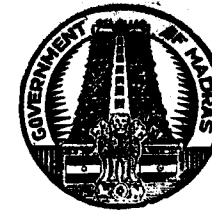


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PUBLIC WORKS DEPARTMENT

ADMINISTRATION REPORT

OF THE

HIGHWAYS DEPARTMENT

1947-48



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ADMINISTRATION REPORT OF THE HIGHWAYS DEPARTMENT, 1947-48

CHAPTER I.

1. PERSONNEL.

Sri Rao Bahadur M. K. Ranganathan, B.A., B.E., I.S.E., continued as Chief Engineer (Highways) from 1st April 1947 till 15th September 1947, afternoon when he proceeded on leave preparatory to retirement. Mr. W. H. Turner, B.Sc., A.M.I.MECH.E., M.I.E. (Ind.), I.S.E., succeeded him and continued to hold office for the rest of 1947-48.

Sri K. A. Nanjundeswara Chetti, B.E., A.M.I.E. (Ind.), continued as Deputy Chief Engineer (Highways) throughout the year 1947-48.

Sri M. C. Krishna Ayyar, B.A. (Hons.), continued as Accounts Officer throughout the year.

The following statement shows the Highways Circle charges :—

I Circle, Kakinada.—Mr. L. P. Cole, I.S.E., M.B.E., M.A., continued to hold charge as Superintending Engineer till 11th June 1947 forenoon, when he was succeeded by Sri S. C. Nayak, who continued till 19th September 1947 afternoon. He was in turn succeeded by Khan Sahib N. Durrani, B.Sc., B.E., M.I.E. (Ind.), M.A.C.I., M.A.S.C.E., M.A.R.B.A., on 26th September 1947 forenoon and continued to hold charge for the rest of 1947-48. Sri Rao Sahib B. Satyanarayana Pantulu held additional charge of the circle during the interim period, 20th to 25th September 1947.

II Circle, Bellary.—Sri T. Sekharan continued to be in charge of the circle throughout the year.

III Circle, Vellore at Madras.—Khan Sahib N. Durrani, B.Sc., B.E., M.I.E. (Ind.), M.A.C.I., M.A.S.C.E., M.A.R.B.A., continued to be in charge of the circle till 22nd September 1947 forenoon, when he was succeeded by Sri S. C. Nayak who continued to hold charge for the rest of the year 1947-48.

IV Circle, Tiruchirapalli.—Sri U. S. Ramasundaram, B.E., M.I.E. (Ind.), I.S.E., continued to be in charge of the circle throughout the year.

V Circle, Coimbatore.—Mr. A. A. Smyth continued to hold charge till 9th June 1947 forenoon, when Sri O. R. Narayanaswami Ayyar, B.E., succeeded him and continued to hold charge for the rest of the year 1947-48.

Bridges' Circle, Madras (Temporary).—Sri T. Lokanatha Mudaliyar, B.E., continued to hold charge till 23rd June 1947 forenoon, when he proceeded on leave and was succeeded by Mr. J. M. Frederick till 7th July 1947 forenoon. Sri T. Lokanatha Mudaliyar rejoined the circle and continued to hold charge for the rest of the year 1947-48.

Road Development Engineer, Madras (Temporary).—Sri B. Narasimha Shenoy, B.E., continued to hold the post throughout the year 1947-48.

2. GENERAL FEATURES OF ADMINISTRATION INCLUDING STAFF POSITION.

With the reduction of one circle, six divisions, 59 Assistant Engineers and 155 sections under the reorganization of the department from 1st February

1947, the department continued to function with the following staff during the year :—

One Chief Engineer.

Five Superintending Engineers in charge of circles.

Thirty Divisional Engineers in charge of divisions, two each for the five heavy districts of Visakhapatnam, Tanjore, Coimbatore, Malabar and Salem and one for each of the remaining 19 districts and Agency area.

One Special Division for charge of Transport and Machinery.

One hundred and one Assistant Engineers in charge of subdivisions, and Three hundred and eighty-three Supervisors in charge of sections.

For normal work 120 subdivisions and 480 sections were considered the irreducible minimum required but the staff indicated above was sanctioned in view of the shortage of technical personnel. With a view to relieve this shortage within the Public Works Department, 7 Executive Engineers, 32 Assistant Engineers and 113 Supervisors working in the Highways Department, were returned to the Public Works Department retaining only 3 Executive Engineers, 8 Assistant Engineers and 61 Supervisors. During the year quite a large number of posts of Supervisors had to be kept unfilled as indicated in the chart for want of suitable qualified candidates and the Superintending Engineers were instructed to place vacant sections in additional charge of the Supervisors of the adjoining sections. Thus throughout the year the Department was understaffed and depleted in the subordinate ranks. The position on 31st March 1948 was as follows :—

1. Total number of Supervisors required	556
2. Number of Supervisors sanctioned up to end of 31st March 1948.	459
3. Number of Supervisors actually working	393
4. (a) Out of the above, number of qualified men with sufficient experience	220
(b) Number of retired men re-employed, unqualified men exempted and those with less than two years of service .. .	173

A statement and an illustrative chart showing the position of staff monthwar are given in Appendix VI (1) and (2).

At present officers and subordinates of the department are required to maintain two sets of accounts, one for district board works and another for Government works and have to follow two sets of rules, district board and Government. In addition, a large amount of non-technical work of the district boards is also being attended to by the technical staff of this department. There has been a general complaint about the inadequacy of ministerial staff and sanction had to be obtained for clearance of arrears in several cases. The difficulties caused by the serious shortage of staff complicated the other problems which the staff had to face. Some district boards complained that works on their roads were not receiving sufficient attention from the officers of the department. A careful analysis of the whole position indicated that the complaints were mostly unavoidable.

It is, however, hoped that with the appointment of separate staff to attend to the non-technical work of district boards and the maintenance of one set of accounts by adopting the P.W.D. system of accounts and executing district board works as "Contribution works" and also by elimination and simplification of work wherever possible, the technical staff will have more time to attend to technical works and that this will be conducive to better supervision. Necessary proposals for the further reorganization required on these lines and for the increase of staff to the irreducible minimum considered necessary are under the consideration of Government.

CHAPTER II.

TERRITORIAL CHANGES—ADDITIONS AND ALTERATIONS TO JURISDICTIONS.

The Highways Department continued to function throughout the year with 5 circles and 30 regular divisions. The territorial jurisdictions of the circles and divisions remained unaltered during the year, except for some internal readjustments in certain divisions.

In addition the bridges circle also continued to function with one Superintending Engineer and 11 Assistant Engineers for investigation and preparation of plans and estimates for bridges schemes. To ensure better outturn of work two bridges divisions were sanctioned, one at Madras attending to southern districts and the other at Kakinada attending to northern districts. The first was created from 1st July 1947 and the second from 21st July 1947.

The Road Development Engineer, who began to function from 17th December 1946 with a Technical Assistant and staff for works connected with the revision of the Post-war Road Development Programme, continued throughout the year.

The Transport and Machinery division with its five subdivisions located at each of the five circles also continued to function throughout the year.

The special division in charge of the work "Cement concreting the Coimbatore-Mettupalayam road" was functioning throughout the year.

One special division for providing conphalt surfacing from Mile 7/5 to 19/1 of the Great Southern Trunk road was sanctioned, and was functioning from 25th August 1947 afternoon till the end of the year. This division has one special subdivision attached to it.

A special division at Srungavarapukota was formed on 21st February 1948 exclusively for the work of "Improvements to Visakhapatnam-Anantagiri-Araku road from Mile 38/2 to 79/2," the estimated cost of which is Rs. 15.10 lakhs. A subdivision at Araku originally sanctioned for the preparation of detailed plans and estimates for the above work functioned under the Agency division up to 21st February 1948 and then it was transferred to the special division. A second subdivision at Srungavarapukota was formed on 5th March 1948 for works connected with its scheme.

In G.O. No. 1884, P.W., dated 28th June 1947, additional temporary subdivisions were sanctioned one for each of the divisions (1) Visakhapatnam North, (2) West Godavari, (3) Guntur, (4) Nellore, (5) South Arcot, (6) Salem South, (7) Mathurai, and (8) Ramnad. The headquarters of Usilampatti subdivision was shifted to Mathurai and renamed as Mathurai East subdivision. In Ramnad division, Paramakudi subdivision was shifted to Ramnad and renamed as Ramnad subdivision.

The additional Technical Assistant in the office of the Chief Engineer (Highways) sanctioned in 1946 for work connected with Post-war Road Development Programme continued to function throughout the year. In addition one Assistant Engineer sanctioned for the scrutiny of bridge estimates functioned from 20th June 1947 to the end of the year.

One special subdivision was sanctioned for the work of reconstructing the damaged spans of Kalahasti bridge.

During the year, fifteen posts of temporary Supervisors (Highways) were sanctioned for the work connected with the Rural Reconstruction and intensive work in selected firkas and five Supervisors assumed charge of the work during the year and the balance early in 1948-49.

CHAPTER III.

BRIEF NOTE ON IMPORTANT WORKS IN PROGRESS DURING THE YEAR.

The maintenance allotment for the year 1946-47 was very insufficient even for normal needs and hence the huge arrears in maintenance that had accumulated during the war years (when all available resources in men and materials had to be concentrated on projects of military importance) still remained at the beginning of the year 1947-48.

During the year 1947-48, the allotment under Post-war Road Development Fund for war arrears was utilized to make up considerable portion of these war arrears, and with the increased maintenance grant, which was still very much short of the minimum allotment required for satisfactory maintenance, there was some improvement in the position. The total expenditure incurred on Government works and district board works executed by this department during the year 1947-48 is given below :—

Nature of work. (1)	Expenditure.		Total. (4)
	Government roads. (2)	District Board roads. (3)	
	LAKHS.	LAKHS.	LAKHS.
Original works	RS. 33.49	RS. 60.23	RS. 93.72
Repairs	262.03	91.54	353.57
Total ..	295.52	151.77	447.29

Out of the total expenditure on Government roads, Rs. 42.64 lakhs relating to National Highways was debited to Central Accounts. Detailed figures showing abstract of appropriation and expenditure under various heads of accounts in each district and expenditure on original works and repairs under various heads are furnished under Appendix III.

(A) Important works costing over Rs. 1 lakh each are enumerated below with particulars of expenditure and progress :—

GOVERNMENT WORKS.

Serial number and name of work. (1)	Estimate. (2)	Expenditure (3)	Remarks. (4)
I. ROAD DEVELOPMENT FUND WORKS—	RS.	RS.	
(a) Bridges and culverts—			
1 Metalling and construction of two bridges and ten culverts on Rajahmundry Mare-dumalli road (I Circle).	1,74,600	39,232	The total expenditure incurred on the work was Rs. 42,391. The work was in progress.
2 Constructing a masonry arched bridge for the river Pennar near Kalavapalli on Anantapur-Kalyandrug road at Mile 19/8 (II Circle).	1,76,000	..	The contractor failed to execute the work and his contract was terminated. Revised estimate for the work was pending approval.
3 Constructing a bridge at Mile 150/4 of the road from the South Arcot district frontier to Tanjore (via) Lower Anicut (IV Circle).	1,11,000	21,454	The expenditure incurred on the work to end of the year was Rs. 37,007. Masonry in abutments and all piers was raised to bed block level and cement concrete bed blocks cast. Materials including steel for laying reinforced concrete slab were collected and centering and form work were being assembled to lay the reinforced concrete slab in site.

Serial number and name of work. (1)	Estimate. (2)	Expenditure. (3)		Remarks. (4)
	RS.	RS.	A. P.	
I. ROAD DEVELOPMENT FUND WORKS--cont.				
(b) Cement concrete works—				
4 Laying cement concrete surfacing on the Great Northern Trunk road from mile 271-3-104 to mile 276-3-104 (I Circle).	2,98,000 No. 6/44-45.	43,377	0 0	The expenditure to end of the year was Rs. 2,54,861 cement concreting the road except the portions on the culverts was completed. The culverts require reconstruction to bring them to I.R.C. 'A' class loading capacity. The estimate was revised making provision for this item of work also.
Partly Road Development Fund—				
5 Cement concreting Mettupalayam-Coimbatore road; M. 2-4 to 9/0 (V Circle).	21,00,000	97,909	0 0	The expenditure incurred to end of the year was Rs. 98,341. The work was started on 2nd July 1947. A special division with headquarters at Coimbatore has been in charge of the execution of the work. The work is in progress.
(c) Other important works—				
6 Metalling Chintapalligudem road from M. 33-3-220 to M. 42-0 (I Circle).	1,65,500	28,008	0 0	The expenditure to end of the year was Rs. 53,862. The work was in progress.
II. POST-WAR ROAD DEVELOPMENT WORKS—				
7 Providing improved surfacing to Madras-Bangalore road, M. 145/3 to 159/6 (III Circle).	2,69,000	50,397	0 0	The total expenditure incurred on the work to end of the year was Rs. 1,65,677. Base coat work was completed and surface dressing was in progress.
8 Providing improved surfacing to Madras-Bangalore road, M. 169/0 to 178/3 (III Circle).	1,20,000	48,214	0 0	The total expenditure incurred on the work to end of year was Rs. 1,02,185. Base coat work was completed and surface dressing was in progress.
9 Forming a road from Ramnad to Mandapam (IV Circle).	1,33,200	100	0 0	Administrative approval to the work was accorded in G.O. No. 269, P.W., dated 27th January 1948, late in the year and hence the token grant for the work alone was spent.
10 Special repairs and improvements to Madras-Kozhikode road, M. 421/4 to 441/7 (V Circle).	4,57,000	6,558	0 0	The total expenditure incurred to end of the year was Rs. 2,55,416. The work was completed during the year and Completion Report awaited.
11 Constructing a road from Vellore to Karivellore (V Circle).	2,04,000	200	0 0	Expenditure on the token grant of Rs. 200 only was incurred on this work during the year. The land acquisition proceedings were not completed during the year as the estimate was sanctioned late in the

Serial number and name of work. (1)	Estimate. (2) Rs.	Expenditure. (3) Rs. A. P.	Remarks. (4)
III. WORKS EXCLUDING POST-WAR ROAD DEVELOPMENT—			
(a) Bridges and culverts—			
12 Reconstructing the damaged spans of the bridge across Swarnamukhi river at M. 54/2 to 4 of Puthalapet-Naidupet road (III Circle).	1,85,000	..	A sum of Rs. 1,01,876 was incurred up to end of the year. Owing to the difficulty in sinking the wells progress during the year was much impeded and the work is expected to be completed by the end of 3/49.
13 Emergent repairs to the Cauvery bridge at Tiruchirapalli (IV Circle).	1,44,000	16,159 0 0	The expenditure to end of the year was Rs. 1,37,765. The work was executed under 50-d repairs.
Improvements and Special Repairs to Roads—			
14 Improvement to Visakhapatnam-Ananthagiri Araku road M. 38/2 to 79/3 (I Circle).	15.10 lakhs.	71,859 0 0	The main scheme was approved by Government. The preparation of the detailed estimates for the sub-works was taken up by a special Divisional Engineer and two Assistant Engineers sanctioned for the work. The division was formed on 21st February 1948. A sub-work under the scheme metalling Visakhapatnam-Ananthagiri Araku road from M. 74/0 to 79/2. Estimate Rs. 1,52,400 was started during the year. Detailed estimates for bridges and culverts were under preparation.
15 Improvements and upgrading the Kathipudi-Pithapuram-Kakinada road (I Circle).	13,40,000 Chief Engineer's No. 23/44-45, Revised Estimate Rs. 15,25,000.	..	The expenditure incurred to end of the year was Rs. 14,33,647. The work was taken up at the instance of the Defence department and it was completed. The accounts of the contractor were yet to be settled and closed. The expenditure was met from the Central Road Fund Reserve.
16 Improvements to the approach Road M. 0/0 to 6/1 of the Rajam-Ramabhadrapuram road and feeder road to Donkinavalasa Railway Station, Bobbili Air fields (I Circle).	2,36,000	(—) 268	The expenditure to end of the year was Rs. 2,12,721. The work was completed and the expenditure was met from the Central Road Fund Reserve.
17 Improvements and special repairs to the strategic road from Uravakonda to Tungabhadra Railway Bridge (II Circle).	8,06,900	..	An expenditure of Rs. 28,404 was incurred on paying for the work done in the previous years. The work was completed and final bills were being paid.
18 Providing wearing coat to Great Northern Trunk road miles 12 to 33 (III Circle).	1,18,900	..	The total expenditure incurred on the work during the year was Rs. 1,00,107. The work was completed during the year.

Serial number and name of work. (1)	Estimate. (2) Rs.	Expenditure. (3) Rs. A. P.	Remarks. (4)
III. WORKS EXCLUDING POST-WAR ROAD DEVELOPMENT—cont.			
Improvements and Special Repairs to Roads—cont.			
19 Special repairs and improvements-Kozhikode-Vythri-Gudalur road 60/5 to 84/8 in the Nilgiris district (V Circle).	8,65,000	..	The expenditure incurred to end of the year was Rs. 8,55,953. The work commenced during the years 1941-42 and 1942-43 was completed during the year 1946-47. Certain liabilities were yet to be adjusted to close the accounts of the work and special staff was sanctioned for the purpose.
20 Special repairs and improvements to Kozikode-Nilambur-Gudalur road 64-5 to 68-4 (V Circle).	1,75,000	..	The expenditure incurred to end of the year was Rs. 1,75,671. Other remarks as per item 19.
21 Special repairs and improvements to Ooty-Gudalur-Mysore road M. 3/1 to M. 44/7 (V Circle).	5,55,700	..	The total expenditure incurred to end of the year was Rs. 5,52,843. Other remarks as per item 19.
IV. DISTRICT BOARD ROADS—			
22 Metalling a road from Kollur to Vellathur of Tenali-Kolluru Donapudi-Vellatur road M. 5-4 furlongs (II Circle).	1,37,000	1,51,723 0 0	The work was executed on behalf of the district board under grants-in-aid Postwar Reconstruction. The work was started during the year and almost completed except for fixing of guard stones.
23 Metalling the road from 4/8 of Repalli-Pittalavaripalem to Donapudi (via) Pamidimarri 6 miles (II Circle).	1,10,000	35,340 8 0	This is a district board work executed during the year under grants-in-aid Post-war Reconstruction —Collection of materials was in progress.
24 Metalling the road from Emani to Vallabhapuram (Guntur district).	1,42,000	30,622 0 0	This is a work of the Guntur District Board started during the year under "Grants-in-aid — Post-war Reconstruction". The collection of materials was in progress.

(B) Review of progress of important original works costing less than Rs. 1 lakh each—

(1) *Bridges, culverts and causeways.*—Under this category 1,100 works of the estimated cost of Rs. 14.49 lakhs on Government roads and 340 works of the estimated cost of Rs. 14.72 lakhs on district board roads were in progress.

(2) *Cement concrete and black-top surfacing.*—Six works of the estimated cost of Rs. 1.75 lakhs were in progress on Government roads.

(3) *Formation of new roads.*—Under this category 25 works of an estimated cost of Rs. 4.65 lakhs on Government roads and 95 works of an estimated cost of Rs. 11.84 lakhs on district board roads were in progress during the year.

Besides the above a large number of other works of the nature of improvements to roads such as widening formation width, metalling surface, etc., were in progress in the year under reference. Details for each division are furnished in the annexure to this Chapter as Appendix IV-A.

CHAPTER IV.

(A) REVISED FIVE-YEAR PLAN OF POST-WAR ROAD DEVELOPMENT.

On the basis of the recommendations of the Chief Engineers' conference at Nagpur held in 1943, a programme of improvement of road communications in this Province was drawn up in 1945 in order to meet the needs of trade and commerce and to bring villages within easy reach of important Highways.

Mr. Vipani's scheme of road development for the Province drawn up in 1935 and subsequent schemes of developments like the approved programmes of Village Communications for individual districts were also taken into account in drawing up the programme. The comprehensive programme was estimated to cost about Rs. 75 crores, and was originally proposed to be spread over a period of 15 years divided into 4 phases, the first of two years, the second of three years and the next two of five years each. The more urgent works were included in the first five-year programme which was estimated to cost Rs. 27.77 crores.

2. In the past, the road system of this Province developed without a co-ordinated plan. The Post-war Road Development Plan aims at rectifying this defect. In the scheme of Post-war Road Development, roads have been divided into five classes which are detailed below with their respective mile-ages :—

Class of road.	Present mileage.	Additional mileage proposed.	Total mileage.
National Highways	2,039	22	2,061
Provincial Highways	3,069	23	3,092
Major District Roads	15,055	945	16,000
Other District Roads	7,968	4,100	12,068
Village Roads	8,822	12,800	21,622
Total ..	36,953	17,890	54,843

National Highways consist of strategic roads and the main Highways running through the length and breadth of India connecting ports, foreign Highways, Capitals of Provinces and States. They form the framework on which the entire road communication system of the country is to be based.

Provincial Highways are the other main Trunk or arterial roads of the Province. Provincial Highways and district roads form the subsidiary frames in respect of the Province and the district respectively. *District roads* are roads traversing each district serving areas of production and markets and connecting these with each other or Highways and Railways.

Village roads are roads giving access for villages to the nearest district road, highway, railway or canal and connecting neighbouring villages.

In planning the village roads, the target aimed at was to keep every village within two miles of a district road or a Highway in thickly populated areas and within five miles in thinly populated areas. Also, every village with a population of over 500 was to be provided with at least an access village road.

The project estimates drawn up in the revised programme anticipate the needs of the Province for the next 20 years and contemplate the following :—

	Mileage.	Cost. LAKHS.
1 New formation	18,000	398.00
2 New metalling	30,000	1,457.00
3 Cement concrete surfacing	1,750	968.00
4 Black top surfacing	2,610	344.00
5 Major bridges (885 in number)	..	1,039.00
6 Minor bridges and culverts	..	1,303.00
7 War arrear renewals (on main roads)	..	56.00
8 Widening	..	32.00
9 Acquisition	..	306.00
10 Other items such as bye-passes, etc.	..	113.00
11 Improvements to municipal roads	..	275.00
12 Highway overbridges, level crossings, etc.	..	93.00
13 Tools and plant	..	400.00
Total ..		6,784.00

National Highways.

The Government of India have assumed responsibility for the maintenance and development of National Highways (subject to the ratification of the Scheme) with effect from 1st April 1947. The total cost of the works on National Highways in the Province was expected to come to about Rs. 7.71 crores of which Rs. 6.7 crores was to be incurred during the first five years as per the original programme. The Government of India have, however, stated that the allotment for expenditure on original works on National Highways in this Province for the first five years from 1st April 1947 would be about Rs. 2.5 crores only. A revised five-year plan of National Highways was accordingly prepared with a programmed expenditure of Rs. 2.5 crores. The revised five-year programme has been forwarded to the Government of India for approval. The estimated cost of the programme however is Rs. 3.96 crores, to provide for continuity of programme in the second quinquennium. The salient features of this programme are—

	Estimated cost of schemes proposed for introduction in the first five-year period.	Programmed expenditure in the first five-year period.
	RS. CRORES.	RS. CRORES.
(i) Major bridges	2.73	2.5
(ii) Other improvements including 98 miles of cement concrete surfacing, 102 miles of black top surfacing, and 21 miles of new formation	1.23	
Total ..	3.96	

Roads other than National Highways.

The original five-year plan on these roads was estimated to cost Rs. 21.06 crores, out of the total programme of Rs. 60.13 crores originally proposed to be spread over 15 years. On financial considerations, the practicability of executing such a huge road programme with the existing resources in men, money and materials was re-examined. In November 1946 the Government decided that the 15-year programme should be reduced to one of Rs. 30 crores with an allotment of Rs. 9.55 crores (i.e., Rs. 7 crores for works, Rs. 1.75 crores for special tools and plant and Rs. 0.80 crores for increased expenditure on maintenance of roads newly formed or improved during the five years) for the five-year programme.

According to the general principles laid down by Government of India, 60 per cent of the total amount was to be allotted to Provincial Highways and major district roads (which are mostly under the control of Government) and 40 per cent to other district roads and village roads, i.e., rural roads. Taking into account the probable contributions of Rs. 1.5 crores that would be forthcoming from the local bodies towards expenditure on road development works for the first five-year period, the Government have increased the allotment for the works portion of the five-year plan from 7 crores to Rs. 8.5 crores.

The revised five year plan was drawn up accordingly during the year under review and submitted to the Madras Government for approval in March 1948. Government have since accorded general approval to the plan after increasing

the provision for new roads under Group II and curtailing provision under Group I roads. The salient features of the plan as modified are—

	Estimated cost of schemes pro- posed for intro- duction in the first five-year period.	Programmed expenditure in the first five-year period.
	RS. CRORES.	RS. CRORES.
1 <i>Provincial Highways and major district roads</i> (called Group I roads)—		
Major bridges	1.11	4.20
New formation 492 miles	0.49	
180 miles of C.C. and 317 miles of B.T. surfacing	1.47	
Other improvements	2.03	
Total	5.10	
2 <i>Other District Roads and Village Roads</i> (called Group II roads)—		
9,000 miles of new roads	3.30	4.30
Improvements to the existing roads including metalling surface wherever necessary, widening and construction of necessary bridges and culverts.	1.81	
Total	5.11	
Total for Group I and Group II roads	10.21	8.50

Illustrative chart showing the comprehensive plan and a statement showing five-year plan are given in Appendix II.

(B) ORGANIZATION AND WORKING OF THE BRIDGES CIRCLE AND ROAD DEVELOPMENT CIRCLE.

To intensify the progress in the preparation of plans and estimates for bridge works included in phase I of the Post-war Road Development Programme, the Bridges Circle was formed on 1st August 1946 with the then existing staff of the Road Development Engineer. The circle was further reorganized from 1st July 1947. The staff of the circle comprised of 1 Superintending Engineer, 1 Technical Assistant, 2 Divisional Engineers, 8 Assistant Engineers, and 26 Supervisors. The two divisions sanctioned were formed in the first instance at Madras on 1st July 1947 and 21st July 1947 and were named the South Division (for southern districts) and the North Division (for the northern districts). The Headquarters of the latter division was subsequently shifted to Kakinada with effect from 21st September 1947.

The circle was intended only for investigation and preparation of plans and estimates for Post-war Road Development and Road Development Fund works on National Highways, Provincial Highways, major district roads, other district roads and village roads.

Statements showing works for which estimates were sanctioned in the circle for Government and district boards are given in Statements 6 and 7—

Several places had to be kept vacant in the ranks of Supervisors and Draughtsmen. The jurisdictions of the Divisional Engineers and Assistant Engineers were comparatively more extensive than the jurisdictions of the regular staff and their duties on investigation were of an arduous nature with many handicaps. There was difficulty to obtain trained personnel. Besides, owing to changes in the Bridges Code and Practice the standard designs had to be revised. Some of the major bridges are of a magnitude and type not hitherto undertaken in the Province, and there was scope for play of a multitude of ideas before the last word is said on the most economical and soundest design in each case. Knowledge of facts involved in such raw cases was just crystallising and suggestions were made at different levels in different stages resulting in a lot of scrutiny and extra time in the process of complicated calculations and preparation of alternative fresh drawings and estimates. In these circumstances the outturn in the year under reference was considered to be satisfactory.

Road Development Circle.

The Road Development Circle was created in 1946-47 for work connected with the revision of the Post-war Road Development Programme, in consequence of the reduction of the allotment originally made for development of communications.

The circle functioned throughout the year. The original 5-year plan of over 27 crores and the overall programme of 75 crores had to be scaled down to 11 crores and 68 crores respectively, the latter spread over 25 years. Government desired at the same time that the original targets were still kept in view and that the essential needs of development of any area were not to be ignored. Hence a searching and detailed revision covering the whole range of works was undertaken during the year. About 1,000 miles of National Highways proposed under the old plan were deleted by the Central Government from the National Highways list and they had to be reclassified. About 12,000 miles of roads in the Province which were transferred to Government were to be fixed up properly in the picture. Works proposed under the Road Development Fund had to be eliminated from the programme.

The needs of the countryside in every taluk were worked out to least cost and maximum service. By such a review the mileage of requisite new roads was cut short from 1,366 to 945 under major district roads, from 5,395 to 4,100 under other district roads and from 13,245 to 12,800 under village roads, resulting in reduction of cost of 2 crores, yet without ignoring a single village of more than 500 population.

The programme was comprehensively recast in every detail and roads were assessed divisionwar and district war. Supplemental statements under the above categories and under priorities assigned were written up for the whole Province, incorporating all available data collected from various sources and from discussions with local officers.

Lists of roads falling under various categories and lists with cost of bridges, etc., were extracted and field blue-prints prepared for easy reference.

District and taluk maps were corrected according to the revised classification.

The Districtwar 5-year operational plan was thus prepared giving out minute details.

A fair amount of work as corollary to planning was also done in the circle for scrutiny of Firka Development Programme and on the requests contained in various representations to Government.

CHAPTER V.

BOARD OF COMMUNICATIONS.

There were two meetings of the Board in the year 1947-48. Various questions relating to Post-war Road Development were discussed in these meetings and specific recommendations were submitted to Government.

At its meeting held on the 25th November 1947, the Board of Communications, Madras, appointed a Sub-Committee consisting of the following official and non-official members to formulate ways and means of expediting the Programme of Village communications and to submit their recommendations regarding the implementation of Post-war Road Development Programme. The Committee met thrice on 1st, 2nd and 22nd March 1948 under the Chairmanship of Sri M. Narayana Menon, M.L.C., and formulated their recommendations which are summarized in the following paragraphs :—

Members of the Committee.

- (1) Sri M. Narayana Menon, M.L.C.
- (2) „ K. A. Nachiappa Gounder, M.L.A.
- (3) „ B. Anantha Chari, M.L.A.
- (4) „ T. Lokanatha Mudaliar, Superintending Engineer (Bridges), Madras.
- (5) „ B. N. Shenoy, Road Development Engineer, Madras.
- (6) „ K. A. Nanjundeswara Chetty, Secretary, Board of Communications and Convener.

Recommendations of the Sub-Committee.

1. There is a large body of public opinion that there has been a serious deterioration in the condition of communications in recent years and that the efforts of the Road Engineers have not appreciably remedied the position. The Committee therefore considered that they should analyse the causes for the present state of affairs and suggest a suitable remedy, before formulating a policy for future development. After full discussion, the Committee came to the conclusion that the present state of affairs was only the climax of the of the War as a result of the growing arrears of maintenance and the war-time difficulties such as increase in cost of materials, shortage of labour and *the most serious handicap namely want of experienced technical personnel*. As the on the efficient execution of the Post-war Road Development Plans, the Committee considered that Government should give a high priority to the requirements of the Highways Department while allocating Engineering Graduates and Licentiates among the several departments.

2. The Committee considered that necessary legislation in the matter of land acquisition so as to simplify and expedite the process should be introduced. They further recommended that the amendments should be more or less on the same lines as the relevant provisions under the Defence of India Rules and should empower the authority in charge of acquisition to take possession of lands after 15 days notice and then to go on with the other formalities involved in acquisition.

3. The Committee observed that in the formation of new roads, appreciable local contributions in the shape of free land, free labour, cash or materials could be expected if local public were approached properly. They therefore recommended tapping of this source and suggested that lists of works coming

within the scope of the Post-war Road Development programme should be widely published, particularly on the notice boards of the local boards and the offices of Revenue Department with an announcement in the villages concerned that selection of works and priorities for their execution would be mainly decided on the basis of local contribution to the estimated cost of a work.

4. The Committee recommended that the Highways Department should be equipped with an adequate fleet of road-making machinery in order to carry out the works economically and expeditiously in the face of the acute shortage of labour.

5. The Committee considered that development of avenues should be given due importance in the Post-war Road Development programme.

6. In order to advise the Special Officers regarding the individual local needs in the matter of selection of works in districts, assigning priorities to them, etc., the Committee recommended the Constitution of Advisory Committees in each district consisting of the local M.L.As., M.L.Cs., and the Divisional Engineer (Highways) expanded further if necessary with the co-option of public-spirited local persons. They recommended that the allotment for each district for the five-year plan should be earmarked as an unlapseable fund in order to reduce the correspondence involved in the annual allotments, resumptions and re-allotments and also to make the progress steady, assured and balanced with reference to working conditions and without creating a scramble for funds.

7. In addition, the Committee recommended the following broad outlines of policy which should be read with the detailed recommendations set out above :—

(a) While inescapable improvements on the existing roads should be carried out side by side with the formation of new roads, the latter should have a higher priority over other improvements of a less urgent nature. Metalling should not be taken up in the earlier years unless demanded by absolute necessity justified on the score of economy.

(b) There are several village and district roads at present with dead ends, which, by projecting for short lengths could establish useful connections with other important roads. Such cases should be examined and given their due priority.

(c) All major district roads and other district roads in the comprehensive plan should be formed within the first 10 years, as they form the frame work of the development of village communications. Formation of new roads should be taken up in two stages—first limited to earthen formation with essential culverts and then, the other improvements to be taken up in later years. The new roads should be taken over by the district boards for maintenance immediately after works contemplated under the first stage are completed.

(d) Priorities must be assigned on the basis of local contributions. In order to simplify the formalities of recovering contributions the execution of works may be entrusted to local co-operative societies, or other committees at the estimated cost less the share of the local contribution. In the case of roads within forest areas, the execution of the works may be entrusted to the Forest department wherever feasible.

(e) Expenditure on major bridges may be made good by levying tolls at specified spots. The schemes of cement and asphaltic concrete surfacing may be taken up on a loan—amortisation scheme, by meeting the amortisation

with the average annual maintenance cost, and in addition, with collections of tolls, if necessary, at specified spots.

(f) In the case of works catering largely to the maintenance and expansion of special interests (like fisheries, silk or sugar factories, mines, pilgrimage centres, etc.) equitable contribution not less than half the cost of the works should be met by the interests or departments concerned.

(g) The accumulated railway cess funds of the district boards should be required to be utilized exclusively for works connected with Post-war Road Development wherever necessary in that district.

(h) Dustless surfacing of main roads within municipal reaches and built-up areas should also go on side by side with the other improvements as this amenity affects a large percentage of the population.

The Board of Communications at its meeting held on 20th May 1948 considered the recommendations of the sub-committee and commended to Government all the recommendations of the sub-committee except the one relating to levying tolls. On the question of tolls the Board considered that census of urban and rural carts should be conducted before coming to any decision on the point. Proposals for the implementations of the recommendations are separately under the consideration of Government.

CHAPTER VI.

FIRKA DEVELOPMENT SCHEME.

During the year under review, 27 firkas and 7 centres were selected by Government for intensive rural reconstruction work. Each firka or centre was allotted a grant of Rs. 50,000 from Provincial funds towards the cost of expenditure on improvements to existing roads and for formation of new village roads. Firka Development Committees were constituted in each firka and centre for selecting road works and assigning them priorities. These committees were required to select road works generally coming within the scope of the comprehensive road development scheme.

Proposals were received from several committees and the same were scrutinized and returned to the Collectors concerned with detailed remarks and lists of schemes coming within the scope of the comprehensive road development plan, in the area covered by the respective Firkas, for placing the lists before the District Firka Development Committees and finalising them. In exceptional cases, works outside the ambit of Post-war Road Development Scheme but of local importance were also selected.

Schemes of improvement on Government roads in the selected firkas were given high priority and selected for execution by the Highways Department. Also works on district board roads specifically provided for in the five-year plan of Post-war Road Development in these areas were taken up by the district boards under grants-in-aid. Other works on rural roads were taken up under the auspices of the Firka Development Scheme. Thus works coming within the ambit of the Comprehensive Plan of Post-war Road Development within the areas of these firkas were compressed in time—but not extended in scope—and were taken up for execution at a comparatively quicker pace than in other areas under the three categories:—

- (1) Works on Government roads entirely with Government funds.
- (2) Works on district board roads under grants-in-aid.
- (3) Other works under Firka Development Scheme.

District Collectors accord administrative sanction to the estimates relating to Firka Development works up to Rs. 10,000, Government's sanction being necessary for works costing above Rs. 10,000. The officers of the Highways Department exercise technical control over these works. During the year under reference lists received from 24 districts containing proposals for 192 works to the value of Rs. 11,52,350 were scrutinized in the Chief Engineer's office and returned to the Collectors with remarks.

CHAPTER VII.

Tools and plant—Progress in the acquisition of essential plant and machinery.—The original proposal under Post-war Road Development programme was to execute a large proportion of works in this department with demobilised personnel with the aid of necessary plant and machinery. Accordingly purchase of plant and machinery to the extent of Rs. 840 lakhs was contemplated. But it was found that demobilised men did not turn up for road works as envisaged. It was also considered mechanisation should not be resorted to on any large scale except to the extent justified on grounds of economy and to meet the position created by the acute shortage of labour. This part of the Post-war Road Development plan was therefore reviewed and a list of minimum plant and machinery required for the maintenance and improvement of the existing roads and for executing the Post-war Road Development programme was prepared and submitted to Government. In G.O. Ms. No. 4045, P.W., dated 29th November 1947, the Government accepted in principle an expenditure of Rs. 3.32 crores on the purchase of minimum requirements for the first quinquennium. Of this, the cost of machinery required for the efficient execution of works outside the Post-war Road Development is estimated at Rs. 170 lakhs and that for works connected with Post-war Road Development plan at Rs. 162 lakhs. Accordingly the provision of Rs. 175 lakhs included under Tools and Plant in the revised five-year programme is reduced to Rs. 160 lakhs. The main items included therein are road rollers, graders and tractors, crushers, granulators, air compressors, Calyx core drills, Nissen huts, water tanks, bitumen boilers, etc., with necessary auxiliaries.

The important units of plant and machinery available with this department on 1st April 1947 and at the end of the year 1947-48 are tabulated below:—

	As on 1st April 1947.	As on 31st March 1948.
1 Road rollers	179	246
2 Lorries	236	237
3 Concrete mixers	55	62 (inclusive of 7 old mixers).
4 Bitumen and asphalt boilers	16 plus 43 = 59	59
5 Oxy-acetylene welding sets	2	2
6 Double Nissen huts	..	40
7 Drill sharpening machine	..	6
8 Stone crushers	..	4
9 Mobile air compressors	..	3
10 Power graders (5 ton)	..	1
11 Pegson asphalt mixers (9 c.ft.)	..	2
12 Pump sets	..	17

The opening of a central workshop at Madras with five branches in the headquarters of circles to meet departmental needs is under contemplation. There are repair yards at Madras and in the mufassal and these are proving more and more useful for carrying out repairs to rollers and lorries, body building, etc.

Organization and working of Transport and Machinery Division.—One Divisional Engineer is in charge of the entire organization of plant and machinery with five Assistant Engineers in charge of five Transport and Machinery subdivisions at the headquarters of each of the five circles. There are 11 Mechanical Supervisors and 21 Motor Vehicle Supervisors in this branch.

The Divisional Engineer, Transport and Machinery, assists the territorial Divisional Engineers in the general upkeep of the plants and machinery through his Assistant Engineers and Supervisors and advises them on important matters pertaining to repairs and maintenance of plant and machinery. The other activities of the division are procurement, supply and distribution of all plant and machinery, scientific and mathematical instruments, etc., required for the whole Highways Department, organization of major repairs to plant and machinery, supplying necessary lubricants, fuel oils, tyres and tubes and batteries and such other stores and spares required for proper maintenance and running of plant and machinery, which are not easily procurable by Divisional Engineers in mufassal. Importance of proper operation and maintenance of machinery is being propagated among supervisory staff and crew by means of bulletins, circulars and instruction classes. As it was found difficult to get trained and efficient crew for newly purchased rollers, they are trained in Madras and sent to out-stations after satisfactory completion of training.

CHAPTER VIII.

(1) FINANCIAL POWERS PERTAINING TO WORKS.

The works of this department are mainly classified into two groups :—

- (a) Works on Government roads.
- (b) Works on District Board roads.

The officers of this department have to follow two different sets of rules in respect of the above two classes of works, viz., Madras Public Works Account and Departmental Codes for Government works and Local Boards Manual for Local Board works and possess different financial powers under the two different sets of rules. As it has been found that the adoption of two different sets of rules for the works executed by the same officers, hampers progress, proposals have been initiated to treat Local Board works as contribution works and to follow Public Works Department procedure for all works to be executed by this department.

(2) CONDITIONS OF LABOUR.

The shortage of labour continued during the year, and has necessitated a further increase in the schedule of rates in several districts.

A brief picture of the labour conditions in the districts is indicated below :—

(i) I Circle (*Visakhapatnam, East Godavari, West Godavari and Krishna districts*).

Labour was generally available in almost all the districts except Agency tracts, but wages for labour increased by 50 per cent over those of 1946-47 due to rise in the cost of essential commodities.

(ii) II Circle (*Cuddapah, Kurnool, Bellary, Anantapur, Guntur and Nellore districts*).

Scarcity of labour was felt in these districts on account of the diversion of labour, towards agriculture, mica fields, sugar factories, tobacco firms, etc., which offered attractive rates. In addition, many of the labourers were absorbed in the Tungabhadra Project work.

(iii) III Circle (*Chingleput, Chittoor, South Arcot, North Arcot and Salem districts*).

Scarcity of labour was felt in all these districts except in Salem North Division, due to the upward trend of prices of food-stuffs and the demand for abnormal wages. The position in Salem North Division was comparatively better.

(iv) IV Circle (*Tiruchirappalli, Tanjore, Mathurai, Ramnad and Tirunelveli districts*).

In Ramnad and Tirunelveli districts famine conditions prevailed in certain areas and people moved out of the districts to find food. Hence there was dearth of labour and increased demand for wages and contractors were reluctant to take up road works. In the Tanjore district, which is an agricultural centre, scarcity of labour was felt during the transplantation and harvest seasons. In the other districts, the position was more or less the same as it was during the previous year.

(v) V Circle (*Coimbatore, Nilgiris, Malabar and South Kanara districts*).

Cost of labour increased enormously in these districts and the scarcity of labour was acute, especially in the mill areas.

(3) AVENUE PLANTATIONS.

Detailed instructions in regard to planting avenue trees on road margins were issued in Chief Engineer's Circular Memorandum No. 515-D-1/47-3, dated 3rd October 1947, and the Superintending Engineers were asked to formulate schemes for avenue development based on the orders and instructions issued from time to time.

New plantations were not taken up on a large scale during the year. But nurseries were opened in some of the districts. The existing avenue plantations on the Highway roads were maintained during the year and the total expenditure incurred on their maintenance was Rs. 1,03,248-8-0 (for district-war details, please see Statement No. 4 of Appendix III).

(4) FERRIES.

In G.O. No. 759, P.W., dated 18th March 1947, the Government ordered the transfer of certain ferries from the district boards to the Highways Department. In G.O. No. 3304, P.W., dated 6th November 1947, Government

issued instructions for the management of and apportionment of revenue from public ferries. According to these instructions, if the two sides of a ferry lie in different jurisdictions, its management should vest in the authorities in the order of precedence indicated below :—

- | | |
|---------------------|------------------------|
| (1) Government. | (3) Municipal Council. |
| (2) District Board. | (4) Panchayat Board. |

When a road is maintained by a local authority on its side of the ferry and there is no maintained road on the other side, the management of the ferry should vest in the authority which maintains the road irrespective of the order of precedence.

According to the Government Order, revenue is to be apportioned on the following basis :—

(a) If there are maintained roads on both sides of the ferry, the net income will be apportioned equally between the two parties concerned.

(b) If there is maintained road only on one side of the ferry, the net income shall go entirely to the authority maintaining the road.

(c) If the sides of the ferry have no maintained roads, the net income will be shared equally by the two local bodies. A list of ferries under the management of this department on 31st March 1948 is furnished in Appendix VII-(1).

(5) ENCROACHMENTS.

With a view to relieving the Highways Engineering staff of non-technical duties as far as possible, and thus enabling them to devote their attention to the technical side, detailed instructions were issued by Government in G.O. No. 3306, P.W., dated 6th November 1947, vesting the control and management of encroachments on Highway road margins in municipal and non-municipal areas, with the executive officers of the municipalities or the Revenue Department, as the case may be, subject to general concurrence of the Highways Department.

In municipal areas, the executive authorities are empowered to detect, control and evict encroachments, grant leases and licences for occupation of road margins, collect licence fees, fines for unauthorized occupation, etc., and to appropriate the income therefrom.

In non-municipal areas all the above duties are to be attended to by the Revenue staff including collection of revenue but half the amount so collected has to be credited to the local board concerned.

Exception has, however, been made in respect of temporary occupation of road margins during fairs and festivals during which time the local board concerned can have temporary control of the road margins with previous permission of the Highways authorities and appropriate the income by leasing them subject to certain general instructions issued by the Chief Engineer (Highways).

Instructions in regard to such leases and the erection of marriage and summer pandals have been issued in Chief Engineer's Circular Memorandum No. 1182-D-1/48-HP, dated 23rd September 1948.

(6) INSPECTION BUNGALOWS AND TRAVELLERS' BUNGALOWS.

Some of the inspection bungalows in the Agency tracts, previously under the control of the Public Works Department were taken over by the Highways Department, as they are situated on the maintained roads in charge of the Highways.

Proposals for the transfer of inspection bungalows in charge of the Public Works Department in Dowlaiswaram Circle were under correspondence with Chief Engineer (General) during the year. A list of inspection bungalows taken over and proposed to be taken over is given in Appendix VII-(2).

It was originally ordered to take over all travellers' bungalows under the district boards by payment of compensation in case the travellers' bungalows were the absolute property of the district boards but in view of the financial position of the Province, the question was deferred.

Travellers' bungalows which originally belonged to Government but were subsequently alienated in favour of district boards free of cost were proposed to be taken over without payment of any compensation and the matter was under correspondence with the special officers of the district boards.

The district board travellers' bungalows were under the supervision of the Highways Department. A statement showing the travellers' bungalows under the supervision and control of this department in each district is furnished in Appendix VII (3).

(7) ACCIDENTS.

In the course of the year, six major accidents occurred. Out of these five were fatal cases. The question of compensation was taken up with the Commissioner for Workmen's Compensation.

One of the accidents involved loss of property to the extent of Rs. 2,600 to Government due to the lorries catching fire. Departmental and Police investigation were taken up in the case promptly. Minor accidents to coolies were also reported from Salem North and South Arcot districts. Details of the major accidents that occurred during the year are given below :—

Serial number and name of district.	Nature of accident.	Brief notes on the accident.	Stage in the award of compensation.	Loss to property, if any.
(1)	(2)	(3)	(4)	(5)
1 Chingleput	Fatal accident due to collision of departmental lorry.	The accident occurred on 4th December 1947. It involved the motor lorry M.S.P. No. 64 of this department. The driver escaped unhurt and the cleaner with minor injuries. Out of the 12 coolies with the lorry, 1 coolie named Kuppan died on the spot, 2 received serious injuries and 9 minor injuries. The driver was charged by the Police, tried by the Subdivisional Magistrate, Saidapet, but acquitted as not guilty.	The Commissioner for Workmen's Compensation has just referred the matter to Chief Engineer for decision and the question is under examination.	There were slight damages to certain parts of the lorry.
2 Tirunelveli	Fatal accident to a coolie caught under a running road roller.	The accident resulted in the death of the boy coolie Velusami Thevar, aged 14. He was run over by the 10-ton road roller No. M.D.T.1258 engaged, on consolidation work, at M. 15/8 of Tuticorin-Kollpatti road. The roller was running on the reverse gear and doing work on the extreme left, when the coolie doing work on the right side was caught in the right side gear wheel and he died instantaneously.	The matter was taken up by the Superintending Engineer direct with the Labour Commissioner, Madras, and was under correspondence.	There was no loss of property to Government.

Serial number and name of district. (1)	Nature of accident. (2)	Brief notes on the accident. (3)	Stage in the award of compensation. (4)	Loss to property, if any. (5)
3 Tirunelveli—cont.	Fatal accident to a coolie who slipped and was run over by a moving road roller.	The coolie Avudayappan, aged 20, son of Subbayya Pillai, Karisalkulam, of Koilpatti taluk, who was engaged by the contractor on spreading work at M. 374/1 of the Great Southern Trunk road on 21st November 1947 suddenly slipped and fell down and was run over by a stone road roller which was doing consolidation work. The injured coolie was taken to hospital but died the same night.	Rs. 630 was deposited towards compensation.	There was no loss of property.
4 Malabar district, Kozhikode division.	Non-fatal accident due to a departmental lorry catching fire.	There was a fire accident on 25th May 1947 as a result of which one departmental lorry was completely burnt and another partly damaged.	There was no loss of life and no injuries to any person and hence the question did not arise.	The damages were estimated to cost about Rs. 2,600.
5 Malabar district, Palghat division.	Fatal accident due to careless jumping into a moving lorry.	The cleaner attached to the departmental lorry M.S.C. No. 8659 fell from the lorry while in motion on 24th February 1948 and died. The cleaner Sri T. M. Subramaniam jumped into the moving lorry from the roadside without the driver's knowledge, slipped down and was squeezed between the lorry and heap of road metal.	On investigation it was found that the case did not come under the Workmen's Compensation Act, as the death occurred due to the careless and uncalled for action of the cleaner.	There was no loss of property.
6 Do.	Fatal accident due to careless handling of a steam road roller by fireman.	The fireman of the departmental steam road roller No. 15880 which was stationed on the Ottapalam-Cherplasser road after repairs, steamed up the engine and drove it in the absence of the driver. As he could not control the engine, the roller slipped down and fell into a ditch, 10 feet deep, resulting in the death of the fireman.	The matter was under correspondence, but here also the fireman himself was responsible for his death. The question of payment of compensation did not arise.	There was no loss to Government property.

(8 FLOOD AND MONSOON DAMAGES.

There were unseasonal and heavy rains during the year in the districts of—

- | | |
|-----------------|--------------------|
| (1) Coimbatore. | (5) East Godavari. |
| (2) Ramnad. | (6) West Godavari. |
| (3) Mathurai. | (7) Visakhapatnam. |
| (4) Krishna. | |

Details of names of roads affected and the extent of damages caused are given below :—

Name of district. (1)	Name of road. (2)	Month of occurrence. (3)	Extent of damages caused and remarks. (4)
1 Coimbatore	Coimbatore-Hassanur road, M. 52 and 60.	October 1947	Rs. 16,000. There was brief interruption to traffic due to slips from hill sides.
2 Ramnad and Mathurai.	Great Southern Trunk road, M. 288/7 and 285/6.	April 1947	Traffic was interrupted but diversion of traffic was arranged in time.
3 Do.	Thirumangalam-Pallapatti road M. 11/7.		
4 Do.	Causeway at M. 8/3 of Tiruchikulmani-Jiyapuram road.		
5 Krishna	Kankipand-Andivada road	August 1947	Rs. 7,500. Due to sudden floods in Kodungal drain, the under-vents of the causeway were damaged.
6 Do.	Nuzvid-Vijayavada road	Do.	Rs. 16,000. This was due to heavy floods in Budameru.
7 Do.	Masulipatnam-Hyderabad road	Do.	Rs. 40,000. This was due to heavy floods in Budameru. Rs. 4,130. This was due to heavy floods in Budameru.

Name of district. (1)	Name of road. (2)	Month of occurrence. (3)	Extent of damages caused and remarks. (4)
8 Krishna	Masulipatnam-Tiruvur road	August 1947	Rs. 25,000. This was due to heavy floods in Budameru.
9 East Godavari	Causeway at 24/5 of Samalkot-Gokavaram road.	Do.	Rs. 5,300. Traffic was interrupted for one day.
0 Do.	Samalkot-Pithapuram road M. 2/1 to 2/5.	September 1947.	Traffic was interrupted for two days. Repairs were carried out from maintenance grant. Rs. 10,050.
1 West Godavari (Agency).	Road from Polavaram to Aswarapeta and V.A.A. road.	Do.	
2 Visakhapatnam	G.N.T. road M. 609/5	Do.	The road breached to a length of 75 feet and repairs were immediately carried out from maintenance grants.

Besides the above, stray cases of interruption to traffic were also reported due to floods and these are detailed below :—

Serial number and name of the road and exact mileage. (1)	Date on which the interruption occurred. (2)	Date of restoration of traffic. (3)
Salem-Tirupattur road-Papireddipatti-Malappuram road (Krishnagiri division).	17th September 1947	30th September 1947.
Do.	22nd October 1947	27th October 1947.
Kurnool-Atmakur road at M. 5/8 (Kurnool district)	22nd September 1947	12th October 1947.
G.N.T. road at M. 610/0	24th September 1947	28th September 1947.
Jangadam on Kuppam ferry at M. 6-7 of Taliparamba-Cheruthayam road (Calicut division).	2nd October 1947	2nd October 1947.
G.N.T. road at M. 520-3-6 (Nathavalasa river-crossing [Visakhapatnam South division]).	11th October 1947	31st October 1947.
Ramnad-Devipatnam road causeway at 3/2	10th November 1947	17th November 1947.
G.S.T. road causeway 339/4	23rd December 1947	29th December 1947.
Tenkasi-Mathurai road '89/8 and Tirumangalam-Usilampatti road M. 1/8.	16th October 1947	1st November 1947.
	20th October 1947	24th October 1947.
	23rd October 1947	26th October 1947.

Prompt action was taken and the traffic was restored as early as possible in these cases.

CHAPTER IX.

DEPUTATION OF ROAD ENGINEERS.

During the year under report the second batch of Road Engineers was sent for training in United States of America. The deputation commenced from April 1947 and ended in September 1947.

Sri C. P. Subbayya, Divisional Engineer, was trained in Highway Economics, Administration of Finance, Traffic problems, designs construction and maintenance and road research. Sri M. Seshumadhava Rao, Assistant Engineer (Highways), had training in "Bridge Engineering and study of General Highway Engineering as background."

The training had been of decided advantage to the deputationists both theoretically and practically and this will naturally be reflected in their day-to-day work.

The choice of subjects had a bearing on the original programme of Post-war Road Development which envisaged employment of ex-servicemen on large scale on departmental works to be executed with machinery. This however did not materialize as Ex-servicemen did not respond as expected and as the scheme for purchase of machinery for the Post-war Road Development works was curtailed. Some of the officers who had undergone training in particular subjects could not, therefore, be employed on works requiring such special knowledge for want of opportunity.

In general the deputationists had the benefit of a broader outlook and vision and acquired an all-round knowledge of the practices obtaining abroad in various matters relating to works and have individually made some special

studies in certain subjects. Such special studies will not negative or stultify their all-round competence as Road Engineers, and will on the other hand stand in good stead when occasion demands.

Rao Sahib Sri K. K. Nambiar, the City Engineer, who belonged to the 1st Batch of deputationists, had better opportunities and had made use of his foreign training to the best advantage and his various activities which have produced good results have also earned recognition from outside.

Sri G. Srirangachari, Divisional Engineer, Transport and Machinery Division, who also belonged to the first batch of deputationists is engaged in experiments on a few selected stretches of earthen roads to observe the behaviour of stabilized soil pavements as wearing surface and as foundation.

Sri C. P. Subbayya, Divisional Engineer (Bridges) of the second batch of deputationists, had been applying his experience gained abroad to evolve economical standard designs for bridges of various spans.

The other officers trained abroad have also been using the knowledge gained by them in various ways in their day-to-day work and the experience gained abroad by all the officers should ultimately be beneficial to the department.

CHAPTER X.

PROGRESS OF ROAD RESEARCH.

The Science of soil mechanics and soil stabilization has been gaining importance during recent years with a view to obtain better roads with striking economy.

A batch of 8 Supervisors and 2 Assistant Engineers were deputed for training in the soil research at the Soil Research Institute, Lahore, in September 1946. An Officer of the rank of a Divisional Engineer was also deputed abroad to United Kingdom and United States of America for special studies in 1946.

Modern methods of soil stabilization have been applied with success under various intensities of pneumatic tyred-traffic in other countries. But the behaviour of such pavements under the iron-tyred country cart of India is yet to be investigated. It was therefore decided to take up a few stretches of roads for experimental works and to observe the behaviour of stabilized soil pavement as wearing surface, subgrade, etc. An estimate for Rs. 7,000 was sanctioned for the equipment required for the preliminary experiments necessary for such works.

The first stage was inaugurated in January 1948, locating the laboratory in the Old District Board Stores Building at Saidapet. Certain apparatus were purchased and some were got manufactured locally.

Sri G. Srirangachari, B.E., A.M., Asce., Divisional Engineer (Highways), Transport and Machinery Division, who has made special studies on soil stabilization in the first batch of deputationists to overseas has been in charge of the work. To assist him in his work, a supervisor who had undergone training in soil research at Lahore was also posted.

EXPERIMENTAL WORKS.

An estimate for Rs. 1 lakh had already been sanctioned for metalling and other improvements to miles 5/0 to 8/5 of Thiruvethiyur-Ponneri-Panjetti Road near Madras. It was decided to execute a portion of the work in the usual manner and to improve another portion with stabilized soil subgrade and wearing surface. Stabsoil base course, and stone soling were proposed to be provided in alternative stretches for comparative studies. Test sections have also been proposed to try stabsoil wearing course, with and without admixture of stone aggregate, and also stabsoil berms.

The question of establishing a Nucleus Soils Laboratory on a larger scale for conducting more experiments will be taken up at the appropriate time.

APPENDIX I-A.

(1) Growth of roads in Madras Province.

1880-81	19,500 MILES
1885-86	19,650 MILES
1890-91	21,800 MILES
1895-96	21,600 MILES
1900-01	23,800 MILES
1905-06	25,100 MILES
1910-11	26,000 MILES
1915-16	26,500 MILES
1920-21	26,500 MILES
1925-26	28,700 MILES
1930-31	32,600 MILES
1935-36	36,000 MILES
1940-41	37,900 MILES
1945-46	37,900 MILES

(2) Statement showing lengths of metalled and unmetalled roads maintained during 1947-48 as on 31st March 1948.

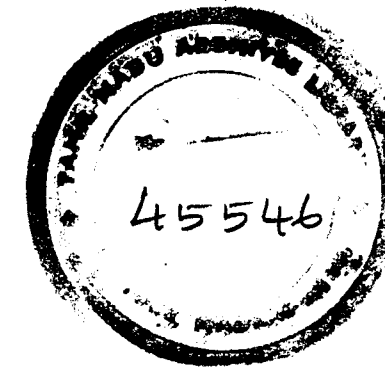
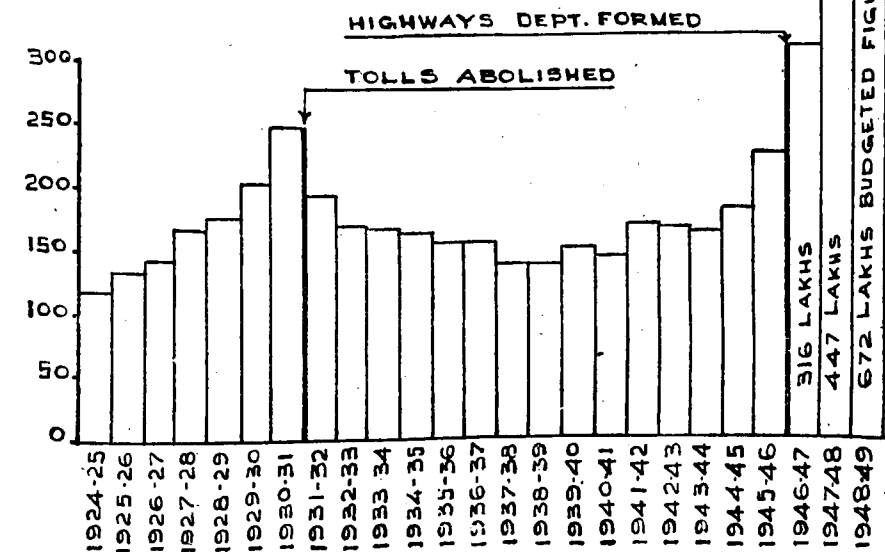
Name of district.	Highways.		Public Works Department roads.		District Board roads.		Municipal roads.		Total metalled.	Total unmetalled.
	Metalled.	Unmetalled.	Metalled.	Unmetalled.	Metalled.	Unmetalled.	Metalled.	Unmetalled.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
MADRAS PROVINCE.										
I Circle.										
1 Visakhapatnam ..	1,055	4	..	..	538	240	143	31	1,736	275
2 East Godavari ..	595	94	..	..	378	581	86	47	1,064	722
3 West Godavari ..	439	30	16	1	243	345	72	9	770	385
4 Krishna ..	437	10	1	30	123	574	84	100	645	714
II Circle.										
5 Guntur ..	602	32	2	34	336	517	102	47	1,042	630
6 Nellore ..	601	..	4	1	672	66	45	..	1,322	67
7 Kurnool ..	573	12	..	..	300	283	32	..	905	317
8 Bellary ..	535	..	..	..	448	155	88	15	1,041	170
9 Anantapur ..	504	..	..	..	601	155	17	..	1,123	172
10 Cuddapah ..	407	2	..	..	500	60	31	7	938	69
III Circle.										
11 Chingleput ..	635	12	3	..	152	640	35	21	825	673
12 Chittoor ..	704	30	..	..	227	626	26	17	957	673
13 North Arcot ..	660	..	1	..	365	514	46	..	1,098	560
14 South Arcot ..	525	24	17	93	513	925	62	13	1,117	1,055
15 Salem ..	810	4	..	..	1,027	504	37	32	1,874	540
IV Circle.										
16 Tiruchirapalli ..	593	..	16	73	282	481	92	37	983	591
17 Tanjore ..	600	65	3	403	244	1,732	109	139	956	2,339
18 Mathurai ..	593	36	5	9	433	390	125	133	1,156	568
19 Ramnad ..	462	..	..	8	330	314	78	73	870	387
20 Tirunelveli ..	449	..	1	..	628	189	89	25	1,167	222
V Circle.										
21 Coimbatore ..	1,046	3	41	8	1,017	1,265	138	36	2,242	1,312
22 Nilgiris ..	203	..	6	..	190	216	106	36	505	252
23 Malabar ..	933	7	7	..	496	532	71	80	1,507	619
24 South Kanara ..	681	17	..	..	154	554	58	11	893	582
25 Madras ..	..	..	3	..	..	..	..	..	..	..
Total ..	14,642	382	131	660	10,167	11,858	1,799	994	26,739	13,894
Abstract.										
Highways ..	..	..	..	..	..	14,642	..	..	15,024	✓
P.W.D. ..	..	..	..	..	..	131	..	382	791	✓
District Boards ..	..	..	..	..	..	10,167	..	660	22,025	✓
Municipal Councils ..	..	..	..	..	..	1,799	..	994	2,793	✓
Total ..	26,739	13,894	40,633							

APPENDIX I-B.

TOTAL ANNUAL EXPENDITURE ON ROADS
INCLUDING CAPITAL WORKS

EXPENDITURE-Rs. IN LAKHS

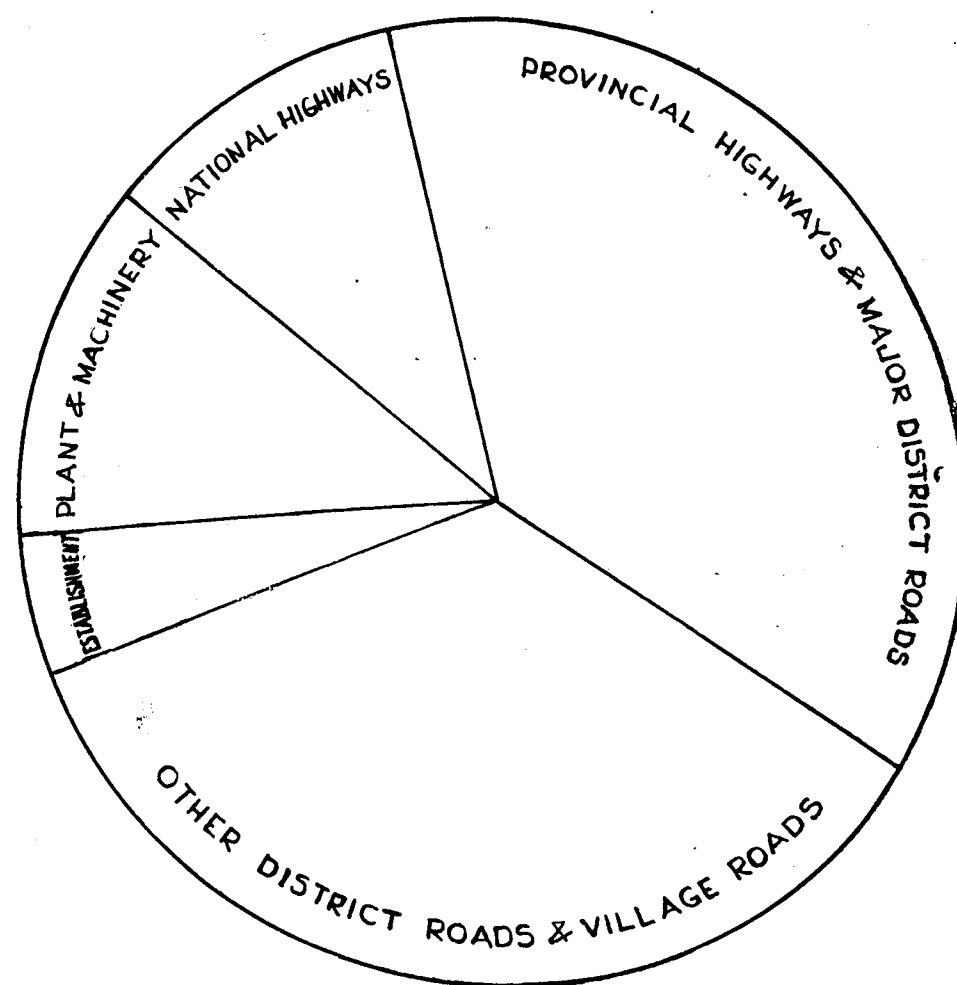
SCALE 1"=150 LAKHS



APPENDIX II-A.

POST WAR ROAD DEVELOPMENT **OF** **MADRAS PROVINCE**

COMPREHENSIVE PLAN
76.45 CRORES 25 YEARS



Post-war Road Development of Madras Province comprehensive plan—Broad Details.

Serial number.	Details.	National highways.	Provincial highways and major district roads.	Other district roads and village roads.	Total.
1	Existing length in miles	2,000	19,167	15,990	37,157
2	Proposed additional length in miles ..	21	934	16,934	17,884
3	Total length in miles	2,021	20,101	32,924	55,046
4	Cost of new formation in lakhs ..	2	26	330	358
5	Improvements proposed—				
	(a) Cement concrete miles/amount in lakhs.	740/255	1,656/571	5/2	828
	(b) Black top miles/amount in lakhs.	1,870/197	1,500/158	130/14	369
	(c) Metalling the surface miles/amount in lakhs.	21/5	2,680/196	26,110/1074	1,275
	Total cost of improved surfacing in lakhs ..	457	925	1,090	2,472
6	Major bridges—amount in lakhs ..	250	404	142	796
7	Widening and other improvements including minor bridges—amount in lakhs.	79	1,520	1,190	2,789
8	Plant and machinery—amount in lakhs.	..	..	..	885
9	Establishment—amount in lakhs ..	..	..	..	345
	Grand total—amount in lakhs	..	..	..	7,645

APPENDIX II-B.

Post-war road development of Madras Province—5-year programme—Broad details.

Serial number.	Details.	National highways.	Provincial highways and major district roads.	Other district roads and village roads.	Total.
1	Existing length in miles	2,000	19,167	15,990	37,157
2	Proposed additional length in miles ..	21	491½	9,000	9,512½
3	Total length in miles	2,021	19,658½	24,990	46,669½
4	Cost of new formation in lakhs ..	0.66	48.84	330.00	379.50
5	Improvements proposed—				
	(a) Cement concrete miles/amount in lakhs.	133/70.43	181/108.90	0.48	179.81
	(b) Black top miles/amount in lakhs.	115/18.43	417/37.66	1.85	57.99
	(c) Metalling the surface miles/amount in lakhs.	19/5.53	774/62.04	1,638/94.06	162.65
6	Major bridges—amount in lakhs ..	277.80	108.78	23.00	409.58
7	Widening and other improvements including minor bridges and war arrear renewals—amount in lakhs.	53.37	144.49	59.79	257.65
8	Plant and machinery—amount in lakhs.	..	..	..	160.00
	Total cost of works proposed to be introduced in the first quinquennium in lakhs.	..	..	..	1,607.18
	Programmed expenditure for the first quinquennium.	250.00	850.00	Tools and plant 160.00	12,60.00

APPENDIX III.

STATEMENT 1.—Statement showing in abstract the appropriation and expenditure in 1947-48—Highways only.

Number. (1)	Finance heads. (2)	Original appropriation. (3) RS.	Final appropriation. (4) RS.	Actual expenditure. (5) RS.
BUILDINGS AND ROADS—50. CIVIL WORKS.				
I	Works and repairs Highways (Provincial)—			
A	Partially Excluded Areas—			
(1)	Excluding Post-war Reconstruction	9,22,700	5,11,100	4,39,978
(2)	Post-war reconstruction		72,600	71,761
B	Ordinary Areas—			
(1)	Excluding Post-war reconstruction	3,08,21,800	2,08,34,200	2,02,35,352
(2)	Post-war reconstruction	1,50,05,400	44,53,300	45,40,665
	Total ..			2,52,87,756
II	Ordinary Establishment, 50. Civil Works—			
A	Highways (Provincial)—			
(1)	Partially excluded areas	53,100	1,01,300	1,01,437
(2)	Ordinary areas	42,72,800	38,89,500	45,34,754
B	Charges in England	6,400	6,400	14,182
	Total, Establishment			46,50,373
III	Tools and Plant—Highways—			
(1)	Partially excluded areas	48,30,000	21,14,900	34,788
(2)	Ordinary areas	22,97,600	16,96,200	29,32,960
	Total, Tools and Plant			29,67,748
IV	Suspense	80,000	3,49,200	— 55,604
V	81—Capital Outlay—Central—Works. (15th August 1947 to 31st March 1948)			1,18,714
	Grand total (Provincial and Central)			3,29,68,987
				RS. 46,50,373
	Deduct proportionate establishment charges recoverable from the Government of India		4,32,660	
	Deduct proportionate establishment charges recoverable from District Boards		12,02,171	
			16,34,831	16,34,831
	Net charges debitable to Provincial Funds			30,15,542

STATEMENT 2.—Statement showing the appropriation and the outlay during 1947-48 final under all heads of civil works—Highways only.

Serial num- ber. (1)	Service heads. (2)	Original works.		Repairs.		Total.	
		Appropriation. (3)	Outlay. (4)	Appropriation. (5)	Outlay. (6)	Appropriation. (7)	Outlay. (8)
I.	Provincial—50. Civil Works—						
	Partially excluded areas—						
1	Excluding Post-war Reconstruction—Communications	78,600	73,920	4,32,500	3,66,058	5,11,100	4,39,978
2	Post-war Reconstruction—Communications	72,600	71,761			72,600	71,761
3	Establishment					1,01,300	1,01,437
4	Tools and Plant					21,14,900	34,788
	50. Civil Works—Partially excluded areas						6,47,964
II.	Provincial—50. Civil Works—						
	Ordinary areas—						
1	Excluding Post-war Reconstruction—Communications	20,72,000	18,16,233	1,87,62,200	1,84,19,119	2,08,34,200	2,02,35,352
2	Post-war Reconstruction—Communications	16,24,100	12,79,423	28,29,200	32,61,242	44,53,300	45,40,665
3	Establishment					38,89,500	45,34,754
4	Charges in England					6,400	14,182
5	Tools and Plant					16,96,200	29,32,960
6	Suspense					3,49,200	— 55,604
	50. Civil Works—Ordinary areas						3,22,02,309
III.	81. Civil Works—Central—Communications (15th August 1947 to 31st March 1948)		1,18,714				3,28,50,273

Remarks.—(1) An expenditure of Rs. 41,56,633-6-10—together with centage charges Rs. 4,15,665 incurred on the maintenance of National Highways—Works—and adjusted to the Central Head "50. Civil Works—Central—E. Repairs" has not been shown by the Accountant-General in statements 1 and 2.

(2) A credit of Rs. 4,837 to Tools and Plant is also pending adjustment by the Accountant-General.

STATEMENT 3.—Detailed statement showing the expenditure on Government works—Original works—1947-48.

Num- ber. (1)	Name of district. (2)	Road Development Fund works.		Other works excluding Post-war Reconstruction.		Post-war Reconstruction.		Tools and Plant.		Total.	
		Major. (3)	Minor. (4)	Major. (5)	Minor. (6)	Major. (7)	Minor. (8)	Major. (9)	Minor. (10)	Major. (11)	Minor. (12)
1	Visakhapatnam North	267 12 0		— 10,239 6 0	341 0 0	3,893 0 0	3,741 0 0	456 0 0	7,707 4 0	13,666 10 0	13,666 10 0
2	Do. Agency South			10,373 12 2	4,447 2 0	92,380 1 6	6,643 13 0	637 5 0	1,87,478 0 6	1,87,478 0 6	1,87,478 0 6
3	East Godavari	65,995 14 10		7,361 5 0	1,589 11 0		2,213 3 0	972 13 0	18,153 10 0	18,153 10 0	18,153 10 0
4	Agency Division	8,877 15 0		5,341 3 0	124 8 0		31,462 6 0	482 9 0	82,402 9 0	82,402 9 0	82,402 9 0
5	West Godavari	43,101 13 0		7,289 6 0	28,595 11 0		32,188 0 0	323 14 9	1,64,292 14 0	1,64,292 14 0	1,64,292 14 0
6	Krishna	2,504 0 0		7,995 6 0	6,127 15 0		15,094 0 0	3,374 7 6	64,583 14 6	64,583 14 6	64,583 14 6
7	Guntur			31,292 0 7	11,306 7 0		1,847 5 2	1,333 9 0	8,608 8 6	8,608 8 6	8,608 8 6
8	Nellore				6,226 4 0		5,013 2 0	1,394 12 9	42,229 8 0	42,229 8 0	42,229 8 0
9	Kurnool				11,213 10 3		8,806 8 1	18 0 0	14,39,323 10 5	14,39,323 10 5	14,39,323 10 5
10	Belary				4,877 12 11		6,147 0 0	147 0 9	1,02,192 15 4	1,02,192 15 4	1,02,192 15 4
11	Anantapur				22,535 12 3		20,256 3 0	346 11 0	43,209 14 3	43,209 14 3	43,209 14 3
12	Cuddapah				741 15 0		14,931 12 0	806 4 0	1,27,203 12 0	1,27,203 12 0	1,27,203 12 0
13	Chingleput				7,451 11 4		16,800 8 0	370 8 10	86,444 13 2	86,444 13 2	86,444 13 2
14	Chittoor				5,998 9 6		1,43,117 15 5	510 15 0	1,93,889 9 11	1,93,889 9 11	1,93,889 9 11
15	South Arcot				4,806 2 0		1,398 14 0	4,457 4 0	10,862 4 0	10,862 4 0	10,862 4 0
16	North Arcot				14,221 4 5		64,455 5 3	1,778 6 8	1,77,407 15 8	1,77,407 15 8	1,77,407 15 8
17	Salem North				7,253 1 3		47,700 13 0	353 1 10	1,91,622 0 10	1,91,622 0 10	1,91,622 0 10
18	Salem South				5,126 1 0		18,357 3 0	193 11 0	33,837 3 0	33,837 3 0	33,837 3 0
19	Tamil Nadu				— 22,552 0 0		95,071 2 5	615 11 3	1,11,992 4 10	1,11,992 4 10	1,11,992 4 10
20	Tamil Nadu				33 0 0		73,966 5 0	800 3 0	74,799 8 0	74,799 8 0	74,799 8 0
21	Tamil Nadu				— 2,460 3 0		14,400 15 0	1,357 2 4	22,301 5 5	22,301 5 5	22,301 5 5
22	Tamil Nadu				4,164 2 4		30,392 0 0	10,037 3 0	52,841 0 4	52,841 0 4	52,841 0 4
23	Tamil Nadu						6,862 15 3	1,725 9 0	15,10,327 4 11	15,10,327 4 11	15,10,327 4 11
24	Tamil Nadu										
25	Tamil Nadu										
26	Tamil Nadu										
27	Tamil Nadu										
28	Tamil Nadu										
29	Tamil Nadu										
30	Tamil Nadu										
31	Tamil Nadu										
32	Tamil Nadu										
33	Tamil Nadu										
34	Tamil Nadu										
35	Tamil Nadu										
	Grand total	22,97,505 9 10	27,175 7 6	— 5,65,075 2 5	1,30,547 7 7	8,41,922 13 6	6,17,328 13 7	15,67,193 15 4	49,16,599 0 11	49,16,599 0 11	49,16,599 0 11

STATEMENT 4.—Showing expenditure on Government works—Repairs during 1947-48.

Serial number.	Name of district.	Excluding Postwar Reconstruction.		Post-war Reconstruction.		Tools and Plant.		Avenues.		Total.	
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	(2)	RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.
1	Visakhapatnam North	5,10,143	13 6	15,158	3 0	16,742	9 9	1,100	10 0	5,43,205	4 3
2	Do.	6,49,222	7 0	4,312	0 0	45,042	15 2	2,514	3 0	7,01,091	9 2
3	Do.	11,74,691	8 8	3,640	0 0	55,660	7 1	116	0 0	12,34,107	15 9
4	East Godavari	5,57,178	13 0	5,68,708	3 0	33,715	14 6	3,456	10 0	5,94,351	5 6
5	Agency Division	7,12,849	9 9	2,29,020	2 0	66,198	9 6	826	15 0	13,48,383	5 3
6	West Godavari	10,27,992	1 5	1,35,420	5 0	68,126	3 0	16,337	14 0	13,41,690	4 2
7	Krishna	6,37,365	12 6	1,90,043	0 0	51,413	7 8	7,621	8 0	8,91,821	3 3
8	Guntur	7,96,976	13 5	84,762	6 0	40,511	10 10	237	11 0	9,27,384	13 4
9	Nellore	3,86,595	15 0	53,647	4 0	17,272	13 4	6,434	8 0	4,38,384	13 4
10	Bellary	5,71,694	15 6	79,009	8 0	17,707	8 5	273	10 0	5,93,484	7 3
11	Anantapur	4,74,200	9 9	93,708	3 6	24,975	9 6	480	9 0	5,09,483	7 0
12	Cuddapah	9,05,311	12 7	51,367	2 0	86,382	14 5	13,068	0 0	9,93,483	7 0
13	Chingleput	8,02,448	5 3	1,13,939	12 6	34,240	8 2	837	2 0	8,93,470	15 5
14	North Arcot	7,06,978	13 9	33,340	0 0	28,877	14 3	4,473	10 0	8,23,370	6 0
15	South Arcot	11,19,086	0 7	1,60,547	0 0	47,548	4 9	6,528	10 0	13,33,709	15 4
16	Salem North	10,35,106	14 10	1,05,049	13 0	76,675	1 3	3,365	1 0	12,20,187	14 1
17	Do.	5,57,405	1 4	68,547	12 0	9,108	1 1	3,936	8 0	6,48,697	6 5
18	Tiruchirappalli	7,04,429	10 1	2,02,735	0 6	37,936	4 10	3,938	0 0	10,10,206	14 5
19	Tanjore East	17,42,938	2 8	1,08,753	15 9	20,211	13 9	5,934	12 0	19,22,842	1 2
20	Tanjore West	15,78,383	7 0	1,36,913	11 0	39,509	3 9	5,934	12 0	18,10,738	1 9
21	Madurai	12,09,091	1 1	99,536	5 0	42,145	14 3	9,765	3 0	13,60,539	4 4
22	Tirunelveli	16,87,773	6 4	1,72,847	12 0	84,243	9 3	4,676	5 0	19,49,546	0 4
23	Coimbatore North	3,48,466	6 9	94,509	6 0	27,095	2 5	..	..	4,70,070	15 2
24	Coimbatore South	14,45,536	9 6	3,61,464	9 6	96,829	15 0	299	3 0	19,04,130	5 0
25	Malabar North	6,20,836	14 1	1,44,019	8 0	42,556	7 0	..	..	8,07,412	13 1
26	Malabar South	..	..	..	..	..	..	..	..	..	..
27	Transport and Machinery Division	..	..	..	..	..	..	..	..	..	..
28	Bridges North	..	..	..	..	..	..	..	..	..	..
29	Bridges South	..	..	..	..	..	..	..	..	..	..
30	Grand total	2,23,38,562	7 1	32,61,241	13 9	13,95,720	13 10	1,03,248	8 0	2,75,98,773	10 8

STATEMENT 5.—Showing the expenditure on District Board works, district-war, during 1947-48.

Serial number and name of District Board.	Original works.			Repairs.	Total expenditure.
	R.D.F. works.	Provincial grant works.	District Board works.		
(1)	(2)	(3)	(4)	(5)	(6)
1 Visakhapatnam, North	RS. 23,892	RS. 40,403	RS. 70,611	RS. 1,54,030	RS. 2,88,936
2 Visakhapatnam, South	2,03,919	2,11,226	1,82,493	1,75,186	7,72,824
3 Godavari, East	42,579	17,077	63,764	5,02,523	6,25,943
4 Godavari, West	1,60,636	..	16,028	5,36,739	7,13,403
5 Krishna	51,936	27,334	3,16,990	3,98,410	7,94,670
6 Guntur	1,048	3,02,962	1,64,727	2,89,745	7,58,482
7 Nellore	..	24,893	10,101	2,56,378	2,91,372
8 Cuddapah	..	18,111	4,034	2,37,140	2,68,945
9 Anantapur	9,660	69,686	14,923	96,319	1,99,998
10 Bellary	19,070	8,898	11,397	71,504	91,799
11 Kurnool	..	9,01,280	3,66,953	..	12,68,242
12 Chingleput	..	55,399	31,100	3,04,365	3,90,864
13 Chittoor	..	35,570	17,765	2,04,324	2,65,907
14 Arcot, North	8,239	54,424	68,042	3,92,761	5,15,227
15 Arcot, South	..	1,22,460	28,564	5,30,520	6,83,640
16 Tanjore, East	2,087	14,893	2,79,770	2,09,095	5,03,758
17 Tanjore, West	..	10,267	3,46,452	3,23,795	6,85,795
18 Tiruchirappalli	..	..	1,12,348	3,55,717	4,70,283
19 Mathurai	..	..	1,07,238	4,77,198	8,49,436
20 Ramnad	..	..	95,359	7,10,685	9,28,926
21 Tirunelveli	..	..	1,06,256	7,31,043	8,68,611
22 Coimbatore	..	..	52,090	8,71,248	10,15,974
23 The Nilgiris	..	..	943	84,894	1,06,156
24 Salem	..	..	282	6,96,885	8,03,166
25 South Kanara	..	..	77,182	1,90,100	2,77,330
26 Malabar	..	..	53,840	3,53,609	7,37,489
Total	6,96,252	25,30,941	27,95,770	91,54,213	1,51,77,176

STATEMENT 6.—Showing districtwar total expenditure incurred on Government works and District Board works, 1947-48.

Serial number and name of district.	Government works.		Total for Government works.	Total for District Board works as per Statement 5.	Grand total.
	Original works as per Statement 3.	Repairs as per Statement 4.			
(1)	(2)	(3)	(4)	(5)	(6)
1 Visakhapatnam, North	RS. 7,707	RS. 5,26,463	RS. 5,34,170	RS. 2,88,936	RS. 8,23,106
2 Visakhapatnam, South	13,211	6,56,049	6,69,260	7,72,824	14,42,084
3 Godavari, East	1,86,841	11,78,448	13,65,289	6,25,943	19,91,232
4 Godavari, West	12,181	5,60,635	5,72,816	7,13,403	12,86,219
5 Krishna	82,050	12,82,385	13,64,435	7,94,670	21,59,105
6 Guntur	1,64,253	12,73,570	14,37,823	7,58,482	21,96,305
7 Nellore	64,554	7,80,408	8,44,962	2,91,372	11,36,334
8 Cuddapah	12,981	5,53,484	5,66,465	2,68,945	8,35,410
9 Anantapur	40,926	6,31,777	6,72,703	1,99,998	8,72,701
10 Bellary	62,234	4,71,616	5,33,850	91,799	6,25,649
11 Kurnool	8,310	8,87,020	8,95,330	12,68,242	21,63,572
12 Chingleput	14,39,306	9,09,501	24,38,807	3,90,864	28,29,671
13 Chittoor	1,02,182	8,67,253	9,69,435	2,65,907	12,35,342
14 Arcot, North	41,025	9,30,233	9,71,258	5,15,227	14,86,485
15 Arcot, South	42,863	7,94,902	8,37,765	6,83,640	15,21,405
16 Salem	1,26,807	12,86,162	14,12,969	8,03,166	22,15,725
17 Tanjore, East	1,93,370	6,34,580	8,27,950	5,03,758	13,31,726
18 Tanjore, West	4,405	9,72,271	9,76,676	6,85,795	16,64,471
19 Tiruchirappalli	86,074	11,43,513	12,29,587	4,70,283	16,99,870
20 Mathurai	1,75,620	18,62,630	20,38,250	8,49,436	28,87,686
21 Ramnad	1,91,267	17,21,232	19,12,499	9,28,926	28,41,425
22 Tirunelveli	33,443	13,18,393	13,52,036	8,68,611	22,20,647
23 Coimbatore	1,11,377	18,65,297	19,76,674	10,15,974	29,92,648
24 The Nilgiris	73,090	4,42,076	5,16,075	1,06,156	6,23,131
25 South Kanara	42,804	7,64,856	8,07,660	2,77,330	10,84,990
26 Malabar	20,944	18,07,300	18,28,244	7,37,489	25,65,733
27 Madras City	6,863	Nil.	6,863	..	6,863
Total	33,49,405	2,62,03,053	2,95,52,458	1,51,77,176	4,47,29,634

APPENDIX IV.

(ANNEXURE TO CHAPTER III.)

A.—Review of important works costing less than Rs. 1 lakh each in progress during the year.

Serial number.	Name of division.	Government works.			District board works.		
		Total number.	Total cost.	Expenditure.	Remarks.	Total number.	Total cost.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			RS.	RS.			RS.
1	Visakhapatnam	..	..	..	....	2	1,18,000
			..	..	....		21,455
2	Krishna	..	..	..	....	1	..
3	West Godavari	..	..	..	....	..	..
		1	68,000	8,378	Total expenditure, Rs. 50,331	..	..
4	Anantapur	..	..	..	....	9	74,646
		3	98,100	6,766	Works were in progress	..	..
5	Bellary	..	..	..	....	1	718
		13	48,645	11,306	Total expenditure incurred was Rs. 16,262. Minor bridges under Road Development Fund were in progress. Revised Estimates were pending.	1	..
6	Cuddapah	..	..	..	....	..	..
		2	84,000	6,920	One major work was in progress and the others completed.	..	..
7	Guntur	..	..	..	....	7	2,40,100
		18	71,850	31,194	Fifteen works of the nature of minor culverts were completed. Rest were in progress.	..	..
8	Nellore	..	..	..	....	16	2,35,800
		1	14,200	6,344	The work could not be completed for want of cement and iron which were supplied later.	..	..
9	Kurnool	..	..	..	....	2	1,48,000
		..	..	..		..	..
10	South Arcot	..	..	..	....	18	73,458
		18	67,810	30,639	One work relating to the widening of Railway level-crossing was carried out by South Indian Railway and expenditure advised.	..	..
11	North Arcot	..	..	..	....	..	..
		1	56,000	8,746	Relates to the causeway across Cheyyar in Arni taluk. Body walls and aprons were completed.	..	..

I. Original works on bridges, culverts and causeways.

1	Visakhapatnam	..	..	..	....	2	1,18,000	21,455	The two works in Visakhapatnam. North Division were on culverts on Dusi-Ravolu Road. Tenders were settled and cement indented.
2	Krishna	..	..	..	....	1	..	..	The total expenditure incurred on the work was Rs. 44,572.
3	West Godavari	..	..	..	....	..	..	..	One work was in progress and the rest were completed.
4	Anantapur	..	..	..	....	9	74,646	37,328	The work was completed.
5	Bellary	..	..	..	....	1	718	718	..
6	Cuddapah	..	..	..	....	..	..	..	..
7	Guntur	..	..	..	....	7	2,40,100	16,053	Four were in progress and the rest completed.
8	Nellore	..	..	..	....	16	2,35,800	23,997	All works were in good progress.
9	Kurnool	..	..	..	....	2	1,48,000	..	No expenditure was actually incurred as only high premium tenders were received.
10	South Arcot	..	..	..	....	18	73,458	17,375	Four were completed and the rest were in progress.
11	North Arcot	..	..	..	....	..	..	..	..

12	Chittoor	..	..	..	....	1	4,000	329	Concreting for foundations was completed and further work was in progress.
13	Salem, South	..	..	..	....	..	..	..	..
14	Tanjore, East	..	..	..	....	41	5,000	4,200	All were completed.
		3	57,800	8,183	All the three works were completed	..	..	..	..
		508	2,76,600	2,39,776	All were minor works on causeways, culverts, etc.	..	..	..	..
15	Tanjore, West	..	..	..	....	44	1,08,870	89,400	Most of the works were completed.
16	Tiruchirappalli	..	..	..	....	7	54,700	7,363	These were incomplete works of the previous year. Six were completed.
		35	25,000	24,052	Thirteen works were completed and the rest were in progress. Nineteen works were executed under Public Works Road Development schemes.	..	..	..	..
17	Madurai	..	..	..	....	124	1,37,160	89,843	..
		44	88,365	66,509	Twenty-three were executed under the Post-war Road Development scheme. Nineteen were completed.	..	..	..	..
18	Ramnad	..	..	..	....	39	50,000	41,505	..
		118	1,50,000	1,44,195	One hundred and seven works were included in the Post-war Road Development scheme.	..	..	..	..
19	Tirunelveli	..	..	..	....	1	5,000	4,367	..
20	South Kanara	..	..	..	....	10	66,700	15,038	Seven were executed under the Post-war Road Development scheme and were in progress.
21	Palghat Division	..	..	..	....	..	..	..	..
22	Kozhikode Division	..	..	..	....	5	84,500	1,276	Works executed under Post-war Road Development scheme.
		1	17,000	10,373	Work completed	8	48,500	20,309	These were minor works in progress.
		..	..	..	....	4	21,960	9,737	One was completed and the rest were in progress.
23	Coimbatore South Division	..	..	..	....	..	..	..	..
		1	2,500	2,384	Work completed	..	..	..	..
		1,100	14,49,420	7,50,349	..	340	14,72,112	4,00,293	..
	Total	..	..	..	..	..	..	..	..

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II. Cement concrete or black top surfacing of roads.

1	Nellore	..	..	..		1	7,700	8,532	The estimate was under revision and the work completed.
2	South Arcot	..	..	..	....	2	6,200	4,417	..
3	North Arcot	..	..	..	....	1	55,000	17,448	The work was completed during the year but final bill not paid pending rectification of bad work.
4	Tanjore, West	..	..	..	....	1	9,000	10,396	The estimate was under revision
5	Madurai	..	..	..	....	1	96,900	80,379	The work was nearing completion
		6	1,74,800	1,21,172	..	..	..	..	..
	Total	..	..	..	..	..	..	..	..

III. A. New formations (and original works of metalling of roads).

Serial number.	Name of division.	Government works.			District board works.			Remarks.
		Total number.	Total cost.	Expenditure.	Total number.	Total cost.	Expenditure.	
(1)	(2)	(3)	(4)	(5)	(7)	(8)	(9)	(10)
1 Krishna	..	..	..	21,567	4	68,000	50,949	Total expenditure, Rs. 56,939.
2 Anantapur	..	..	..	60,230	4	77,300	41,198	One work was completed and the rest were in progress.
3 Guntur	..	2	1,32,000	50,900	8	2,06,300	44,155	Three were incomplete works of the previous year and five new works were started under Post-war Road Development.
4 Kurnool	..	..	..	..	5	1,80,100	34,679	One of the works was executed in the department only.
5 Chittoor	..	2	13,800	3,734	2	8,195	708	Alienation proposals were made in respect of one work.
6 South Arcot	..	..	..	..	9	99,506	18,488	One work was completed. The rest were in progress.
7 Tanjore, East.	..	..	..	..	7	18,200	6,178	The works were in progress.
8 Tanjore, West.	..	..	..	..	4	14,120	6,040	Do.
9 Tiruchirappalli	..	..	..	..	6	47,800	15,603	Do.
10 Madurai	..	..	..	..	10	87,725	..	Land acquisition proposals were not finalized and the works could not be pushed through.
11 Ramnad	..	..	..	..	4	71,400	22,362	The works were in progress.
12 Tirunelveli	..	..	..	..	5	..	14,844	Rs. 8,604 was incurred on village roads.
13 South Kanara	..	18	2,51,970	37,583	16	1,80,570	11,669	Excess of the works were executed under village communications and the rest under Post-war Road Development.
14 Kozhikode Division	..	1	7,000	1,661	11	1,25,250	24,848	Five were major works under Post-war Road Development. One work was completed.
Total		25	4,65,000	1,15,445	95	11,84,466	2,91,721	

B. Statement showing the quantities of Cement and Steel utilised on works in the Highways Department during 1947-48.

Cement.—The following quantities of cement were authorized and used on works during 1947-48 :—

	TONS.
Government works	3,765
District Board works	902

Steel.—The following quantities of steel were allotted by the Consulting Engineer to the Government of India during 1947-48 and distributed for use on works in various divisions :—

	TONS.
I and II quarters of 1947	23.95
III quarter of 1947	200
IV quarter of 1947	80
I quarter of 1948	100
Total	403.95

APPENDIX V.

(A) Certain important items of work done in the office of the Chief Engineer (Highways).

Review of civil works, 1947-48.—During the year, 229 (two hundred and twenty-nine) estimates of the aggregate value of Rs. 4,31,96,327 (four crores, thirty-one lakhs, ninety-six thousand, three hundred and twenty-seven) were dealt with in the Technical Section under the following heads :—

(a) Roads	155	Estimates.
(b) Bridge and causeways	58	"
(c) Miscellaneous kinds of estimates	16	"
Total	229	"

Of these the items estimated to cost over one lakh of rupees are noted below :—

(a) Roads.

	Estimate.
	RS.
1 Widening and improving Great Western Trunk road from miles 7/5 to 19/1	10,50,000
2 Formation of a road from Elayangudi to Rajasingamangalam Ramnad district, Road Development Fund Work	11,61,000
3 Improvements to Dornal pass road from miles 54/4 to 69/6, Kurnool district	2,36,000
4 Metalling Tenali-Kollur Donepudi-Vellatur road, Guntur district	1,37,000
5 Relief works—Formation of a road from Belarama to Kotabommale	2,60,000
6 Cement concreting Coimbatore-Mettupalayam road	4,50,000
7 Improvements to Madras-Bangalore road from miles 169/0 to 178/3 surface dressing, Salem district	1,20,000
8 Formation of a road from Vellur to Karivellur 5½ miles in length, Malabar district	2,04,000
9 Special repairs and improvements to Kozhikode-Nilambalur-Gudalur road miles 64/4 to 68/4 (revised estimate)	1,75,000
10 National Highways No. 47, Salem-Cochin road cement concreting from miles 349 to 354	3,52,000
11 National Highways No. 7, Benares-Cape Comorin road surface dressing with pre-coated chips	1,66,600

(a) Roads—cont.

	Estimate. RS.
12 Widening and cement concreting from miles 24/3 to 34/0 of Koderu-Nallagerla road, West Godavari district ..	9,75,000
13 Providing improvements to surface—Beach road, Kozhikode Municipality ..	1,30,000
14 Forming roads and providing cement concrete pavement to the Guntur-Bapatla-Chinnaganjam road from miles 0/0 to 3/6 and 5/0 to 11/2, Guntur district ..	6,82,000
15 Masulipatam-Hyderabad road restoring black top surfacing between miles 0/6 and 34/0 ..	3,91,000
16 Improvements to Sultan's Battery Mysore frontier road and Coimbatore-Mettupalayam road ..	2,71,500
17 Cement concreting Coimbatore-Mettupalayam road from miles 0/3—652 to 2/4 ..	3,63,000
18 Widening metalled width in Periakulam-Kuruvanthi road from miles 0/3 to 41/2, Madura district ..	1,68,000
19 Cement concreting Nellore-Bombay road in miles 2/6 to 13/0 (Budget estimate for 1947-48 Post-war Road Development) ..	4,00,000
20 Special repairs and improvements to the Madras-Calicut road between miles 421—3—400 and 441—6—400 ..	3,73,000
21 Cement concreting miles 178/3 147 to 180/5 86 of Chittoor-Kurnool road ..	2,00,000
22 Improved surfacing to Benares-Cape Comorin road, Mathurai district ..	1,95,000
23 National Highways Black topping Benares-Cape Comorin road, Kurnool section ..	3,25,000
24 Coimbatore-Mettupalayam road—Cement concreting miles 2/4 to 9/0 ..	7,35,000
25 Formation of new roads Minimalur ghat road from Padiru to Madugola-Visakhapatnam agency ..	15,20,000
26 Cement concreting Madras-Calcutta road (Great Northern Trunk) miles 247/0 to 267/0, Guntur district ..	9,75,000
27 Cement concreting Coimbatore-Mettupalayam road miles 16/0 to 22/5 440 ..	3,78,000
28 Improvements to Theppakkadu-Madinangudi road, Nilgiris district ..	2,54,000
29 Black topping the road in built up areas of National Highways No. 47, Salem-Cochin road, Malabar section ..	1,74,000
30 Cement concreting miles 7/0 to 13/0 of Nellore-Bombay road ..	2,50,000
31 Improvements to Great Northern Trunk road miles 479/0 to 488/3 ..	3,59,000
32 Metalling Bapatla-Pedanandipadu road miles 12/0 to 18/1 ..	2,60,000
33 Widening roads to standard widths in Cuddapah district ..	1,12,850
34 Metalling Repalle-Nizampatam road miles 5/0 to 15/0, Guntur district ..	4,26,000
35 Metalling Chintapalligudam road miles 33/3—270 to 41/6 (revised estimate) ..	1,96,000
36 Improvements of roads in Palni-Shoranur area for military importance ..	3,64,073
37 National Highways—Widening the roads to standard width Madras-Calcutta road, Nellore district ..	1,17,950
38 National Highways—Salem-Cochin road—Black topping appropriate reaches providing 2" shelerete miles 267 to 323/0 Madras-Kozikhode road ..	2,77,000
39 Famine relief works—Formation of roads—(1) Haviti to Nelavanka, Visakhapatnam district ..	6,40,500

(a) Roads—cont.

	Estimate. RS.
40 Constructing an undervented dam across Ponnai river at miles 14/2 of Chittoor-Tiruttani road (Part II Schemes of 1948, 1949 proposal) ..	1,75,000
41 Cement concreting miles 22/0 to 26/6 of K.N.F. road, West Godavari district ..	1,60,000
42 Cement concreting Tirumashi-Sathiavedu road miles 27/7 to 29/4 (revised estimate), Chingleput district ..	1,26,000
43 Cement concreting Cuddalore-Chittoor road miles 2/2 to 5/2, South Arcot district ..	3,43,250
44 National Highways No. 5, Madras-Calcutta road miles 110/0 to 112/0 cement concreting, Nellore district ..	2,13,000
45 Improvements to Anantagiri-Araku road, Visakhapatnam district ..	15,10,000
46 Great Northern Trunk road miles 479/0 to 483/3 providing cement concrete surfacing ..	3,59,400
47 Cement concreting Tiruchirappalli-Coimbatore road miles 120/0 to 124/5, Coimbatore district ..	8,64,000
48 Metalling Guntur-Macherla-Nagarjunakonda road, Guntur district ..	2,47,000
49 Metalling road from Pedavadlapudi to Pedopoliar crossing over Nathaki-Ramachandrapuram and Viralapuram, Guntur district ..	1,70,000
50 Improvements to the road leading from Tirupalavanam to Pulicut miles 9/6 to 12/0, Chingleput district ..	4,00,000
51 Metalling the road from miles 4/4 of Repalli-Nizampatam road to Adavuladin (via) Valipalam-Mantrapalam and Gollapalam, Guntur district ..	2,60,000
52 Cement concreting Anakapalli-Madugole road (Part II Schemes for 1948-49) ..	4,50,000
53 Metalling the road from miles 11/4 of Tenali-Kolur road to Guntur-Repalli road and Batprole (via) Tadigiri-Padar and Penamairn (Grant-in-aid work 1947-48) ..	2,14,000
54 Metalling Repalli-Thummala road from miles 0/0 to 5/0, Guntur district ..	1,85,000

(b) Bridges and culverts.

1 Constructing a bridge across Payaswami river at Tekhil miles 52/8 to Kalalakka-Konhangad road, South Kanara district ..	5,00,000
2 Constructing a high-level bridge across Champavathi river near Nathavalasi at miles 520/3-6 at Madras-Calicut road, Visakhapatnam district ..	9,00,000
3 Constructing a bridge across Palar at miles 38/58, Madras-Dindigul road—National Highways No. 45, Chingleput district ..	12,00,000
4 Reconstructing the damaged portions of the Girder Bridge across the Swarnamukhi river at Kalahasthi in miles 54/2-4 of Puthalpet-Naidupet road, Chittoor district ..	1,82,000
5 Construction of a bridge at Kalvapalli across Pennar in miles 18/8 of Anantapur-Kalyandrug road ..	1,76,000
6 Construction of a bridge at miles 34/1-2 of Kanigiri-Badvel road (Major District road) ..	1,45,000
7 Constructing a causeway in miles 13/7-8 of Rajampet-Kadri road (Major District road) ..	1,45,000

(b) Bridges and culverts—cont.

	Estimate. RS.
8 Construction of a bridge across Coleroon at Anaikaranchatram in Chidambaram-Shiyali road	30,30,000
9 Constructing a bridge at Pambal river in miles 2/5 Villupuram-Gingee road	1,10,000
10 Construction of a causeway across the Pennar at miles 10/4 to 11/2 of Mudanur-Jammalamadugu road, Cuddapah district. (Road Development Fund Work)	1,18,000
11 Constructing a bridge across Gowthami river in miles 6/3-5, Visakhapatnam district	2,70,000
12 Constructing a bridge across Nandiar river at miles 18/4-5—Tiruchirappalli-Chidambaram road	1,92,000
13 Constructing a bridge across Coleroon river on Perambalur-Manamadura road, Tanjore district	28,00,000
14 Reconstructing the bridge across Tondiar river at miles 31/2 of Tindivanam-Gingee road, South Arcot district	1,30,000
15 Constructing a causeway across Agniar river in miles 6/4-5 of Pattukkottai-Aranthangi road, Tanjore district	2,50,000
16 Reconstructing a bridge at Thalavasal in miles 41/7-8 of Salem-Cuddalore road	1,70,000
17 Constructing a bridge across Kadavanan river at miles 6/2 of Dindigul-Aravakurichi road, Mathurai district	1,26,000
18 Constructing a bridge across Tirur river at miles 26/4-8 Peramba-Tirur road, Malabar district	1,32,000
19 Constructing a bridge in miles 7/1 of Ramnad-Kilakarai road, Ramnad district	1,75,000
20 Reconstructing the bridge across Sankarapurani river in miles 37/8 of Tindivanam-Gingee-Tiruvannamalai road, South Arcot district	1,75,000
21 Constructing a bridge in miles 7/1-2 of Koilkuntla-Nasam road, Kurnool district	1,50,000
22 Reconstructing the bridge across Solaser river in miles 45/5 of Tirunelveli-Senkaranninar Kovil road, Tirunelveli district	1,31,000
23 Construction of a bridge across the river Boggeru at miles 36/6 of Nellore-Bombay road, Nellore district	2,20,000
24 Constructing a bridge across Bahuda river in miles 49/7 to 50/1 of Chittoor-Kurnool road, Chittoor district	1,56,700
25 Construction of a bridge across the Cauvery river at Pugalur National Highway No. 7	19,78,000
26 Constructing a bridge across the Bharadapuzha river at miles 18/2 of Angadipuram-Kutilipuram, Cochin Frontier road, Malabar district	11,35,000
27 Constructing a causeway across Hagari river at miles 32/2 of Bellari-Kalyandrug road, Bellary district	1,19,000
28 Constructing a bridge across Manimuthar river at miles 6/1 of Manugiri-Kallal road, Road Development Fund Work, Ramnad district	1,10,000
29 Strengthening the bridges and culverts and provision of diversions to bridges in Palni-Shoranur area	9,85,900
30 Constructing a causeway in miles 15/8 of Bellary-Kalyandrug road, Bellary district	1,60,000
31 Constructing a bridge across Pennar at miles 104/45 of Madras-Dindigul road	15,80,000
32 Strengthening and widening the bridge at miles 66/4 of Madras-Kozhikode road	1,98,000

The approximate number of other miscellaneous references including tenders and agreements, etc., dealt with in Technical section for the year 1947-48 apart from the estimates specified above is 2,569 against 2,160 in the previous year.

Out of these, 141 tender proposals to a cost of Rs. 33,97,000 were approved by Chief Engineer (Highways) and 130 recommended to Government for approval in 1947-48 as against 42 and 22 respectively during 1946-47.

In the other branches of the Chief Engineer's Office, 48,743 references were dealt with during the year 1947-48 as against 40,949 in 1946-47.

Representations regarding Post-war Road Development Schemes.—In the year 1947-48, 730 (seven hundred and thirty) representations were received from several public bodies, associations and individuals in connection with the schemes under Post-war Road Development. The number of such cases for 1946-47, were approximately 200 (two hundred only). These representations were scrutinized in detail and the suggestions were incorporated in the programme wherever possible and replies were sent to the parties concerned wherever necessary.

Representations for loans and grants (Local Bodies).—The number of applications for grants from Local Bodies dealt with in the year 1947-48 is shown below with comparative figures for 1946-47 :—

Serial number.	Local bodies.	Number of works.		Amount.	
		1946-47.	1947-48.	1946-47.	1947-48.
				RS.	RS.
				LAKHS.	LAKHS.
1	District boards	79	746	21.44	126.29
2	Municipal Councils	65	77		
3	Panchayat boards	..	1		

(B) Work done in the offices of the Superintending Engineers and Divisional Engineers.

(i) The details of the number of estimates sanctioned and their cost for Government, District Board and Panchayat Board works are given below :—

Works.	Number of estimates. 1947-48.	Cost, 1947-48.	Remarks.
	RS.	RS.	
A. GOVERNMENT WORKS—			
(1) Original Works—			
(i) Road Development works	15	9,92,535	
(ii) Works other than Post-war Road Development Works	275	19,59,700	
(iii) Post-war Road Development Works	558	30,91,920	
Total (1)	848	60,44,185	
(2) Repairs—			
(i) Works other than Post-war Road Development Works	5,855	4,27,66,191	
(ii) Post-war Road Development Works	639	31,73,503	
Total (2)	6,494	4,59,39,694	
(3) Avenues	197	1,58,670	
(4) Tools and Plant new supplies	41	1,31,21,075	
(5) Tools and Plant Repairs	680	28,43,052	
Total, A	8,260	6,81,06,676	The corresponding figures for the year 1946-47 are 5,436, estimates to the value of Rs. 5,29,55,624 only.

Works.	Number of estimates, 1947-48. RS.	Cost, 1947-48. RS.	Remarks.
B. DISTRICT BOARD WORKS—			
(1) Original works	1,733	1,04,07,895	
(2) Repairs	10,552	1,56,10,511	
Total (B)	12,285	2,60,27,406	
C. PANCHAYAT WORKS			
	392	8,14,272	
Grand total A + B + C.	20,937	9,49,48,354	

Details are given in Statements 1 to 3.

(ii) *Agreements*.—Seven thousand, three hundred and thirty-three (7,333) agreements to a cost of Rs. 2,93,11,015 were checked and approved in the offices of the Superintending Engineers and Divisional Engineers. Details are given in Statement 4.

(iii) *Tenders*.—Eight thousand, one hundred and seven (8,107) tenders were checked and accepted and 344 (three hundred and forty-four) were scrutinized and sent up to Chief Engineer for approval. Details are given in Statement 5.

The corresponding figures for the year 1946-47 are 11,566, estimates to the value of Rs. 1,97,67,355 only.

The corresponding grand total for the year 1946-47 is 17,002, estimates to the value of Rs. 7,27,15,979.

STATEMENT 1.—Statement showing the number and amounts of estimates sanctioned in the offices of the Superintending Engineers and Divisional Engineers (Divisionwar) during 1947-48, for Government works.

Division.	Road Development Fund works.						Works other than the Post-war Road Development works.					
	Major.			Minor.			Major.			Minor.		
	Number.	Amount.	RS.	Number.	Amount.	RS.	Number.	Amount.	RS.	Number.	Amount.	RS.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
I Circle.												
Visakhapatnam, North	..	..	..	..	..	..	..	..	..	..	..	..
Vizagapatnam, South	..	..	..	..	..	..	..	..	..	..	..	..
Agency Division	1	1,29,000	..	..	..	..	..	..	..	..	..	..
East Godavari	..	..	..	..	..	..	..	..	..	..	..	..
West Godavari	1	8,800	..	..	..	..	..	..	..	..	..	..
Krishna	2	5,27,500	..	..	..	..	..	..	..	..	..	..
II Circle.												
Bellary	..	..	..	..	..	..	..	..	..	..	..	..
Cuddapah	..	..	..	..	..	..	..	..	..	..	..	..
Kurnool	..	..	..	..	..	..	..	..	..	..	..	..
Anantapur	..	..	..	..	..	..	..	..	..	..	..	..
Nunur	1	39,500	..	..	..	..	..	..	..	..	..	..
Nellore	1	4,900	..	..	..	..	..	..	..	..	..	..
III Circle.												
Chittoor	..	..	..	..	..	..	..	..	..	..	..	..
Chingleput	1	13,100	..	..	..	..	..	..	..	..	..	..
North Arcot	..	..	..	..	..	..	..	..	..	..	..	..
South Arcot	..	..	..	..	..	..	..	..	..	..	..	..
Salem, North	..	..	..	..	..	..	..	..	..	..	..	..
Salem, South	..	..	..	..	..	..	..	..	..	..	..	..
Transport and Machinery Division.	3	1,16,700	..	..	..	..	..	..	..	..	..	..
IV Circle.												
Tiruchirappalli	..	..	..	..	..	..	..	..	..	..	..	..
Tirunelveli	..	..	..	..	..	..	..	..	..	..	..	..
Tanjore, East	..	..	..	..	..	..	..	..	..	..	..	..
Tanjore, West	..	..	..	..	..	..	..	..	..	..	..	..
Ramnad	..	..	..	..	..	..	..	..	..	..	..	..
Madurai	..	..	..	..	..	..	..	..	..	..	..	..
V Circle.												
Coimbatore, North	..	..	..	..	..	..	..	..	..	..	..	..
Coimbatore, South	..	..	..	..	..	..	..	..	..	..	..	..
Nagpur	..	..	..	..	..	..	..	..	..	..	..	..
South Kanara	5	1,53,065	..	..	..	..	..	..	..	..	..	..
Malabar, North	..	..	..	..	..	..	..	..	..	..	..	..
Malabar, South	..	..	..	..	..	..	..	..	..	..	..	..
Special Division, Coimbatore	..	..	..	..	..	..	..	..	..	..	..	..
	15	9,92,565	..	..	..	..	201	5,10,140	5,855	4,27,66,191	197	1,58,670

STATEMENT 1.—Statement showing the number and amounts of estimates sanctioned in the offices of the Superintending Engineers and Divisional Engineers (Division war) during 1947-48, for Government works.

Division.	Post-war Road Development Works.										Tools and plant.	Total number.	Total cost.			
	Major.			Minor.			Repairs.			New supplies.				Maintenance.		
	Number.		Amount. RS.	Number.		Amount. RS.	Number.		Amount. RS.			Number.			Amount. RS.	
	(14)	(15)		(16)	(17)		(18)	(19)		(20)	(21)	(22)	(23)			
			RS.			RS.			RS.			RS.		RS.	(24)	(25)
<i>I Circle.</i>																
Visakhapatnam, North	2	28,700		4,200	4	20,000		1	700	15	15,000	204	10,37,900			
Visakhapatnam, South	..	..		43,000	2	5,000		..	..	14	..	123	11,55,890			
Agency Division	..	..		..	..	..		..	..	..	..	133	8,41,640			
East Godavari	6	1,13,900		30,000	6	10,000		..	..	13	69,050	208	20,90,650			
West Godavari	..	..		46,000	..	..		..	..	10	5,000	91	10,65,800			
Krishna	3	84,020		47,620	10	1,60,000		2	840	17	89,550	213	31,20,420			
<i>II Circle.</i>																
Bellary	3	46,500		53,540	21	1,77,230		1	4,400	9	43,115	195	9,44,440			
Cuddapah	..	..		51,250	16	77,350		4	5,725	5	34,000	143	9,12,482			
Kurnool	1	19,500		8,400	..	..		..	5,500	10	67,500	125	11,95,745			
Anantapur	3	52,700		1,32,250	51	2,52,350		2	..	8	43,810	245	22,70,115			
Guntur	..	48,400		1,28,900	19	4,10,500		..	..	29	1,46,000	265	25,87,787			
Nellore	3	1,01,500		41,430	14	1,13,710		1	100	20	1,20,205	231	17,48,929			
<i>III Circle.</i>																
Chittoor	..	..		..	28	1,50,955		1	100	16	1,03,000	240	17,60,744			
Chingleput	..	98,000		9,700	17	2,09,540		..	..	12	81,000	153	15,13,830			
North Arcot	..	..		..	18	80,340		2	660	16	66,280	319	21,18,963			
South Arcot	2	84,000		51,500	14	1,02,100		3	8,150	19	71,400	285	21,86,225			
Salem, South	..	..		11,700	23	1,22,775		..	..	19	67,000	164	12,09,520			
Salem, North	1	60,000		50,000	16	1,25,000		1	220	10	58,800	192	14,46,400			
Transport and Machinery Division	..	..		..	..	..		4	1,30,84,310	300	11,33,888	304	1,42,18,698			
<i>IV Circle.</i>																
Tiruchirappalli	1	12,500		89,535	15	1,07,930		3	800	3	1,210	477	35,15,860			
Tirunelveli	17	1,34,510		22,280	23	80,745		..	..	3	1,950	306	11,29,310			
Tanjore, East	..	1,73,550		..	288	2,32,030		1	5,000	7	12,900	490	7,06,990			
Tanjore, West	1	12,000		2,11,915	5	1,01,900		1	100	2	620	623	16,11,150			
Ramnad	..	2,03,280		2,66,190	22	2,61,100		..	..	18	1,05,820	504	48,85,700			
Mathurai	4	1,99,100		60,180	6	44,700		4	1,000	24	1,40,900	339	41,58,226			
<i>V Circle.</i>																
Coimbatore, North	..	..		..	1	1,440		1	500	11	1,720	214	22,36,039			
Coimbatore, South	..	..		..	..	1,65,885		1	500	34	1,34,665	198	23,66,829			
Nilgiris	..	..		..	11	97,653		2	230	10	56,176	77	8,50,491			
South Kanara	7	2,11,290		..	6	..		2	500	24	1,48,938	151	16,23,345			
Malabar, North	..	36,880		..	..	..		1	500	8	3,026	127	13,48,253			
Malabar, South	4	..		7,000	3	63,265		1	700	2	1,000	180	2,37,455			
Special Division Coimbatore	..	..		..	..	..		..	..	1	150	5	10,800			
Total	73	17,25,330	485	13,66,590	639	31,73,503	41	1,31,21,075	680	28,43,052	8,260	6,31,06,676				

STATEMENT 2.—Statement showing the total number of estimates sanctioned and their cost for District Board works, 1947-48.

Serial number.	District.	Original works.		Repairs.		Total number.	Total cost.
		Number.	Cost.	Number.	Cost.		
1	Visakhapatnam, North.	77	RS. 4,58,575	258	RS. 2,48,545	335	RS. 7,07,120
2	Visakhapatnam, South.	84	3,58,867	302	3,92,503	386	7,51,370
3	East Godavari	47	2,02,910	880	6,68,833	927	8,71,743
4	West Godavari	63	1,07,000	354	4,17,750	417	5,24,750
5	Krishna	115	7,22,935	527	4,45,435	642	11,68,370
6	Bellary	13	1,26,750	183	2,97,847	196	4,24,597
7	Cuddapah	15	1,63,300	223	5,77,325	238	7,40,625
8	Kurnool	26	4,50,420	151	7,12,230	177	11,62,650
9	Anantapur	2	8,920	41	1,12,170	43	1,21,090
10	Guntur	56	30,14,600	425	8,41,320	481	38,55,920
11	Nellore	336	5,06,600	91	36,152	427	5,42,752
12	Chittoor	65	3,27,158	369	4,35,820	434	7,62,978
13	Chingleput	11	99,950	294	3,10,000	305	4,09,950
14	North Arcot	39	2,38,760	287	4,42,091	326	6,80,851
15	South Arcot	35	48,130	723	5,85,733	758	6,33,863
16	Salem	37	3,70,900	605	9,47,390	642	13,18,290
17	Tiruchirapalli	64	2,83,520	347	4,38,705	411	7,22,225
18	Tirunelveli	86	2,15,000	216	8,48,000	302	10,63,000
19	Tanjore, East	58	3,24,285	615	3,21,000	673	6,45,285
20	Tanjore, West	124	7,20,840	880	3,72,310	1,004	10,93,150
21	Ramnad	37	3,47,260	689	24,15,713	726	27,62,973
22	Mathurai	149	3,58,909	283	9,14,815	432	12,73,724
23	Coimbatore	94	2,92,456	915	16,15,589	1,009	19,08,045
24	Nilgiris	19	35,850	176	1,44,325	195	1,80,175
25	South Kanara	45	2,77,000	291	5,32,000	336	8,09,000
26	Malabar	36	3,47,000	427	5,45,910	463	8,92,910
	Total	1,733	1,04,07,895	10,552	1,56,19,511	12,285	2,60,27,406

STATEMENT 3.—Statement showing the number and cost of estimates scrutinized for panchayat works in the offices of Superintending Engineers and Divisional Engineers, 1947-48.

Serial number and name of division.	Total number of estimates.	Total cost.
		RS.
1 Visakhapatnam North Division	21	25,160
2 Visakhapatnam South Division	21	30,300
3 East Godavari	6	12,500
4 West Godavari	15	18,400
5 Krishna	29	34,000
6 Guntur	47	2,04,260
7 Bellary	13	30,920
8 Anantapur	16	43,910
9 Kurnool	9	13,200
10 Cuddapah	11	14,400
11 Nellore	6	9,670
12 Chittoor	20	18,195
13 Chingleput	4	26,160
14 Salem, South	6	8,460
15 Salem, North	12	8,50
16 North Arcot	29	54,951
17 South Arcot	13	26,973
18 Tanjore, East	7	12,83
19 Tanjore, West	24	43,150
20 Tiruchirappalli	9	27,650
21 Mathurai	9	36,373
22 Ramnad	4	5,800
23 Tirunelveli	10	20,820
24 Coimbatore, South	24	7,395
25 Coimbatore, North	6	9,360
26 Nilgiris	6	11,315
27 Palghat Division	..	..
28 Kozhikode Division	..	..
29 South Kanara Division	15	49,970
Total	392	8,14,272

STATEMENT 4.—Statement showing the number of agreements and their amount checked and approved in the offices of Superintending Engineers and Divisional Engineers.

Name of division.	Number of agreements.	Amount. RS.
<i>I Circle.</i>		
Visakhapatnam, North	430	9,24,036
Visakhapatnam, South	368	16,35,150
Agency Division	87	5,72,120
East Godavari	448	19,91,400
West Godavari	250	13,40,000
Krishna	158	21,44,010
<i>II Circle.</i>		
Bellary	188	7,20,884
Guntur	153	15,74,189
Nellore	429	8,55,835
Cuddapah	72	4,16,531
Kurnool	238	6,32,092
Anantapur	185	12,98,648
<i>III Circle.</i>		
Chittoor	373	10,98,669
Chingleput	211	6,48,963
North Arcot	441	12,13,865
South Arcot	441	12,10,491
Salem, South	140	5,58,392
Salem, North	338	13,63,216
<i>IV Circle.</i>		
Tanjore, East	280	4,41,400
Tanjore, West	552	10,23,637
Tiruchirapalli	555	12,65,174
Mathurai	344	12,15,555
Ramnad	115	14,61,820
Tirunelveli	457	18,97,584
<i>V Circle.</i>		
Coimbatore North	5	18,07,354
Coimbatore, South	24	
South Kanara	3	
Nilgiris	6	
Kozhikode	11	
Palghat	29	
Coimbatore Special	2	
Total	7,333	2,93,11,015

STATEMENT 5.—Showing the number of tenders (a) checked and approved in the offices of the Superintending Engineers and Divisional Engineers and (b) sent up to the Chief Engineer (Highways) for approval.

to the Chief Engineer (Highways) for approval.							Number checked and approved.	Number sent up to Chief Engineer for approval.	Total.
I Circle.									
Visakhapatnam, North	..	..	..	..	..	378	..	378	
Visakhapatnam, South	..	..	..	..	..	296	..	296	
Agency Division	..	..	..	..	..	135	..	135	
East Godavari	..	..	..	..	..	575	..	575	
West Godavari	..	..	..	..	..	269	..	269	
Krishna	..	..	..	..	..	145	1	146	
II Circle.									
Bellary	..	..	..	..	..	57	38	1421	
Guntur	..	..	..	..	..	111			
Nellore	..	..	..	..	..	357			
Cuddapah	..	..	..	..	..	373			
Kurnool	..	..	..	..	..	223			
Anantapur	..	..	..	..	..	262			
III Circle.									
Chittoor	..	..	..	..	..	280	35	315	
Chingleput	..	..	..	..	..	240	..	240	
North Arcot	..	..	..	..	..	337	19	356	
South Arcot	..	..	..	..	..	354	193	547	
Salem, South	..	..	..	..	..	216	28	244	
Salem, North	..	..	..	..	..	645	22	667	
Special Conphalt Division	..	..	..	..	..	..	2	2	
IV Circle.									
Tanjore, East	..	..	..	..	..	140	..	140	
Tanjore, West	..	..	..	..	..	65	..	65	
Tiruchirapalli	..	..	..	..	..	610	..	610	
Mathurai	..	..	..	..	..	470	5	475	
Ramnad	..	..	..	..	..	114	..	114	
Tirunelveli	..	..	..	..	..	341	1	342	
V Circle.									
Coimbatore, South	..	..	..	..	..	251	..	251	
Coimbatore, North	..	..	..	..	..	246	..	246	
South Kanara	..	..	..	..	..	230	..	230	
Nilgiris	..	..	..	..	..	29	..	29	
Kozhikode	..	..	..	..	..	185	..	185	
Palghat	..	..	..	..	..	170	..	170	
Special Division, Coimbatore	..	..	..	..	..	3	..	3	
Total						8,107	344	8,451	

STATEMENT 6.—List of sanctioned bridge estimates in 1947-48, Office of the Superintending Engineer (Bridges), Government Roads.

Serial number.	C.R. number.	Name of work.	Sanctioned amount. RS.
1	2	Reconstructing Sirur bridge 79/7 Coast Road, North (South Kanara district).	55,000
2	2A	Bridge across Morayur 84/4 Salem-Pondicherry Road, North Arcot district.	34,000
3	3	Bridge across Kushavati 3 Kodikonda-Amarapuram Road, Anantapur district.	43,500
4	5	Causeway across Pullhalat 9/8 of Dharmapuri-Thirupattur Road, Salem district.	25,200
5	6	Causeway across Jagadevi river 24/7 Dharmapuri-Thirupattur Road, Salem district.	11,500
6	7	Bridge at 2/4 of Vittal-Kabaca Road, South Kanara district ..	38,500
5			

Serial number.	C.R. number.	Name of work.	Sanctioned amount.
			RS.
7	8	Bridge across Beerapera at 23/6-7 of Nellore-Bombay road, Nellore district.	64,500
8	9	Bridge at 24/7 of Katpadi-Venkatagiri, Kota road, North Arcot district.	24,500
9	10	Bridge at 20/6 of Chittoor-Kurnool Road, Chittoor district ..	30,200
10	11	Causeway across Hanuman theertham 47/5-6 of Salem-Tiruppattur road, Salem district.	60,000
11	12	Bridge across Kutticole at 5/8 of Baliapatam-Taliparamba road, Malabar district.	98,500
12	13	Bridge across Matlai stream at 55/1 of coast road, South Kanara district.	30,000
Total ..			5,15,400

STATEMENT 7.—List of sanctioned bridge estimates in 1947-48, Office of the Superintending Engineer, Bridges.

District Board Roads.

			RS.
1	1A	Constructing a vented causeway across Kolichal stream 18/5 Hosdruv-Panathad road, South Kanara.	11,100
2	1	Bridge across Repalli main drain at 23/8 of Kuchipudi-Pooravalli road.	55,700
3	2	Bridge across Samalcota Canal near Indrepalayam (East Godavari district.	23,700
4	3	Bridge across Kak'nada Canal at 23/1 near Aratlakatta, East Godavari.	27,400
5	4	Bridge across Karadikudi at 11/1 Abdullapuram-Pakkam road, North Arcot d strict.	34,500
6	10	Bridge across Nambiyar at 4/8 Nanguneri-Thirukarangudi road, Tirunelveli d strict.	65,500
7	12	Bridge across Nallavagu 31/4 of Poapalli-Aspari road, Kurnool district.	66,000
8	13	Bridge at 27/2 of Poapalli-Gooty-Pattikonda-Adoni road, Kurnool district.	82,000
9	14	Bridge across Poapalli main drain 9/2 of Repalli-Pitlavaripalayam road, Guntur d strict.	86,000
10	15	Bridge across Ethapur 8/1 of Ethapur-Thumbal road, Salem district.	73,000
11	16	Causeway at 4/8 Katchapuram-Manchala road, Bellary d strict ..	52,500
12	17	Undervented road dam Budameru, 2/1 Indrapalli Talaprole road, Krishna district.	73,000
13	18	Bridge across Krishna Western Canal Pedavadlapudi at 3/8 Mangalagiri-Nautekki road, Guntur district.	84,000
14	19	Submersible Bridge Kattavai at 1/3 of Tannirapalli-Peroli road, Tiruchirappalli district.	23,000
15	20	Bridge at 4/1 of Kuppagal-Hatcholi road, Bellary district ..	89,500
16	21	Causeway at 42/67 Cuddapah Trunk road, via Arkonam-Renigunta, Chittoor district.	20,000
17	22	Bridge across Nizampatam Canal 39/6 of Vallathur-Bapatla road, Guntur district.	57,000
18	23	Submersible Bridge across Ponnivari, 1/6 of Nungavaram-Needalur road, Tiruchirappalli district.	30,000
19	24	Bridge across Pulagampalli 8/2-3 of Kadiri-Palasamudram road, Anantapur district.	62,500
20	25	Bridge across Kattuvai at 8/7 of Thimmachipuram-Veeravalli road, Tiruchirappalli district.	70,000
21	26	Causeway across Pennar river at 13/5-6 of Penukonda-Madakasera road, Anantapur d strict.	93,500
22	27	Causeway across Ponnar at 4/1 of Krishnagiri-Royakotta road, Salem district.	98,000

Total .. 12,83,900

Government roads as per statement (6) .. 5,15,400

Grand total for 1947-48 .. 17,99,300

APPENDIX VI

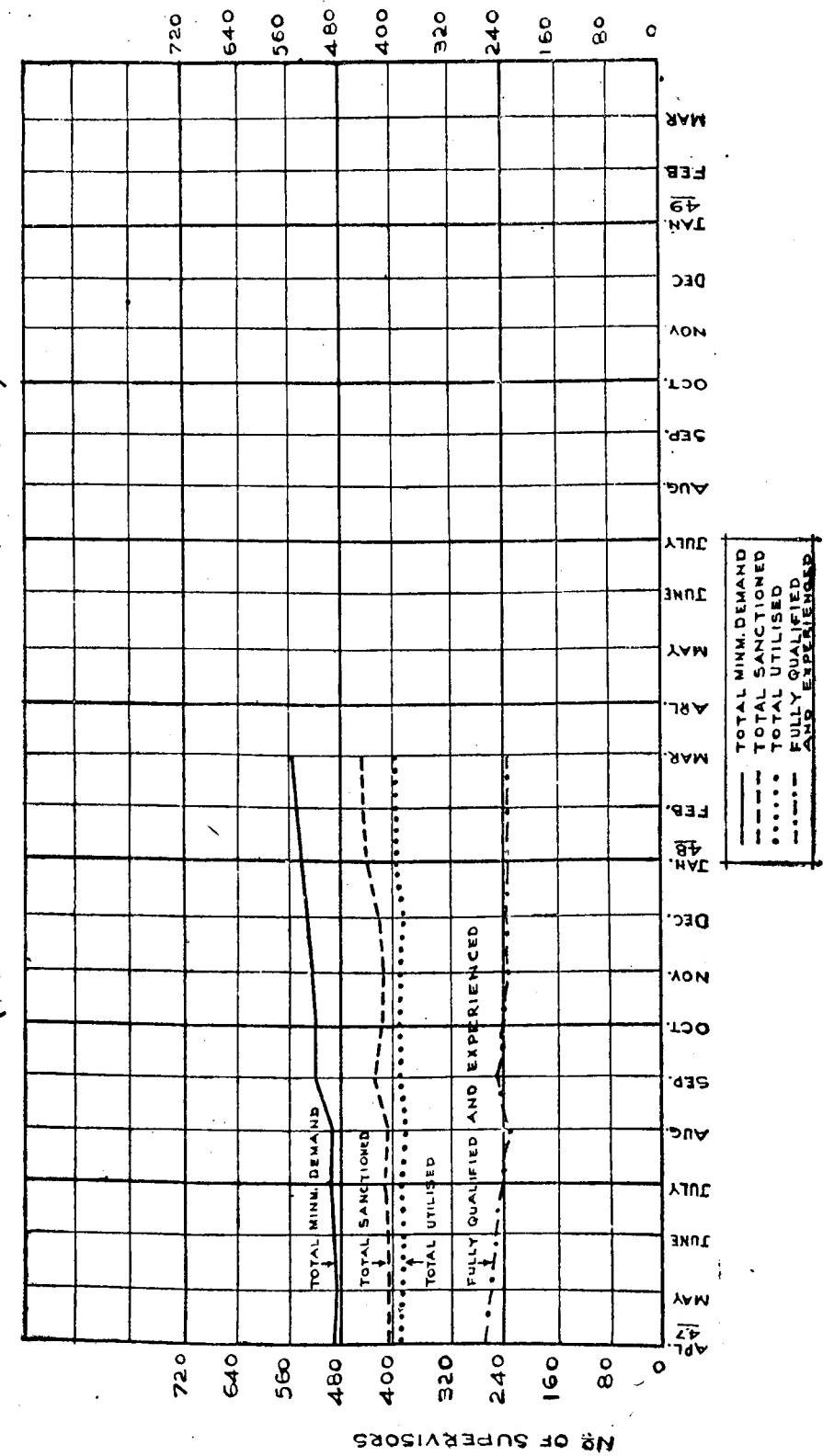
(1) Statement showing the staff position (Supervisors) at the end of each month from 1st April 1947 to 31st March 1948.

APPENDIX VI.

(1) Statement showing the staff position (Supervisors) at the end of each month from 1st April 1947 to 31st March 1948.

Details.	April 1947.	May 1947.	June 1947.	July 1947.	August 1947	September 1947.	October 1947.	November 1947.	December 1947.	January 1948.	February 1948.
1 Total number required	497	497	491	512	505	541	537	536	535	538	548
2 Number of Supervisors sanctioned up to the end of the month.	400	400	394	415	408	444	440	430	438	441	451
3 Number of Supervisors actually working.	377	372	364	368	351	370	385	384	380	389	396
4 Out of the above—											
(a) Number of qualified men with sufficient experience.	278	270	245	240	225	243	242	235	228	233	230
(b) Number of retired men re-employed and unqualified men exempted to hold the posts of Supervisors, or Overseers against the sanctioned strength of Supervisors and those with less than two years' service.	99	102	119	128	126	136	143	149	152	156	166

GRAPH SHOWING THE STRENGTH OF SUPERVISORS IN THE HIGHWAYS DEPARTMENT
(AND HOW FAR IT IS SHORT OF REQUIREMENTS) APPENDIX VI 2



(3) Statement showing the percentage cost of establishment to expenditure on works.

Year.	Expenditure on the works.*	Cost of establishment.	Percentage.
	RS.	RS.	
1944-45	2,01,07,014	24,92,249	12.4
1945-46	2,67,89,201	27,54,573	10.3
1946-47	3,51,71,279	36,10,492	10.3
1947-48	4,76,92,549	46,50,373	9.8

* This includes expenditure on Tools and plant.

APPENDIX VII.

STATEMENT 1.—Showing the Ferries in charge of the Highways Department as on 31st March 1948.

Public ferries.	Local boards to which those ferries were previously assigned for management.
I CIRCLE.	
(1) Visakhapatnam.	
1 Sankili	District Board, Visakhapatnam.
2 Calingapatnam	District Board, Visakhapatnam (originally District Board, Gingee).
3 Nivagam	Do. do.
(2) East Godavari.	
1 Kotipalli	East Godavari District Board.
2 Bodasakurru	Do.
3 Yedurulanka	Do.
4 Kapileswarapuram	Do.
5 Bobberlanka (Rajahmundry tream ferry).	Do.
6 Bobberlanka (Dowlaishwaram) ..	Do.
7 Bobberlanka (Vizzaswaram) ..	Do.
(3) West Godavari.	
1 Prakkilanka	West Godavari District Board.
2 Madhavaipalam	Do.
3 Doddipatla	Do.
4 Koderu	Do.
(4) Krishna.	
1 Someswaram	Krishna District Board.
2 Iylur	Do.
3 Lingala	Do.
II CIRCLE.	
(5) Guntur.	
1 Pondugula	District Board, Guntur.
2 Dharanikota	Do.
3 Kollururevu	Do.
(6) Nellore.	
1 Mypaud Basin	District Board, Nellore.
2 New Ferry across Pennar. (G.O. No. 2050, dated 5th June 1948.)	

Public ferries.

Local boards to which those ferries were previously assigned for management.

II CIRCLE—cont.

(7) Cuddapah.

1 Ferry near Chennur	District Board, Cuddapah.
2 Ferry near Proddatur and Petla-durthi lankas.	Do.
3 Ferry near Jammalamadugu ..	Do.

(8) Bellary.

1 Madhavaram	Taluk Board, Adoni.
2 Manohala	Do.

III CIRCLE.

(9) Salem.

1 Hanumatheertam	Salem District Board.
2 Irumathur	Do.

IV CIRCLE.

(10) Tanjore.

1 Gopalasamudram	Tanjore District Board.
2 Sundaraperumalkoil	Do.
3 Parithikudi	Do.
4 Elangudi	Do.
5 Engam	Do.

(11) Ramnad.

1 Kottagudy	Ramnad District Board.
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(12) Tirunelveli.

1 Vi'athukulam	Tirunelveli District Board.
------------------------	-----------------------------

(13) Tiruchirapalli.

1 Velur-Pugalur	District Board, Tiruchirappalli.
2 Manapalli-Nanniyu	Do.
3 Kam naickenpalayam (Pettava-thalai Ayyampalam).	Do.
4 Thurumalavadi-Va thinathampatti ferry.	
5 Th'rumanur-Vi'angudi ferry.	
6 Kulittalai-Musiri ferry (G.O. No. 1633, P.W., dated 6th June 1947).	

V CIRCLE.

(14) South Kanara.

1 Bolar	South Kanara District Board.
2 Chanmagiri	Do.
3 Shire	Do.
4 Karingot	Do.
5 Chittari	Do.
6 Mogral	Do.
7 Manipura	Do.
8 Uppala	Do.
9 Belral	Do.

Public ferries.

Local boards to which those ferries were
previously assigned for management.

V CIRCLE—cont.

(14) South Kanara—cont.

10 Kallathkere	South Kanara District Board.
11 Thekkil	Do.
12 Hosmatta	Do.
13 Kulur	Do.
14 Pavanje	Do.
15 Roalky	Do.
16 Mabukal (Malinkal)	Do.
17 Bhadrageri-Kallianpur	Do.
18 Gangolli	Do.
19 Udiavar	Do.
20 Hangar-hole	Do.
21 Kandlur	Do.
22 Puthuge	Do.
23 Valady	Do.
24 Vandse	Do.
25 Vadkal	Do.
26 Puchamogar	Do.

(15) Malabar.

1 Kuppam	Malabar District Board.
2 Baliapatam	Do.
3 Kultri	Do.
4 Panamaram Kadavu	Do.
5 Pattambi Ferry (Vattolikavu Nangatheri Ferry)	Do.
6 Cheliyampmyhe (Beypora)	Do.
7 Chommaravatam	Do.
8 Mullurkadavu	Do.
9 Thirthala Varandu	Do.
10 Thusseri Kadam	Do.

STATEMENT 2.—Statement showing inspection bungalows, (a) taken over and (b) proposed to be taken over by the Highways Department.

Inspection bungalows taken over and maintained.

Chittoor district.

Inspection bungalows at—

- (1) Kesapuram.
(2) Modayagari Palle.

Kurnool district.

Inspection bungalows at—

- (3) Kalva.
(4) Jupad.
(5) Cumbum tank bund.
(6) Giddalore.
(7) Markapur.
(8) Sirvel.
(9) Koilkuntla.
(10) Santhajutur.
(11) Kambalapalli.

Cuddapah district.

- (12) Duvvur.
(13) Jammalamadugu.

Inspection bungalows proposed to be taken over.

Agency are in Dowlaiswaram Circle.

Inspection bungalows at—

- (1) Dondapudi.
(2) Buttayagudem.
(3) Jeelugumillie.
(4) Taduvai.
(5) Giddada.
(6) Velagapalli.
(7) Parnasala.
(8) Dondapudi.
(9) Edira.
(10) Alpaka.
(11) Perur.

STATEMENT 3.—Statement showing the Travellers' Bungalows and Rest-houses under the control and supervision of the Highways Department.

Name of the district.	Under the control of Highways Department.	Under supervision of Highways Department [other than those under column (2).]
(1)	(2)	(3)
(1) Anantapur district ..	(1) Guntakal (2) Rayalacheruvu. (3) Pamidi—vide G.O. No. 1566, dated 3rd August 1944.	(1) Uravakonda.
(2) North Arcot district ..	Nil	(1) Ambur. (2) Tiruvalam. (3) Kamamangalam. (4) Polur. (5) Katpadi. (6) Cheyyur. (7) Wandiwash. (8) Moranam. (9) Tiruppattur. (10) Sholingur. (11) Arkonam. (12) Dusi.
(3) South Arcot district ..	Nil	(1) Veppur. (2) Arasur. (3) Ulandurpet. (4) Vikravandy. (5) Tindivanam. (6) Bhuvanagiri. (7) Port Novo. (8) Konaratchi. (9) Anumandal. (10) Kurinjipadi. (11) Panrutti. (12) Serasevalai. (13) Elavansur. (14) Tirukoilur. (15) Markanam. (16) Gingee (New). (17) Gingee (Old). (18) Koliyanur.
(4) Bellary district ..	(1) Paramadevana Halli .. (2) Kudathuri. (3) Gadiganur. (4) Hirehal. (5) Alur.	Nil.
(5) Chingleput district ..	(1) Gummudipundi. (2) Guduvancheri. (3) Karunguzhi. (4) Acharapakkam. (5) Kadapperi. (6) Avadi.	(1) Pudukottai. (2) Uthukottai. (3) Periapalayam. (4) Chittampur.
(6) Chittoor district ..	Nil	(1) Palamaneru. (2) Punganur. (3) Madanapalle. (4) Molakalacheruvu. (5) Puthalpet. (6) Damalacheruvu. (7) Kalluru.
(7) Coimbatore district ..	Nil	North Area— (1) Karumathampatti. (2) Avanashi. (3) Mottupalayam. (4) Annur. (5) Satyamangalam. (6) Dhimbam. (7) Bhavani. (8) Gobichettipalayam. (9) Chilukkavadi. (10) Kollegal.

* N.B.—The list under this head is not exhaustive.

Name of the district.	Under the control of Highways Department.				Under supervision of Highways Department [other than those under column (2)].
(1)	(2)				(3)
(7) Coimbatore district—cont.	Nil	..	..	..	South Area— (1) Perundurai. (2) Kangayam. (3) Vellakoil. (4) Palladam. (5) Kudumdy. (6) Kattampatty.
(8) Cuddapah district	..	Nil	..	..	(1) Yerraguntla. (2) Kondapuram.
(9) East Godavari district	..	Nil	..	..	(1) Rajanagaram. (2) Jeggampeta. (3) Prathipadu. (4) Karthipadu. (5) Annavaram. (6) Tuni. (7) J. Annavaram road. (8) Yeloswaram road. (9) Gokavaram. (10) Samalkota. (11) Balabhadrapuram. (12) Anaparthi. (13) Uppada. (14) Dwarapudi. (15) Ramachandrapuram. (16) Neelapalli. (17) Amalapuram. (18) Gannavaram. (19) Mummidivaram. (20) Mandapeta.
(10) West Godavari district.	Nil	..	..	..	(1) Bhimaddole. (2) Nallajerla. (3) Kovur. (4) Prakilanka. (5) Gopalapuram. (6) Kammavarapukota. (7) Undi. (8) Veeravasam. (9) Tadikalpudi. (10) Sangidi. (11) Neggipudi.
(11) Guntur district	..	Nil	..	..	(1) Tanguttur. (2) Velampalli. (3) Konanki. (4) Chilakaluripet. (5) Mangalagiri. (6) Chebrole. (7) Ponnur. (8) Repalli. (9) Prathipadu. (10) Indollu. (11) Parchur. (12) Modikondur. (13) Sattenapalli. (14) Pirangipuram. (15) Bapatla. (16) Chirala. (17) Amaravathi. (18) Dachepalli. (19) Piduguralla. (20) Pundugala. (21) Badarevu. (22) Addanki. (23) Kommalapadu. (24) Rompicherla. (25) Nekarical. (26) Vellalacheruvu. (27) Vinukonda.

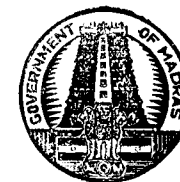
Name of the district.	Under the control of Highways Department.				Under supervision of Highways Department [other than those under column (2)].
(1)	(2)				(3)
(12) South Kanara district	..	Nil	..	..	(1) Ferringipet. (2) Pamamangalore. (3) Mani. (4) Puttur. (5) Jalsur. (6) Sullia. (7) Aranthod. (8) Sanpji. (9) Buntual. (10) Puglacunta. (11) Belthangady. (12) Charmady. (13) Uppinangady. (14) Gobithattu. (15) Shirady. (16) Kudupuchuttram. (17) Gurpur. (18) Mudabidri. (19) Karkal. (20) Someshwar. (21) Halady. (22) Kasaragod. (23) Muliya. (24) Adur. (25) Kunthur. (26) Kadaba. (27) Kulgunda. (28) Hosangady. (29) Ampur. (30) Kollur. (31) Siddakotta. (32) Vittai. (33) Adkasthala. (34) Badiadka. (35) Bevinja. (36) Periya. (37) Kimmigolil. (38) Shankernarayana.
(13) Krishna district..		Nil	..	..	(1) Nidumolu. (2) Pamarru. (3) Vuyyur. (4) Kankipadu. (5) Kanchikacherla. (6) Nandigama. (7) Sermahannapet. (8) Komarabanda. (9) Mungala. (10) Kaikalur. (11) Gannavaram. (12) Gudivada. (13) Bapulapadu. (14) Nuzvid. (15) Vissanapeta. (16) Chellapalli. (17) Jaggayapeta. (18) Lingala. (19) Mylavaram. (20) Kondur. (21) Tiruvur.
(14) Kurnool district.	..	Nil	..	..	(1) Kodamur. (2) Karivemula. (3) Allardianne. (4) Pattikonda. (5) Maddikera. (6) Peepally. (7) Dhone. (8) Yeldurthi. (9) Namur. (10) Cargiyapuram.

Name of the district.	Under the control of Highways Department.	Under supervision of Highways Department [other than those under column (2)].
(1)	(2)	(3)
(14) Kurnool district---cont.	Nil	(11) Velgode. (12) Panyam. (13) Owk. (14) Allagadda. (15) Chagalamarri. (16) Nagareddipally. (17) Kumbum. (18) Markapur.
(15) Malabar district	.. Nil	(1) Qualandy. (2) Badagara. (3) Kundotti. (4) Mannarghat. (5) Manjeri. (6) Eddakkara. (7) Nilambur. (8) Chandanathodu. (9) Kannothe. (10) Cherupulacherry. (11) Pattambi. (12) Ponnani. (13) Trithala. (14) Vyitri. (15) Thamarasseri. (16) Chowghat. (17) Kollargode. (18) Koduvayur. (19) Sultan Battery. (20) Tiruvangadi. (21) Anacode. (22) Pandikad. (23) Karuvarakundi. (24) Vadakancheri. (25) Alathur. (26) Ottapalam. (27) Tirur. (28) Pananghat. (29) Thuppanad. (30) Kongad. (31) Kartikulam.
(16) Mathurai district	.. Nil	(1) Tirunangalam. (2) Kodai Road. (3) Karugulakhudy. (4) Kottampatty. (5) Natham. (6) Chockanurini. (7) Thevi. (8) Kallupatty. (9) Periakulam. (10) Battalagundu. (11) Shenpatty. (12) Palni. (13) Palakavuth. (14) Eriyodu. (15) Vedasandur. (16) Kodaikanal.
(17) Nellore district	.. Nil	(1) Tada. (2) Sulerpet. (3) Kovur. (4) Singarayakonda. (5) Muthukur. (6) Nellorepalayam. (7) Mandavaram. (8) Bhata. (9) Nandipad. (10) Duttaloor. (11) Kanigiri. (12) Kaigir. (13) Podili. (14) Vonkatagiri. (15) Vinjamur.

Name of the district.	Under the control of Highways Department.	Under supervision of Highways Department [other than those under column (2)].
(1)	(2)	(3)
(18) The Nilgiris district	.. Nil	(1) Coonoor. (2) Gudalur. (3) Avalanche.
(19) Ramnad district	.. Nil	(1) Sattur. (2) Tirupatur. (3) Managiri. (4) Manamadura. (5) Paramakudi. (6) Ramnad. (7) Kariapatty. (8) Palayampatty. (9) Tiruvadani. (10) Tondi. (11) Sivaganga. (12) Mudukulathur. (13) Sayulgudi.
(20) Salem district	.. Nil	(1) Bargur. (2) Krishnagiri. (3) Shulagiri. (4) Adamankotta. (5) Thoppur. (6) Omalur. (7) Sankari. (8) Rayacotta. (9) Palacode. (10) Manchavadi. (11) Namakkal. (12) Kariapatty. (13) Valapady. (14) Athur. (15) Talvasal. (16) Rasipuram. (17) Achanakuttaipatty Rest-house. (18) Mathur.
(21) Tanjore district	.. Nil	East area— (1) Shiyali. (2) Kumbakonam. (3) Tiruvidamarudur. (4) Narasingampet. (5) Kuttalam. (6) Nannilam. (7) Karungauni. West area— (8) Pattukkottai. (9) Madukkur. (10) Peravani. (11) Nagudi. (12) Tiruvadi. (13) Vallam. (14) Sengipatti. (15) Budalore. (16) Grand Anicut.
(22) Tirunelveli district	.. Nil	(1) Koilpatti. (2) Kayattar. (3) Nanguneri. (4) Kurukkuchalai. (5) Sankaran Koil. (6) Vasudevanallur. (7) Pavoorchatram. (8) Ambasamudram. (9) Vagchaikulam. (10) Tiruchendur.

ADMINISTRATION REPORT OF THE
HIGHWAYS DEPARTMENT, 1947-48

Name of the district.	Under the control of Highways Department.	Under supervision of Highways Department [other than those under column (2)].
(23) Tiruchirappalli district.	(1) Manaperi .. (2) Aravakurichi .. (3) Toramanga'am ..	(1) Tiruvalleri Rest-shed. (2) Samayapuram. (3) Vayyampatti. (4) Thoraiyur. (5) Padalur. (6) Ariyalur. (7) Jayankondam. (8) Lower Anicut. (9) Mundurai. (10) Kilapalur. (11) Karur. (12) Koyyal. (13) Pudupalayam. (14) Chinnadevapuram. (15) Koilpatty.
(24) Visakhapa'nam district.. Nil ..	..	South area— (1) Anakapalli. (2) Salur. (3) Narasapatam. (4) Yellamanchilli. (5) Ganapathiragavan. (6) Sebbavaram. (7) Sringavarapukota. (8) Gummalluru. (9) Medivata. (10) Kannurpalayam. (11) Uratla. (12) Kadgole. (13) Jammadevipeta. (14) Burzavalasa. (15) Maduravada. (16) Pondurthi. North area— (1) Chilaka'apa'em. (2) Chicacole. (3) Narasannapeta. (4) Tekkili. (5) Kasibugga. (6) Kanchili. (7) Ichchappur. (8) Bobbili. (9) Parvathipur. (10) Komavada. (11) Palakonda. (12) Rajam. (13) Kalingapatam. (14) Amidava'asa. (15) Veeraghattam. (16) Hiramondalam. (17) Koturu. (18) Singili. (19) Gava. (20) Jalumuru.



PUBLIC WORKS DEPARTMENT

G.O. No. 2464, 30th June 1949

Administration Report—Highways Department—1947-48—Recorded.

READ—the following paper :—

From the Chief Engineer (Highways), dated 20th December 1948,
No. 6606/E-3/48-33.

Order—No. 2464, P.W., dated 30th June 1949.

Recorded.

2. The report presents a record of the working of the Highways Department during the second year of its organization as an independent department. Fifteen thousand and twenty-four miles of the important roads in the Province were maintained by the Highways Department, while 791 miles of roads were maintained by the Public Works Department and 24,818 miles of roads of local importance (including about 5,800 miles classified as major district roads) remained under the control of the district boards and municipal councils. A total expenditure of Rs. 262.03 lakhs was incurred during the year on the maintenance of the roads under Government. The allotment under Post-war Road Development for war arrear renewal works was utilised to improve a considerable portion of the bad stretches. With the increase in the maintenance grant for 1947-48 there was some improvement in the condition of the roads.

3. The Government of India assumed responsibility for the maintenance and development of National Highways with effect from 1st April 1947 and allotted a target expenditure of Rs. 2.5 crores for improvement works. A revised five-year plan of works on National Highways for Rs. 2.5 crores prepared by this Government was tentatively approved by the Government of India. Another revised five-year plan for development of roads other than National Highways was being drawn up by the Chief Engineer (Highways) during the year under review for an expenditure of Rs. 8.5 crores. The plan was approved by the Government in September 1948 with certain modifications. The Bridges Circle which was formed on 1st August 1946 for preparing plans and estimates for bridge works was reorganized on 1st July 1947. An expenditure of Rs. 33.49 lakhs was incurred on original works in the year and a large number of works costing over Rs. 1 lakh each were in progress. There were two meetings of the Board of Communications during 1947-48; various important questions relating to Post-war Road Development were discussed at these meetings and specific recommendations were made.

4. The department also attended to district board works involving an expenditure of Rs. 91.54 lakhs on maintenance works and Rs. 60.23 lakhs on original works. Proposals for 192 works amounting to Rs. 11,52,350 under the Firka Development Scheme were also examined. Detailed instructions regarding avenue plantations on road margins were issued by the Chief Engineer. Certain ferries were transferred from the district boards to the Highways Department on 1st April 1947 with reference to the orders issued in G.O. No. 114, L.A., dated 18th January 1946.

5. The staff position in the subordinate ranks was very difficult owing to post-war conditions. Many supervisors' sections had to be left vacant and of the men working, barely half were qualified persons with sufficient experience.

(By order of His Excellency the Governor)

T. A. VARGHESE,
Secretary to Government.

To the Chief Engineer (Highways).

„ Superintendent, Government Press, Madras.

Copy to the Local Administration Department.