Flat Road	Forming and grading from Allotment 32A to timber reserve, Parish of Borung ..	1·26	1·26
KORUMBURRA SHIRE—			
Bena–Kongwak Road	2·03 miles reforming and 1·87 miles metalling in various sections in Parish of Jumbunna East	2·03	·82
Poowong–Olsen Road	Reforming and gravelling through Allotment 17 and opposite Allotment 17A, Parish of Poowong	1·12	·59
Sheepways Road	Metalling through Allotment 46B, Parish of Kongwak	·75	·44
Timm's Road	·49 mile gravelling and ·31 mile stone base sections opposite Allotment 13, Parish of Poowong	·8	·72
KOWREE SHIRE—			
Elderslie Road	Gravelling near Meereek	·12	·12
Little Desert Road	Gravelling through and south of scrub section	1·04	2·53
Minimay Road	Gravelling near junction with Booroopki Road	·88	·7
KYNETON SHIRE—			
Baynton Road	Grading, forming, and metalling opposite Allotments 5 and 6, Parish of Baynton	..	·5
LAWLOIT SHIRE—			
Cove Estate Settlement Road ..	Gravelling between Lillimur and Cove Estate	..	·64
Little Desert Road	Gravelling between Kaniva and Little Desert	..	1·27
Serviceton South Road	Gravelling between Serviceton and Serviceton South	..	·59
LOWAN SHIRE—			
Diapur–Yanac Road	Forming and gravelling opposite Allotment 147, Parish of Tarranginnie ..	·62	·4
Netherby Road	Forming and metalling opposite Allotment 23, Parish of Warragine	·32	·32
Yanac South Road	Forming and gravelling south of Yanac Township opposite Allotment 29, Parish of Yanac-a-Yanac	·13	·13
MANSFIELD SHIRE—			
Benalla–Mansfield Road ..	.. ..	1·2	
Tolmie Road	.. ..	1·39	..
MARONG SHIRE—			..
Newbridge–Shelbourne Road ..	Bitumen penetration construction adjoining Shelbourne Railway Station ..	·15	·15
Yarraberb Road	Forming and gravelling in three sections and construction of flood crossing between Yarraberb Homestead and railway line	·59	·59
MELTON SHIRE—			
Exford Road	Forming and metalling near Werribee River	..	..
MILDURA SHIRE—			
Benetook Avenue Road ..	Laying foundation gravel	1·1	·8
Brownport Road	Forming, sanding, scooping, and rubbling	·5	..
Red Cliffs South-east Road ..	Laying foundation course of limestone metal	·7	..
Red Cliffs West Road	Laying top coat of bituminous penetrated limestone	·5	..
MINHAMITE SHIRE—			..
Nardoo Road	Boxing and gravelling from Allotment 2A to Allotment 1B, Parish of Willatook ..	..	·59
MIRBOO SHIRE—			
Allambee–Thorpdale Road ..	Erection of timber bridge and approaches over Watkins Creek	·3	..
Mirboo–Boolarra Road	Metalling and sanding from Allotment 33A to Allotment 29, Parish of Mirboo ..	2·6	2·6
,, ,, ,, ...	Forming and sanding from Mirboo North to Allotment 36, Parish of Mirboo ..	2	..
Mirboo North–Thorpdale Road ..	Sanding near Reserve and Allotment 113, Parish of Narracan South	·7	·7
Nichols Road	Sanding through Allotment 114B, Parish of Mirboo	·72	·72
MORTLAKE SHIRE—			
Vite Vite Road	Forming, grading, and metalling from Pnra Pnra Township north-westerly along railway line	..	·67
MORWELL SHIRE—			
Boolarra–Morwell Road ..	Sanding on Guthrie's Hill	..	·63
Middle Creek Road	Bridge and approaches over Vagg's Creek	..	·05
Thorpdale East Road	Sanding opposite Allotment 9, Parish of Narracan	..	·38
,, ,, ...	Forming from Allotment 29 to Allotment 10, Parish of Narracan	..	1·99
Tyers Road	Sanding three sections from Allotment 10 to Allotment 4, Parish of Tanjil East	..	1·01
NARRACAN SHIRE—			
Coalville–Narracan Road ..	Reforming and sanding easterly from Allotment 121 to Allotment 120, Parish of Moe	1·02	1·02
Mirboo North–Thorpdale Road ..	Reforming and sanding from Allotment 69 to Allotment 70A, Parish of Allambee East	·66	..
Platina Road	Construction of steel and concrete bridge over Moe-Walhalla Railway line, near Platina Railway Station	·01	·01
Shady Creek Road	Reforming and sanding northerly from Allotment 85B to Allotment 87A, Parish of Darnum	·84	·84
Thorpdale East Road	Reforming and sanding to junction with McDonald's Track opposite Allotment 128, Parish of Moe	·81	·81
Thorpdale–Yarragon Road ..	Reforming and sanding in two sections south-westerly from Allotment 13 to Allotment 16, Parish of Moe	·94	·94
Willowgrove–Fumina Road ..	Reforming, loaming, and gravelling, &c., north-westerly from Allotment 18 to Allotment 37, Parish of Fumina	1·91	..
	Carried forward	65·69	69·75

STATEMENT SHOWING MILEAGE OF SURVEYS AND WORKS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Surveys Effected.	Works Constructed.
		Miles.	Miles
	UNDER MUNICIPALITIES—*continued.*		
NEWSTEAD AND MT. ALEXANDER SHIRE—	Brought forward	65·69	69·75
Glengower–Joyce's Creek Road ..	Forming, gravelling, &c., in Parish of Sandon	..	..
NUMURKAH SHIRE—			
Waaia North Road	Gravelling, &c., north from Waaia railway crossing	..	·38
Wunghnu East Road	Gravelling opposite Allotments 27 and 29, Section B, Parish of Drumanure ..	..	·43
OMEO SHIRE—			
Brookville Road	Forming from "Shelton's Gap" towards Swift's Creek	..	1
Sandy Creek Road	Forming to "New Line"	..	1·6
ORBOST SHIRE—			
Bete Bolong Road	Forming and side-cutting north-westerly from Bete Bolong Creek to Allotment 1, Parish of Buchan	1·35	2·44
Groves Road	Gravelling in two sections from Allotment 10 to Allotment 14, Parish of Newmerella	·31	·31
Lower Benm Road	Sanding in thirteen short sections on various parts of road	·89	·89
PYALONG SHIRE—			
Lancefield–Tooborac Road ..	Forming and culverts, Patterson's deviation	1·57	..
RIPON SHIRE—			
Trawalla West Road	Bluestone metalling opposite Allotment 65, Parish of Lillirie	..	..
ROCHESTER SHIRE—			
Corop Road	Gravelling opposite Allotment 172A, Parish of Naneella	1·34	·75
SOUTH GIPPSLAND SHIRE—			
Chadwick's Road	Gravelling from Toora–Wonyip Road to Agnes River	1·43	..
Dollar–Foster Road	Gravelling from Main South Gippsland Road to Allotment 48C, Parish of Dumbalk	1·16	1·16
O'Grady's Ridge Road	Gravelling from Main South Gippsland Road	..	·79
Port Franklin Road	Gravelling from Foster–Yarram Road to Bannison Railway Station	..	1·17
Toora–Gunyah Road	Forming, &c., deviation from Allotment 8 to Allotment 14, Section B, Parish of Woorarra	..	1·8
Whitelaw's Track Road ..	Gravelling between Falls Road and Main South Gippsland Road	·8	..
Woomera Creek Road	Gravelling through Allotment 20, Section C, Parish of Woorarra	·7	·7
Woorarra West Road	Gravelling from Boolarra–Foster Road to Allotment 19, Parish of Woorarra ..	1·27	..
STAWELL SHIRE—			
Marnoo–Rupanyup Road ..	Gravelling north-west of Marnoo	1·15	1·15
Marnoo–St. Arnaud Road ..	Gravelling Hynes Hill	·09	·09
Pomonal Road	Forming, &c., from Allotment 12, Parish of Bellellen, to Allotment 67, Parish of Mokepilly	2·75	2·75
TOWONG SHIRE—			
Granya–Tallangatta Road ..	Forming near Allotments 12 and 13, Parish of Bullioh	..	·57
Murray Valley Road	Forming and gravelling at Jingellic	·88	·88
Tallangatta Creek Road	Forming and gravelling at Allotment 6 and near Allotment 4, Parish of Keelangie	·57	·57
Yabba Road	Gravelling at Tallandoon	·83	·83
TRARALGON SHIRE—			
Callignee Factory Road ..	Widening and sanding opposite Allotment 9A, Parish of Callignee	·73	..
TUNGAMAH SHIRE—			
Katandra Road	Forming and gravelling opposite Allotments 17 and 17A, Parish of Yabba Yabba	·47	·47
Wunghnu–Youanmite Road ..	Forming and gravelling opposite Allotment 24, Parish of Youanmite	·53	·53
Yarroweyah–Tocumwal Road ..	Forming and gravelling opposite Allotments 10 and 11, Parish of Yarroweyah ..	·75	·75
UPPER MURRAY SHIRE—			
Beetomba Road	Reforming and sanding near Beetomba Railway Station	·53	·53
Benambra–Corryong Road ..	Timber bridge over Nariel Creek at surveyed township of Nariel	·15	..
UPPER YARRA SHIRE—			
Woori Yallock–Cockatoo Road ..	Reforming and loaming from Allotment 18 to Allotment 47, Parish of Woori Yallock	..	1·2
" " " ..	Reforming and loaming from Allotment 31 to Allotment 12, Township of Yellingbo, Parish of Woori Yallock	..	..
VIOLET TOWN SHIRE—			
Fernhills Road	Forming and sidecutting, &c., near boundary with Enroa Shire	..	·88
WALPEUP SHIRE—			
Boinka North Road	Metalling opposite Allotment 17, Parish of Boinka	..	·15
Boinka South Road	Metalling opposite Allotment 19, Parish of Worooa	..	·13
Boorongie North Road	Metalling opposite Allotment 27, Parish of Boorongie	..	·25
Cowangie Road	Metalling opposite Allotment 7, Parish of Tutye	..	·5
" "	Metalling opposite Allotment 30, Parish of Tutye	..	·13
Danyo North Road	Forming and metalling in Parishes of Danyo, Duddo, and Walpa	..	·89
Kattyoong Road	Metalling opposite Allotment 1, Parish of Gnarr	..	·74
Linga North Road	Metalling from Allotment 20 to Allotment 16, Parish of Underbool	..	·55
Nyang Sonth Road	Metalling opposite Allotment 49, Parish of Nyang	..	·34
Ouyen–Kulwin Road	Metalling opposite Allotment 36, Parish of Wagant	..	·26
" " "	Metalling opposite Allotment 7, Parish of Ouyen	·8	·8
Ouyen–Tempy Road	Metalling opposite Allotment 37, Parish of Boulka	..	1·05
Panitya North Road	Metalling opposite Allotments 49 and 50, Parish of Mulcra	..	1·45
" " "	Metalling opposite Allotment 11, Parish of Manya	·72	·72
" " "	Forming and metalling opposite Allotment 32, Parish of Manya	2·05	·87
" " "	Metalling opposite Allotment 22, Parish of Manya	..	·39
Panitya South Road	Forming and metalling in Parish of Carina	..	·77
WANGARATTA SHIRE—			
Peechelba Station Road	Clearing, boxing, and gravelling in two sections opposite Allotments 157 and 154 and opposite Allotment 75B, Parish of Boorhaman	..	..
WANNON SHIRE—			
Melville Forest Road	Forming and gravelling through Allotments 2B and 3B, Section XV., Parish of Carrak	..	·49
" " "	Reforming and gravelling at Gritjurk	..	1·37
" " "	Forming and gravelling at Vasey	..	..
WARANGA SHIRE—			
Mt. Camel–Corop Road	Forming and metalling between Colbinabbin and Corop	·66	·3
Mt. Camel Estate Road ..	Forming and metalling between Mt. Camel and Colbinabbin	..	·96
WARRAGUL SHIRE—			
Ferndale Road	Reforming and sanding southerly from Allotment 64 to Allotment 67, Parish of Allambee	·91	..
Lardner–Tetoora Road	Reforming and sanding easterly from Allotment 1 to Allotment 68, Parish of Allambee	·92	·92
WARRNAMBOOL SHIRE—			
Childers Cove Road	Forming and gravelling 14 miles from Warrnambool	·54	·54
Naringal Road	Forming and metalling 1½ miles east of Naringal	·34	·34
Panmure Road	Forming and metalling 4 miles from Panmure	·38	·38
WODONGA SHIRE—			
Beechworth–Wodonga Road ..	Forming and gravelling at Leneva	·41	·41
WOORAYL SHIRE—			
Dollar–Dumbalk Road	Metalling from Allotment 18 to Allotment 16B, Parish of Mirboo South ..	·55	·55
Leongatha–Mirboo Road ..	Sanding opposite Allotments 86 and 86A, Parish of Koorooman	1·36	..
Nerrena Road	Sanding from Allotment 21B to Allotment 20B, Parish of Nerrena	·78	·78
WYCHEPROOF SHIRE—			
Berriwillock–Woomelang Road ..	Forming and limestoning, &c., from Allotment 9, Parish of Wortongie, to Allotment 77, Parish of Boigbeat	..	1·51
Culgoa–Lalbert Road	Forming and grading, &c., in four sections from Allotment 21 to Allotment 12, Parish of Toort	..	2·12
YACKANDANDAH SHIRE—			
Kergunyah Road	Forming and gravelling, &c., from Allotment 5 to Allotment 9, Parish of Murramurrangbong	·51	·51
YEA SHIRE—			
Flowerdale Road	Forming and gravelling in seven sections from Allotment 45C to Allotment 3, Parish of Flowerdale	·68	·68
		97·55	116·22

STATEMENT SHOWING MILEAGE OF SURVEYS AND WORKS CONSTRUCTED, ETC.—*continued.*

Name of Municipality and Road.	Nature and Locality of Works.	Permanent Surveys Effected.	Works Constructed
		Miles.	Miles.
UNDER DIRECT SUPERVISION OF THE BOARD.			
BENALLA SHIRE—			
Toombullup Road	Reforming and gravelling in the vicinity of Crawley's Gap	·4	·4
" "	Reforming and gravelling from junction with Tolmie–Whitfield Road	4·24	4·24
BERWICK SHIRE—			
Nar Nar Goon–Gembrook Road	Clearing and forming near Bessie's Creek	1·72	..
ELTHAM SHIRE—			
Kinglake–Kinglake East Road	Reforming and gravelling from junction of Yarra Glen–Glenburn Road	2·45	1·1
" " "	Reforming and gravelling between Mt. Slide landing and Kinglake	3·02	3·02
Toolangi–Kinglake Road	Forming and gravelling from Mt. Slide landing towards Toolangi	·95	..
HEALESVILLE SHIRE—			
Healesville–Toolangi Road	Clearing, forming and gravelling near Toolangi House	·29	·29
Toolangi–Kinglake Road	Forming and gravelling 1 mile west of Toolangi Post Office	1·2	·57
HEYTESBURY SHIRE—			
Cooriejong Road	Clearing and forming at junction with Eastern Creek	29	·29
Eastern Creek Road	Forming and draining 3 miles from Cobden–Port Campbell Road	·5	·5
" " "	Reforming and surfacing with scoria east from junction of Cobden–Port Campbell Road	·85	..
Eastern Creek Settlement Road	Forming and construction of timber bridge from junction with Eastern Creek Road	·87	·87
Timboon–Nirranda Road	Reforming and gravelling from junction with Nullawarre–Timboon Road	1·13	1·13
MORWELL SHIRE—			
Linklater's Connexion	Clearing and forming from junction with Ridge Road	1·1	..
Morwell River Road	Reforming and metalling at junction with Gunyah-Ryton Road	3	3
NARRACAN SHIRE—			
Allambee–Childers Road	Forming, reforming and sanding easterly from Childers Hall	4·8	..
Allambee–Thorpdale Road	Reforming and sanding northerly from the southern boundary of the Shire	2·4	..
Moe-Moondarra Road	Clearing and forming north-easterly from Tyers River at Gould	9	1·2
" " "	Clearing and forming between Gould and Moondarra	2·45	·65
OTWAY SHIRE—			
Colac–Beech Forest Road	Reforming and gravelling between Kawarren Station and Gellibrand River	1	1
Ferguson–Charley's Creek Road	Clearing and forming 3 miles north of Ferguson Station	·68	·68
Gellibrand East Road	Construction of timber bridge over Lardner's Creek	..	·01
Hordern Vale–Apollo Bay Road	Forming 4 miles west of Apollo Bay	1·48	1·48
OXLEY SHIRE—			
Tolmie–Whitfield Road	Clearing and forming between Whitlands and Tolmie	2·94	..
" " "	Reforming and gravelling between Whitlands and Tolmie	2·43	4·91
TRARALGON SHIRE—			
Traralgon Creek Road	Construction of timber bridge and approaches over Traralgon Creek	..	·01
WINCHELSEA SHIRE—			
Cape Patten Road	Construction of timber bridge over Separation Creek	..	·01
		49·19	25·36

APPENDIX G.

COUNTRY ROADS BOARD.

STATE HIGHWAYS.

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED, WORKS CONSTRUCTED, AND HIGHWAYS MAINTAINED UNDER THE PROVISIONS OF THE COUNTRY ROADS ACT 1928 DURING THE YEAR ENDED 30TH JUNE, 1931.

Name of Highway and Section.	Nature and Locality of Work.	Permanent Surveys Effected.	Works Reconstructed.	Maintenance Works Carried Out.
		Miles	Miles.	Miles.
	UNDER DIRECT SUPERVISION OF THE BOARD.			
PRINCE'S HIGHWAY (West)—				
Section 1	Gravel shoulders and sealing bituminous macadam between Werribee and Geelong, Shires of Corio and Werribee. Day labour	20	20	..
Section 2	Resealing waterbound macadam between Warncoort and Pirron Yallock, Shire of Colac. Day labour	13·2	13·2	..
,, ...	Widening and surfacing with bituminous macadam between Stoneyford and Camperdown, Shires of Heytesbury and Hampden. Day labour	·5	·5	..
Section 3	Widening and surfacing with bituminous macadam between Boorcan and Terang, Shire of Hampden. Day labour	·8	·8	..
,, ...	Widening and surfacing in semi-penetration macadam and modified macadam between Panmure and Allansford, Shire of Warrnambool. Day labour	4	4	..
,, ...	Resealing waterbound macadam between Dennington and Tower Hill, Shire of Warrnambool. Day labour	5	5	..
Sections 1 to 5	General maintenance	..	..	300
PRINCE'S HIGHWAY (East)—				
Section 1	Spraying bituminous macadam between Longwarry and Tynong, and between Officer and Nar-nar-goon, Shire of Berwick. Day labour	16·2	16·2	..
,, ...	Reforming, widening and construction in bituminous macadam, northerly from Allotment 47, Parish of Darnum, Shire of Buln Buln	1·28	1·28	..
,, ...	Spraying granitic sand between Bunyip and Drouin, Shire of Buln Buln. Day labour	·8	·8	..
Section 2	Spraying waterbound macadam at Darnum, Shire of Warragul. Day labour	·3	·3	..
,, ...	Spraying gravel between Morwell and the Traralgon Shire Boundary, Shire of Morwell. Day labour	2·59	2·59	..
Section 3	Reforming, widening, and resheeting with gravel between Providence Ponds and Delvine, Shire of Avon	1·65	1·65	..
,, ...	Spraying gravel between Nuntin Hill and Stratford, Shire of Avon. Day labour	1·79	1·79	..
,, ...	Spraying gravel between Stratford and the Bairnsdale Shire boundary, Shire of Avon. Day labour	8·82	8·82	..
,, ...	Reforming and resheeting with gravel between Avon Shire boundary and Bairnsdale, Shire of Bairnsdale	7·3	7·3	..
,, ...	Clearing, forming, and gravelling between Providence Ponds and Bairnsdale, Shire of Bairnsdale	5·59	5·59	..
,, ...	Spraying gravel surface between Avon Shire boundary and Bairnsdale, Shire of Bairnsdale. Day labour	13·38	13·38	..
,, ...	Construction of R.C. culvert 5 miles west of Bairnsdale, Shire of Bairnsdale	..	·01	..
Section 4	Survey from Bellbird Creek to Toorloo Arm	14·66	..	..
,, ...	Construction of bridge over Tambo River at Swan Reach, Shire of Tambo	·01	·01	..
Sections 1 to 6	General maintenance throughout	..	..	244
WESTERN HIGHWAY—				
Section 1	Sealing bituminous macadam between Melton and Djerriwarrh Creek, Shire of Melton. Day labour	5	5	..
,, ...	Priming and sealing gravel at Pyke's Creek, Shire of Bacchus Marsh. Day labour	·5	·5	..
,, ...	Resealing bituminous macadam between Bacchus Marsh and Myrniong, Shire of Bacchus Marsh. Day labour	2	2	..
,, ...	Benching at Myrniong, Shire of Ballan. Day labour	·25	·25	..
,, ...	Sealing bituminous macadam from Gordon towards Ballarat, Shires of Buninyong and Bungaree. Day labour	5	5	..
Section 2	Construction in asphaltic macadam and sealing with bitural between Burrumbeet Park and Burrumbeet Township, Shire of Ballarat. Day labour	·08	·08	..
,, ...	Reforming, widening, and surfacing with bituminous macadam near Burrumbeet Park, Shire of Ballarat	..	·9	..
,, ...	Construction of bridge over Burrumbeet Creek and approaches; sealing with bitumen, Shire of Ballarat. Day labour	·14	·14	..
,, ...	Sealing and resealing gravel with bitumen between Trawalla and Burrumbeet, Shires of Ripon and Lexton. Day labour	2·92	2·92	..
,, ...	Resealing gravel from Box's cutting to Middle Creek, Shires of Ripon and Lexton. Day labour	2·76	2·76	..
,, ...	Resealing gravel past Buangor, Shire of Ararat. Day labour ..	2·4	2·4	..
,, ...	Resheeting with granitic sand and sealing with bitumen at Mt. Mistake, Shire of Ararat. Day labour	5·03	3·3	..
Section 3	Sealing gravel with bitumen and bitural from Deep Lead to Wal Wal, Shires of Stawell and Wimmera. Day labour	22·63	22·63	..
,, ...	Forming, reforming, and gravelling between Deep Lead and Horsham, Shires of Stawell and Wimmera	..	5·16	..
,, ...	Clearing, forming, and surfacing with bituminous macadam at Dadswell's Bridge, Shire of Wimmera	·73	·73	..
Section 4	Sealing loam with bitumen (experimental) between Pimpinio and Wail, Shire of Wimmera. Day labour	·08	·08	..
,, ...	Clearing and forming between Pimpinio and Wail, Shire of Wimmera	·95	1·35	..
,, ...	Forming near Drung Drung School, Shires of Wimmera and Dimboola	1·01	..	..
,, ...	Sealing sand clay road with bitumen (experimental) between Wail and Dimboola, Shire of Dimboola. Day labour	·08	·08	..
,, ...	Forming at junction with Rainbow Road, Shire of Dimboola ..	·71	·71	..
,, ...	Reshaping with limestone rubble between Dimboola and Nhill, Shire of Dimboola. Day labour	3·63	3·63	..
Sections 1 to 4	General maintenance	..	..	201
	Carried forward	174·27	162·84	745

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED, WORKS CONSTRUCTED, ETC.—*continued.*

Name of Highway and Section.	Nature and Locality of Work.	Permanent Surveys Effected.	Works Re-constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER DIRECT SUPERVISION OF THE BOARD—*continued.*			
	Brought forward	174 27	162·84	745
CALDER HIGHWAY—				
Section 1	Sealing bituminous macadam between Keilor and Holden, Shire of Keilor. Day labour	5	5	..
Section 2	Resheeting with a penetrated top course between Castlemaine and Harcourt, Shire of Metcalfe. Day labour	1·31	1·31	..
,, ...	Spraying bituminous macadam at Harcourt, Shire of Metcalfe. Day labour	·38	·38	..
,, ...	Reforming and gravelling between Specimen Hill and Marong, Shire of Marong	..	5	..
,, ...	Forming, reforming, and gravelling between Marong and Bridgewater, Shire of Marong	11	11	..
Section 3	Spraying gravel 1 mile east of Charlton, Shire of Charlton. Day labour	·34	·34	..
Sections 1 to 3	General maintenance	..	..	119
HUME HIGHWAY—				
Section 1	Spraying bituminous macadam from Wallan to Bylands, Shire of Broadmeadows. Day labour	4·2	4·2	..
,, ...	Spraying bituminous macadam near Kilmore, Shire of Kilmore. Day labour	3·2	3·2	..
,, ...	Construction of steel and concrete bridge over Sunday Creek, Shire of Seymour	·01	·01	..
,, ...	Clearing, forming, and gravelling near the northern boundary of Seymour Parish, Shire of Seymour	..	·33	..
,, ...	Spraying bituminous macadam from Tallarook towards Seymour, Shire of Seymour. Day labour	4·1	4·1	..
Section 2	Resealing gravel with bitumen from Avenel to Longwood, Shires of Seymour and Goulburn. Day labour	12·35	12·35	..
,, ...	Forming, reforming, and sanding near Old Longwood, Shires of Goulburn and Euroa	..	1·95	..
,, ...	Construction of six R.C. culverts and approaches between Euroa and Longwood, Shire of Euroa. Day labour	·12	·12	..
,, ...	Widening and resheeting with granitic sand between Longwood and Euroa, Shire of Euroa	5·41	5·41	..
,, ...	Reforming and gravelling between Violet Town and Benalla, Shire of Violet Town. Day labour	2	2	..
,, ...	Reforming, resheeting with gravel, priming, and sealing between Violet Town and Baddaginnie, Shires of Violet Town and Benalla. Day labour	7·86	7·86	..
,, ...	Reforming and resheeting with local gravel from Baddaginnie to Benalla, Shire of Benalla	1·77	1·77	..
Section 3	Reforming and gravelling between Winton and Glenrowan, Shire of Benalla. Day labour	2·2	2·2	..
,, ...	Reforming, resheeting with gravel, priming, and sealing between Winton and Head's Siding, Shire of Benalla. Day labour	4·03	4·03	..
,, ...	Priming and sealing gravel between Head's Siding and Glenrowan, Shire of Benalla. Day labour	5·5	5·5	..
,, ...	Construction of a R.C. culvert near Glenrowan, Shire of Benalla	·01	..	..
,, ...	Clearing and forming in the Parish of Bontherambo, Shire of Wangaratta	..	·59	..
,, ...	Widening and sanding between Springhurst and Chiltern at South Wangaratta, Shire of Wangaratta. Day labour	5·75	5·75	..
,, ...	Construction of a R.C. culvert between Springhurst and Chiltern, Shire of Rutherglen. Day labour	·02	·02	..
,, ...	Forming, reforming, and gravelling between Barnawartha South and Barnawatha Subway, Shires of Chiltern and Wodonga	7·71	7·71	..
,, ...	Reforming and gravelling between Barnawartha Subway and Wodonga, Shire of Wodonga	..	3·17	..
,, ...	Priming and sealing gravel between Barnawartha Subway and Wodonga. Day labour	5·25	5·25	..
,, ...	Widening and gravelling near Wodonga Township, Shire of Wodonga. Day labour	·62	·62	..
,, ...	Forming, resheeting with gravel, penetrating and sealing with bitumen between Wodonga and the Murray River, Shire of Wodonga. Day labour	1·05	1·05	..
Sections 1 to 3	General maintenance throughout	..	..	161
NORTHERN HIGHWAY—				
Section 1	Construction of a R.C. culvert 2 miles north-east of Huntly, Shire of Huntly. Day labour	·07	·07	..
,, ...	Spraying gravel between Bagshot and Avonmore and north of Elmore, Huntly Shire. Day labour	12·44	12·44	..
,, ...	Sealing a semi-penetrated road south of Rochester, Shire of Rochester. Day labour	1·14	1·14	..
,, ...	Respraying a gravelled road between Rochester and Echuca at Strathallan, Shire of Rochester. Day labour	8·25	8·25	..
,, ...	General maintenance throughout	..	..	52
OMEO HIGHWAY—				
Section 1	Construction of timber bridge and approaches over Ramrod Creek, Shire of Tambo	..	·01	..
,, ...	General maintenance	..	..	33
Section 2	Construction of timber bridge over the Haunted Stream, Shire of Omeo	..	·01	..
Section 4	Clearing, forming, and gravelling from Huon School to Sandy Creek, Shires of Towong and Yackandandah	5·4	5·4	..
,, ...	Clearing, forming, and gravelling near Huon Station, Shire of Yackandandah	2·76	·33	..
,, ...	Construction of two timber bridges on Hume Weir deviation, Shire of Yackandandah	·02	..	..
,, ...	Clearing, forming, and gravelling between Ebden and Huon and east of Bonegilla Station, Wodonga Shire	4·23	3·66	..
		299·77	296·37	1,110
	UNDER MUNICIPALITIES.			
KORONG SHIRE—				
Calder Highway—Section 2 ..	1″ mixed in place bituminous gravelling over old seal in detached sections from Allotment 2A to Allotment 14, Parish of Inglewood	..	·5	..
,, ,, ,, ..	Resealing in detached sections from Allotment 1 to Allotment 3, Parish of Inglewood	..	..	·85
,, ,, Section 3 ..	3″ mixed in place bituminous gravelling from Allotment 2 to Allotment 7, Section 15, Parish of Wedderburn	·5	·5	..
LAWLOIT SHIRE—				
Western Highway—Section 5 ..	Gravelling from chainage 1,435,090 to chainage 1,437,490 ..	..	·45	..
,, ,, ,, ..	Gravelling from chainage 1,419,852 to chainage 1,423,252 ..	..	·65	..
,, ,, ,, ..	Gravelling from chainage 1,410,535 to chainage 1,412,435, and from chainage 1,414,305 to chainage 1,418,305	..	1·12	..
,, ,, ,, ..	General maintenance	..	..	29·2
	Carried forward	·5	3·22	30·05

STATEMENT SHOWING MILEAGE OF SURVEYS EFFECTED, WORKS CONSTRUCTED, ETC.—*continued.*

Name of Highway and Section.	Nature and Locality of Work.	Permanent Surveys Effected.	Works Re-constructed.	Maintenance Works Carried Out.
		Miles.	Miles.	Miles.
	UNDER MUNICIPALITIES—*continued.*			
	Brought forward	.5	3·22	30·05
LOWAN SHIRE—				
Western Highway—Section 4 ..	Bitumen surfacing metalled road opposite Allotments 26 and 25A, Parish of Balrootan	..	·25	..
,, ,, ,, ..	Patrol maintenance	..	..	3·4
,, ,, Section 5 ..	Bitumen surfacing metalled road from Allotment 81 to Allotment 70, Parish of Tarranginnie	..	·75	..
,, ,, ,, ..	Levelling and repairs to gravel from Allotment 55 to Allotment 61, Parish of Tarranginnie	..	..	·57
,, ,, ,, ..	Patrol maintenance	..	..	9·8
MILDURA SHIRE—				
Calder Highway—Section 6 ..	Construction of foundation and wearing course of bituminous penetrated limestone metal between Red Cliffs and Irymple	3·1	3·1	..
,, ,, ,, ..	Limestone foundation course between Red Cliffs and Yatpool ..	·8	..	..
,, ,, ,, ..	Bituminous penetrated limestone wearing coat between Red Cliffs and Yatpool	1	..	..
,, ,, ,, ..	Reforming and regravelling between Nowingi and Trinita ..	..	4·78	..
OMEO SHIRE—				
Omeo Highway—Section 1 ..	Forming between St. Patrick's Creek and Tambo Crossing ..	4·88	..	..
,, ,, ,, ..	General maintenance, including sheeting, scarifying, rolling, &c.	..	..	19
,, ,, Section 2 ..	Forming:—Holland's deviation immediately south of Tongio; Tucker Box deviation, north of Tambo Crossing; and 7 miles north of Ensay	1·86	..	..
,, ,, ,, ..	Forming, and two concrete culverts	·5	..	..
,, ,, ,, ..	General maintenance, including sheeting, scarifying, rolling, &c.	..	..	45
,, ,, Section 3 ..	General maintenance, including sheeting, scarifying, rolling, &c.	..	..	55
STAWELL SHIRE—				
Western Highway—Section 3 ..	Bitumen sealing, Deep Lead to Stawell	..	4	..
,, ,, ,, ..	General maintenance	..	..	20
TOWONG SHIRE—				
Omeo Highway—Section 3 ..	General maintenance	..	..	25
TOWONG AND YACKANDANDAH SHIRES—				
Omeo Highway—Section 4 ..	Forming and gravelling deviations from Bolga to Wodonga Shire boundary	..	..	..
,, ,, ,, ..	Forming and gravelling Hume Weir deviations from Bolga to Sandy Creek	..	5·07	..
,, ,, ,, ..	General maintenance	..	..	40
WALPEUP SHIRE—				
Calder Highway—Section 5 ..	Forming from Allotment 40, Parish of Woornack, to Allotment 19, Parish of Boulka	4·46	..	..
,, ,, ,, ..	Patrol maintenance	..	..	23
,, ,, Section 6 ..	Metalling opposite Allotment 7, Parish of Ouyen	1·52	..	..
,, ,, ,, ..	Metalling opposite Allotment 49, Parish of Kia	·7	·51	..
,, ,, ,, ..	Patrol maintenance	..	..	14
WODONGA SHIRE—				
Omeo Highway—Section 4 ..	Forming and gravelling deviations at Ebden	..	..	..
,, ,, ,, ..	Resealing 1 mile, gravelling, and general maintenance	..	..	11
WYCHEPROOF SHIRE—				
Calder Highway—Section 4 ..	Boxing and limestoning between Berriwillock and Culgoa ..	..	1·8	..
,, ,, ,, ..	Boxing and limestoning between Nullawil and Warne	..	4·36	..
,, ,, ,, ..	Gravelling between Wycheproof and Nullawil	..	5·75	..
,, ,, ,, ..	Patrol maintenance	..	..	48
,, ,, ---Section 5 ..	Limestoning between Sea Lake and Nandaly	..	2·84	..
,, ,, ,, ..	Patrol maintenance	..	..	33
		19·32	36·43	376·82

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