

ADMINISTRATION REPORT OF THE

HIGHWAYS AND RURAL

WORKS DEPARTMENT,

1960-61



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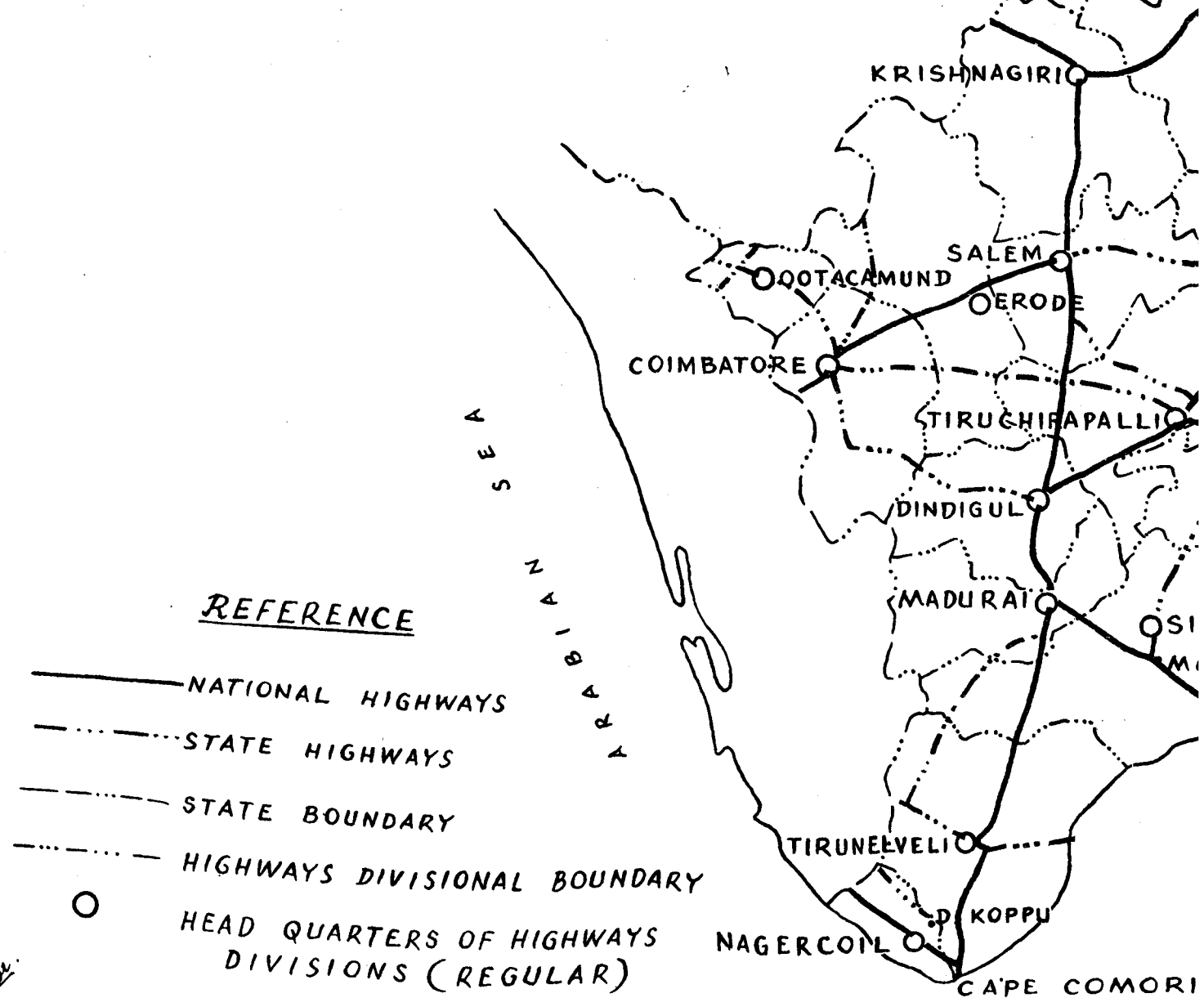
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Administration report of the
Highways and rural works
department 1960-61.

MAP OF MADRAS STATE SHOWING NATIONAL HIGHWAYS, STATE HIGHWAYS AND JURISDICTION OF HIGHWAY DIVISIONS

AS ON 31-3-'61.

SCALE:- 1" = 50 MILES.



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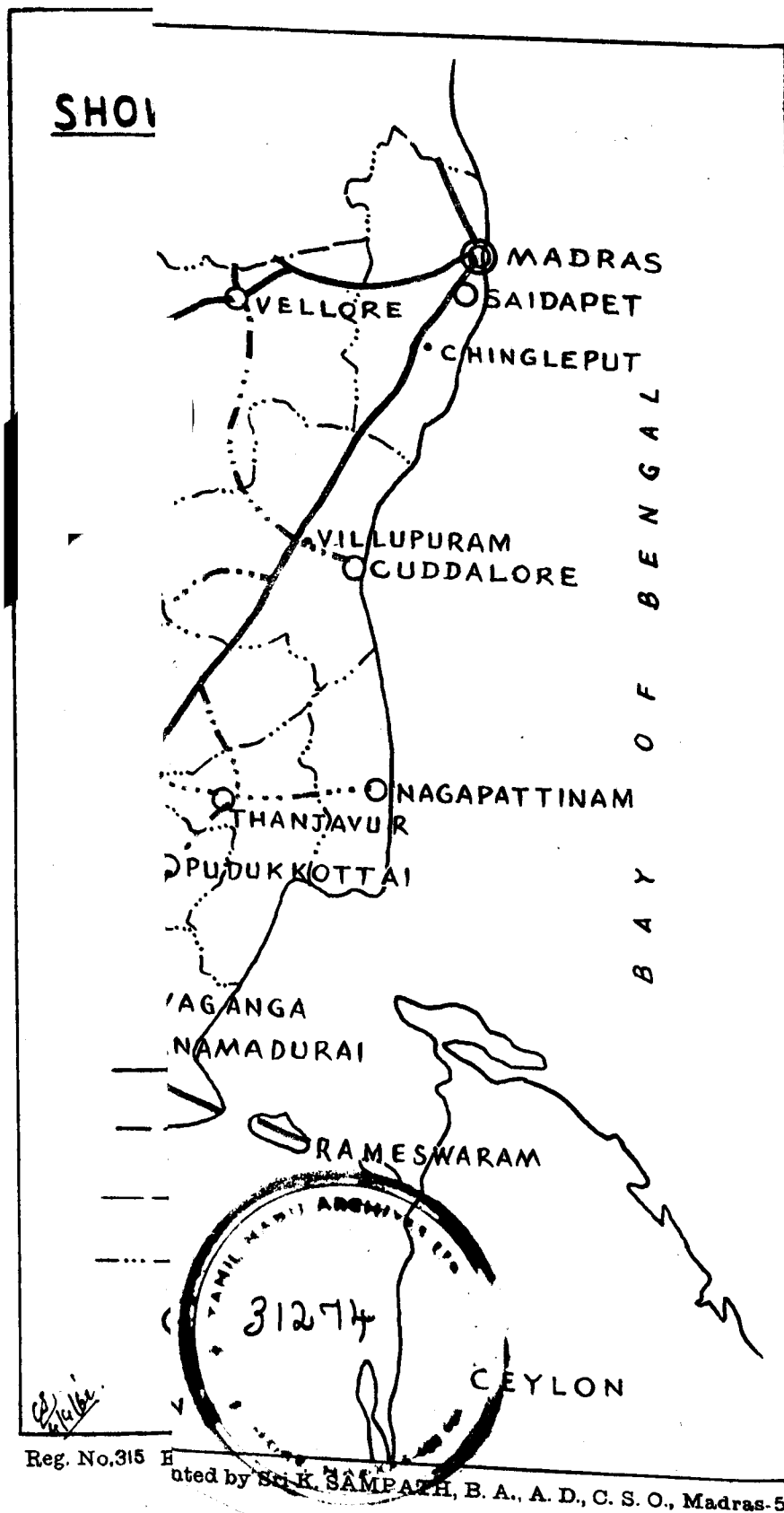
ADMINISTRATION REPORT OF THE HIGHWAYS AND RURAL WORKS DEPARTMENT, 1960-61.

CHAPTER I.

SUMMARY.

1. *Accomplishments.*—During the year under report, the Highways Department was reorganized as "Highways and Rural Works Department" with reference to orders issued in G.O. No. 851, Rural Development and Local Administration, dated 9th May 1960, to suit the future pattern of Panchayat Administration. This department continued to execute works on all categories of roads, viz., National Highways, Provincial Highways, major and other district roads, village roads and the balance of major district roads under district boards, the expenditure on works on National Highways having been financed by the Government of India. Several roads running through both rural and urban areas or those subjected to heavy traffic were treated with appropriate types of improved surfacing such as cement concrete, surface dressing with precoated chips, etc.

The policy of this department has all along been that all National Highways, Provincial Highways and major district roads should be taken over by Government from the local bodies in order to relieve them of the responsibility of maintaining these classes of roads and enable them to concentrate their resources on roads of rural importance. In pursuance thereof, a length of 232 miles of roads were taken over to Government during the period under review bringing up the total mileage of Government roads to 11,439 miles as on 31st March 1961. The details of roads taken over during the year are given in Annexure 7. The activities of the department have been increasing year by year. An indication is given below by the figures of the total expenditure on all Government and district board works, which gives an account of the increasing volume of works carried out by this department in the past and during the year under report.



Year.

(1)
Composite Madras State.

1946-47
1947-48
1948-49
1949-50
1950-51
1951-52
1952-53

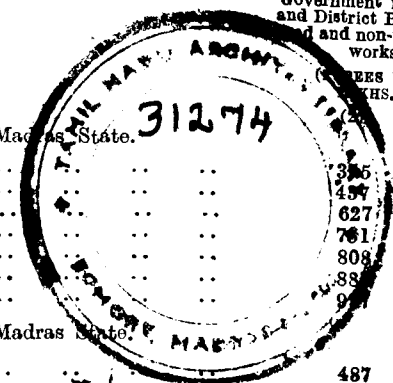
Residuary Madras State.

1953-54
1954-55
1955-56
1956-57

(i) 1st April 1956 to 31st October 1956 315
(ii) 1st November 1956 to 31st March 1957 218

1957-58
1958-59
1959-60
1960-61

Expenditure on
Government roads
and District Board
and non-roads
works.
(in lakhs.)



325
454
627
761
808
88
9
487
449
532
523
598
618
709
797

Reg. No. 315

dated by Sri K. SAMPATH, B.A., A.D., C.S.O., Madras-5.

Consequent to the Pataskar Award and redistribution of villages in the border areas of Andhra Pradesh, 225 miles of roads were taken over in North Arcot and Chingleput Division (both under Government and district board) and similarly 116 miles of roads were transferred to Andhra Pradesh. Further, due to formation of first stage of panchayat unions from 2nd October 1960, 2,063 miles of district board roads were handed over to the respective panchayat unions for future maintenance with their funds.

The nature and volume of works that are undertaken by this department more and more on the increase during the past two five-year plan periods so as to fit in with the administrative and executive machinery of Government for the proper implementation of development schemes to improve general living standards of fast changing rural and urban societies of modern age.

A brief summary of accomplishments of the department in the year 1960-61 is given below :—

Government roads.—Five miles of roads were cement concreted, 368 miles of roads were black topped. One hundred and nineteen miles were metalled and 25 miles of new roads were formed. Besides 60 bridges, culverts and causeways were constructed and special repairs to the extent of Rs. 33.04 lakhs were carried out.

District board roads.—Eight miles of roads were cement concrete. Thirty miles of roads were black topped. One hundred and seventy-three miles were metalled, 250 miles of new roads were formed and 54 bridges, culverts and causeways were constructed, besides carrying out special repairs.

2. Expenditure.—The particulars of final grant and actual expenditure incurred during the year 1960-61 in respect of Government and district board works are given below :—

Nature of work.	Final grant for 1960-61.	Expenditure in 1960-61.		Expenditure in 1959-60.	
		Amount in (lakhs).	Percentage of final expenditure to the final grant.	Amount in (lakhs).	Percentage of final expenditure to the final grant.
(1)	(2)	(3)	(4)	(5)	(6)
Government Roads—					
Capital Works (including P. W. R. D.).	193.93	184.49	95.1	157.68	..
Maintenance..	254.67	343.68	134.9	338.65	..
Total Government roads ..	448.60	528.17	117.7	496.33	..
District Board Works—					
Capital works on roads (including P. W. R. D.).	70.61	98.98	140.02	98.20	..
Maintenance..	82.09	80.50	98.06	90.10	..
Non-road works ..	26.88	28.73	106.9	25.20	..
Total District Board Works	179.58	208.21	115.9	213.50	..
		117.4	799.83		..

The Expenditure on Government and District Board works classified under different categories of roads is given below :—

(1)	Expenditure in rupees.	
	New construction.	Maintenance.
	(2) RS.	(3) RS.
Government Roads—		
National Highways	38,86,209	42,42,987
State Highways	17,31,749	34,37,346
Major District Roads	1,00,99,233	2,41,94,503
Other District Roads	27,31,988	16,48,874
Avenues	..	8,44,011
Total ..	1,84,49,179	3,43,67,721
District Board Works—		
Major District Roads	4,782	1,04,206
Other District Roads	59,92,381	34,43,114
Village roads	39,01,171	44,11,436
Avenues	..	90,904
Total ..	98,98,334	80,49,660

The following statement shows the cost of establishment as percentage of the expenditure on works during the year 1960-61 with corresponding figures for the previous years for comparison :—

Year.	Expenditure on works inclusive of T and P.	Expenditure on establishment.	Percentage of cost of working expenditure.
(1)	(2) (RUPEES IN LAKHS).	(3) (RUPEES IN LAKHS).	(4)
1946-47	351.71	36.10	10.3
1947-48	478.60	46.64	9.7
1948-49	666.05	53.49	8.0
1949-50	824.66	58.90	7.1
1950-51	958.85	61.63	6.4
1951-52	965.69	62.89	6.5
1952-53	1,086.27	68.35	5.9
1953-54	517.91	34.88	6.7
1954-55	489.81	40.02	8.5
1955-56	589.50	39.26	6.8
1956-57—			
1st April to 31st October 1956 and 1st November 1956 to 31st March 1957.	589.97	29.66 } 16.62 }	7.8
1957-58	627.04	47.68	7.6
1958-59	655.32	52.57	8.0
1959-60	756.78	54.92	7.25
1960-61	796.56	62.53	7.85

Out of the total establishment charge of Rs. 62,53,597 a sum of Rs. 5,66,040 was recoverable from the Union Government towards the charges of works executed by the Department of National Highways and a total sum of Rs. 8,73,432 was provisionally marked for being recovered from the district boards in proportion to the expenditure incurred on district board roads.

3. *Upkeep*.—A general review concerning the upkeep of Government and district board roads in the State is given below :—

Government roads—National Highways.—The standard of maintenance of National Highways in the State is fairly satisfactory with reference to the funds made available for maintenance. However, owing to heavy intensity of traffic on these roads allotment of more funds was felt necessary.

State Highways and major district roads.—The general condition of these classes of roads is satisfactory. With advent of and increase in the number of modern fast moving vehicles and heavy traffic, there has been growing demand for improved surfacings such as cement concrete and black-top. The allotment sanctioned for the year under review was inadequate. Nevertheless, the roads were maintained as fairly as possible by a judicious distribution of available funds.

District board roads.—The standard of maintenance of various categories of roads contained to be generally satisfactory. The paucity of funds in all the district boards and also their inability to place in time even the available funds to the credit of the officers of the department were telling seriously upon the maintenance of roads in their charge. However, the roads were maintained as satisfactorily as possible.

CHAPTER II.

ORGANISATION.

(1) Administrative set-up.

The Highways Department continued to function with the Chief Engineer (Highways and Rural Works) in its charge during the year. There were three Circles-in-charge of Superintending Engineers and 30 Divisions (including Special Divisions) in charge of Divisional Engineers. Besides, there were a regional officer, viz., Director, Research Station, in the rank of Superintending Engineer (Highways and Rural Works), and a Superintending Engineer (Highways and Rural Works), Rural Housing Cell. In G.O. No. 582, L.A., dated 9th May 1960, Government sanctioned the post of an Additional Superintending Engineer (Rural Works) in the office of the Chief Engineer to work out details in connection with the reorganisation of the Highways Department ordered in G.O. No. 851, L.A., dated 9th May 1960. In G.O. No. 1784, Public Works, dated 16th June 1960, Government sanctioned the creation of an Investigation Circle with four Divisions for investigation and preparation of plans and estimates in respect of road and bridge works included in the Five-Year plans and for assessing the strength of weak structures on continuous stretches of important roads particularly in industrial belts in order to allow heavy vehicles and truck-trailer combination.

(2) Chief Engineer and his office.

Chief Engineer (Highways and Rural Works). Sri S. C. Nayak, from 1st April 1960 to 2nd January 1961.
Sri P. Sirajuddin, from 3rd January 1961 to 31st March 1961.

(2) Chief Engineer and his office—cont.

Additional Superintending Engineer (Rural Works).	Sri P. Sirajuddin, from 30th July 1960 to 2nd January 1961. Sri P. Sirajuddin, (additional charge), from 3rd January to 31st March 1961.
Deputy Chief Engineer (Highways and Rural Works).	Sri C. R. Muniswami Nayudu, from 1st April to 26th September 1960. Sri V. Govindasami Pillai, from 27th September 1960 to 31st March 1961.
Personal Assistant to Chief Engineer (Highways and Rural Works).	Sri M. J. Aruliah, from 1st April 1960 to 26th March 1961. Sri T. A. Lakshmiraghavachari, (additional charge) from 27th March to 31st March 1961.
Additional Personal Assistant to Chief Engineer (Highways and Rural Works).	Sri S. V. Narasimhalu, from 16th September 1960 to 3rd January 1961. Sri T. A. Lakshmiraghavachari, from 4th January to 31st March 1961.
Accounts Officer (Highways and Rural Works).	Sri V. S. Krishnamachari, from 1st April 1960 to 31st March 1961.
Special Accounts Officer (Highways and Rural Works).	Sri M. Balasubramaniam, from 14th July to 18th December 1960. Sri S. Marimuthu, from 19th December 1960 to 31st March 1961.
Engineer Liaison Officer (Highways and Rural Works).	Sri J. Subramanian, from 1st April 1960 to 31st March 1961.
Technical Assistants—	
Sri B. D. Jayaraman	From 1st April 1960 to 31st March 1961.
Sri S. P. Krishnamurthy	Do.
Sri C. Raghavan	From 1st April 1960 to 22nd March 1961.
Sri B. D. Jayaraman (additional charge).	From 23rd March to 31st March 1961.
Sri N. Sundaravadivelu	From 1st April 1960 to 31st March 1961.
Sri S. T. Ramanathan	From 1st June 1960 to 31st March 1961.

(3) Superintending Engineers (Highways and Rural Works).

Madras Circle	Sri O. Sivasankaran, from 1st April 1960 to 31st March 1961.
Rural Housing Cell	Sri K. Namasivayam, from 1st April 1960 to 31st March 1961.
Highways Research Station	Sri K. Ramaswami Reddi, from 1st April 1960 to 31st March 1961.
Tiruchirappalli Circle	Sri S. R. Naidu, from 1st April 1960 to 31st March 1961.
Coimbatore Circle	Sri P. Sirajuddin, from 1st April 1960 to 25th July 1960. Sri T. M. Veeraghavan, from 27th July 1960 to 31st March 1961.
Investigation Circle	Sri C. R. Muniswami Naidu, from 27th September 1960 to 31 March 1961.

(4) *Divisional Engineers (Highways and Rural Works).*

1 Chingleput Division	..	Sri P. G. Nambiar, from 1st April to 11th May 1960. Sri G. Sivanandam, from 12th May 1960 to 31st March 1961.
2 North Arcot Division	..	Sri M. S. Lawrence, from 1st April 1960 to 31st March 1961.
3 South Arcot Division	..	Sri S. Nataraja Pillai, from 1st April to 18th May 1960. Sri P. G. Nambiar, from 19th May 1960 to 31st March 1961.
4 Salem Division	..	Sri M. Balasubramaniam, from 1st April 1960 to 31st March 1961.
5 Krishnagiri Division	..	Sri S. H. Madhavan, from 1st April 1960 to 31st March 1961.
6 Tiruchirappalli Division	..	Sri P. Venkataraman, from 1st April to 8th June 1960. Sri A. Muthukumaraswamy from 9th June 1960 to 31st March 1961.
7 Nagapattinam Division	..	Sri G. Sundaram, from 1st April to 23rd May 1960. Sri G. A. Venkatachalam (additional charge), from 24th May to 25th June 1960. Sri M. A. Hafizkhan, from 26th June 1960 to 31st March 1961.
8 Thanjavur Division	..	Sri G. A. Venkatachalam, from 1st April 1960 to 31st March 1961.
9 Tirunelveli	.. ..	Sri V. Govindasamy Pillai, from 1st April to 22nd September 1960. Sri T. M. A. Jayaraman, from 23rd September 1960 to 31st March 1961.
10 Ramnathapuram Division at Sivaganga.	..	Sri V. Subramaniam from 1st April 1960 to 31st March 1961.
11 Madurai Division	.. ..	Sri P. S. Sivaprakasam, from 1st April 1960 to 31st March 1961.
12 Erode Division	.. ..	Sri P. Loganathan, from 1st April 1960 to 31st March 1961.
13 Coimbatore Division	..	Sri K. S. Logavinayagam, from 1st April 1960 to 31st March 1961.
14 Nilgiris Division at Ooty.	..	Sri P. S. Sadasivaswamy, from 1st April 1961 to 31st March 1960.
Transport and Machinery Division, Madras.		Sri A. Muthukumaraswamy, from 1st April to 31st May 1960. Sri G. Sundaram, from 1st June 1960 to 31st March 1961.
16 Designs Division, Madras	..	Sri R. Thillainayagam, from 1st April to 23rd September 1960. Sri K. S. Srinivasan, from 24th September 1960 to 31st March 1961.
17 Kolli Hills at Sendamangalam		Sri B. Jayaram, from 1st April to 30th June 1960.

(4) *Divisional Engineers (Highways and Rural Works)—cont.*

18 Special Division, Bodinayakanur.		Sri E. C. Chandrasekaran, from 1st April 1960 to 31st March 1961.
19 Special Division for Cauvery Bridge Works, Tiruchirappalli.		Sri S. Sundaram, from 1st April 1960 to 31st March 1961.
20 Special Division, Ramanathapuram.		Sri R. Bhuvaramurthy, from 1st April to 19th July 1960. Sri B. Jayaraman, from 20th July 1960 to 31st March 1961.
21 Kanyakumari Division, Nagercoil.		Sri M. Abdul Hafiz Khan, from 1st April to 15th June 1960. Sri P. Venkataraman, from 16th June to 30th December 1960. Sri T. M. A. Jayaraman (additional charge), from 31st December 1960 to 5th January 1961. Sri S. Venkataraman, from 6th January to 18th 1961. Sri A. Devapriam, from 19th January to 31st March 1961.
22 Dindigul Division	.. ..	Sri T. M. Veeraraghavan, from 1st April to 24th July 1960. Sri R. Bhuvaramurthy, from 25th July 1960 to 31st March 1961.
23 Pudukottai Division	.. ..	Sri M. A. T. Arasu, from 1st April 1960 to 31st March 1961.
24 Special Division for preparation of road maps, Madras.		Sri C. V. Padmanabhan, from 1st April to 8th August 1960.
25 Special Division for Security measure Works in Ramanathapuram District, Kamuthy.		Sri A. Devapriam, from 1st April 1960 to 17th September 1960. Sri George Jacob, from 18th September 1960 to 31st March 1961.
26 Special Division, Villupuram		Sri G. Sivanandam, from 1st to 8th April 1960. Sri L. N. Natesan, from 9th April to 25th November 1960. Sri G. Krishnan, Assistant Engineer (additional charge) on 26th November 1960. Sri P. G. Nambiar Divisional Engineer (Additional charge), from 27th November to 24th December 1960. Sri K. Srinivasa Rao, from 25th December 1960 to 31st March 1961.
27 Special Division, Tenkasi	..	Sri B. S. Umar, from 1st April 1960 to 31st March 1961.
28 Special Division, Tiruvettipuram.		Sri K. S. Devarajan, from 1st April 1960 to 31st March 1961.
29 Special Division, Erode	..	Sri S. Nataraja Pillai, from 27th May 1960 to 31st March 1961.
30 Investigation Division, Tiruchirappalli.		Sri M. Edwin Rabindra, from 22nd September 1960 to 31st March 1961.

31	Special Division for strengthening structures, Madras.	Sri K. Srinivasa Rao, from 23rd September to 24th November 1960.
		Sri K. S. Krishnan, from 25th November 1960 to 31st March 1961.
32	Investigation Division, Madras	Sri R. Thillainayagam, from 24th September to 21st December 1960.
		Sri A. Krishnamurthy, from 22nd December 1960 to 31st March 1961.
		Sri A. Krishnamurthy, from 10th October 1960 to 1st December 1960.
33	Investigation Division, Coimbatore.	Sri C. V. Padmanabhan, from 2nd December 1960 to 31st March 1961.
		Sri R. Thillaiyanagam, from 22nd December 1960 to 31st March 1961.
34	Traffic Engineering Cell, Madras.	

5. Subdivisions.

The following special subdivision formed in the previous years were closed during the year under report on the dates noted against each :—

Serial number and name. (1)	Head-quarters. (2)	Date of formation. (3)	Date of closure. (4)
1 Local Development Works Sub-division.	Pattukkottai	21st October 1954.	31st March 1961.
2 Do.	Tiruchirappalli	31st October 1955.	Do.
3 Do.	Palayamcottai	15th November 1955.	Do.
3 Do.	Saidapet ..	29th October 1954.	Do.
4 Do.	Cuddalore ..	6th October 1955.	Do.
5 Do.	Coimbatore-I	18th April 1955.	Do.
6 Do.	Salem ..	1st December 1954.	Do.
7 Do.	Sivaganga ..	1st September 1955.	Do.
8 Do.	Dindigal ..	16th July 1955.	Do.
9 Do.	Vellore ..	9th November 1954.	Do.
10 Do.	Ponneri ..	2nd June 1955.	30th June 1960.
11 Special Subdivisions	Tiruvannamalai.	1st September 1955	31st March 1961.
12 Local Development Subdivisions ..	Pudukkottai.	2nd September 1955.	Do.
13 Do.	Sendamangalam.	11th October 1955.	Do.
14 Special Subdivision ..	Periakulam..	5th January 1956.	Do.
15 Local Development Works Sub-Division.	Villupuram..	18th January 1956.	Do.
16 Do.	Chinglepnt ..	19th January 1956.	Do.
17 Do.	Coimbatore-II	12th March 1956.	Do.
18 Do.	Thanjavur ..	26th April 1956.	Do.
19 Do.	Sattur ..	30th April 1956.	Do.
20 Do.	Do. ..	9th June 1956.	30th April 1960.

Name. (1)	Head quarter. (2)	Date of formation. (3)	Date of closure. (4)
21 Special subdivision ..	Tirukkkoilur.	4th September 1956.	31st October 1960.
22 Do.	Tuticorin ..	12th August 1957.	31st July 1960.
23 Do.	Papanasam..	21st November 1957.	31st August 1960.
24 Special Subdivision ..	Erode ..	11th October 1957.	17th October 1960.
26 Local Development Works Sub-division.	Kanyakumari	18th February 1958.	31st March 1961.
27 Special subdivision ..	Maduranthakam.	14th August 1958.	31st May 1960.
28 Do.	Palayamkot-tai.	10th September 1958.	30th September 1960.
29 Additional Local Development Works subdivision.	Madurai ..	28th February 1959.	31st March 1961.
30 Special subdivision ..	Madras ..	4th March 1959.	28th February 1961.
31 Local Development Works Sub-division.	Tirunelveli ..	13th April 1959.	31st March 1961.
32 Special subdivision ..	Erode ..	6th June 1959.	31st December 1960.
33 Do.	Tirukkosh-ti-yur.	12th July 1959.	31st August 1960.
34 Special subdivision for preparation of District Road Maps.	Madras ..	16th July 1959.	8th August 1960.
35 Do.	Do. ..	31st July 1959.	8th August 1960.
36 Special subdivision ..	Arni ..	21st August 1959.	31st March 1961.
37 Do.	Theni ..	9th September 1959.	31st October 1960.
38 Do.	Peranampet.	27th January 1960.	28th February 1961.
39 Do.	Cumbum ..	9th October 1960.	1st March 1961.

The following Special Subdivisions were formed during the year under report on the dates noted against each.—

Name of the Sub-division. (1)	Headquarters. (2)	Date of formation. (3)
Special subdivision ..	Tiruppuvanam ..	9th April 1960.
Do. ..	Erode ..	9th May 1960.
Do. ..	Vellakoil ..	20th May 1960.
Additional Regular subdivision ..	Nagercoil ..	29th May 1960.
Special subdivision ..	Tiruthurai-poondi ..	2nd June 1960.
Do. ..	Avadayarkoil ..	4th July 1960.
Do. ..	Kattumannargudi.	2nd July 1960.
Investigation subdivision ..	Madras ..	8th July 1960.
Special subdivision ..	Madurai ..	Do.
Investigation subdivision ..	Vellore ..	25th July 1960.
Do.	Cuddalore ..	27th July 1960.
Special subdivision for strengthening weak Structures.	Madras ..	9th August 1960.
Do.	Do. ..	11th August 1960.
Personal Assistant to Superintending Engineer (Highways and Rural works Investigation Circle.	Do. ..	12th August 1960.

Name of division. (1)	Name of section. (2)	Date of formation. (3)
Investigation subdivision	Madurai	17th August 1960.
Do.	Nagarcoil	Do.
Do.	Salem	3rd September 1960.
Do.	Thanjavur	8th September 1960.
Special subdivision	Thiruthani	9th September 1960.
Investigation subdivision	Coimbatore	7th October 1960.
Special subdivision	Veppanapalli	2nd December 1960.
Do.	Vedaranyam	22nd October 1960.
Do.	Vedaranyam	7th November 1960.
Do.	Pattukottai	12th November 1960.
Do.	Dindigul	31st December 1960.
Special subdivision for clearance of audit objection.	Madras	28th January 1961.

(6) Junior Engineers and Supervisors.

The staff position in regard to the availability of qualified personnel had not improved. As in the previous years, some of the final year B.E. students were appointed as temporary supervisors on Rs. 100 pending publication of their results. All passed candidates were redesignated as Junior Engineers and their pay was refixed at Rs. 150 per mensem in the scale of Rs. 150—10—250. The revision of the pay scales of the Junior Engineers and Supervisors came into force with effect from 1st June 1960 forenoon. According to the revised scales of pay, the pay of the Junior Engineers was refixed at Rs. 225 per mensem with effect from 1st June 1960 forenoon in the scale of Rs. 225—15—375. The pay of the Supervisors who were appointed on Rs. 100 per mensem was refixed at Rs. 150 per mensem with effect from 1st June 1960 forenoon in the scale of Rs. 150—5—175—10—225—15—375. Owing to the non-availability of the regularly selected candidates, the services of some of the candidates who failed in the final year B.E. Degree Examinations were being continued. Sanction for the further continuance of one retired Supervisor was accorded. Even then quite a good number of vacancies remained unfilled. Common staff attended to both Government and district board works. The Supervisors spared from this department for appointment as District Engineering Supervisors for panchayat works for a term were continued to be spared during this year also. The services of about 183 Junior Engineers and Supervisors were spared to the National Building Schemes such as National Extension Service and Community Project and Local Development works. The services of eight Junior Engineers who were deputed to the Directorate of Technical Education, Madras for appointment as Lecturers and Assistant Lecturers in the various Government Polytechnics were being utilised by the Directorate of Technical Education this year also. The services of five Junior Engineers and three Supervisors whose services were spared for appointment as Assistant Engineers and Section Officers in the Neyveli Lignite Corporation, Limited, were being utilised by the Corporation this year also. During the year under report 36 Junior Engineers and 19 Supervisors resigned their appointments in this department.

Recruitment (Direct).—Madras Highways Engineering Subordinate Service—Supervisors (including) Junior Engineers.—In July and August 1960, the Madras Public Service Commission held the prescribed competitive examination for the direct recruitment of candidates for appointment as Supervisors (including Junior Engineers) in Madras Highways Engineering Subordinate Service. It selected 98 candidates out of which 40 are graduates and 58 diploma-holders.

The special sections mentioned below were formed during the year under report on the dates noted against each.

Name of division or circle. (1)	Name of section. (2)	Date of formation. (3)
Chingleput Division ..	Tiruttani Special East Section ..	12th September 1960.
	Tiruttani Special West Section ..	1st December 1960, a.n.
	Tiruttani Special Section. ..	15th June 1960.
South Arcot Division ..	Cuddalore Investigation Section ..	28th October 1960.
	Cuddalore Special Section for Bridges Investigation.	15th November 1960.
Tanjavur Division ..	Thanjavur Investigation ..	1st September 1960.
	Kumbakonam Special Section ..	9th August 1960.
	Kumbakonam Special Section for Aliphatic Concrete works.	8th February 1961.
	Investigation Special Section ..	25th August 1960.
	Avadaiyarkoil Special Section ..	31st August 1960.
	Thanjavur C.R.F. works Pattukottai Special Section.	7th June 1960.
Pudukottai Division ..	Pudukottai Bridges Section ..	13th September 1960.
Dindigul Division ..	Kodai Road Special Section ..	7th October 1960.
	Oudanchatram Special Section ..	21st November 1960.
	Kannivadi Special Investigation Section.	23rd June 1960.
	Special Section Dindigul ..	18th March 1961.
Ramanathapuram Division.	Tiruppuvanam Special Bridge Section.	25th May 1960, a.n.
	Manamadurai Special Section ..	23rd November 1960.
Madurai Division ..	Vaigai Bypass works Special Section.	2nd July 1960.
	Cumbum Special Section ..	14th October 1966.
Tirunelveli Division ..	Causeway Vilathikulam Vembar Road Section.	7th November 1960.
	Kamuthy South Section ..	21st July 1960.
	Perungulam Special Section ..	15th July 1960.
	Vilathikulam Special Section ..	3rd September 1960.
Erode Special Division ..	Vellakoil for Pudupai Bridge works ..	1st August 1960.
	Kodumudy Seapage work Special Section.	28th May 1960.
	Gobi seapage works ..	11th May 1960.
	Special Section Erode ..	4th August 1960.
	Atangiam Bridge at Dharmapuram Section.	26th February 1961.
	Uthukudi Special Section ..	29th November 1960.
	Seapage Special Section ..	9th May 1960.
	Seapage Special Section at Villaiakoil	25th May 1960.
Coimbatore Division ..	Pollachi Special Section ..	23rd May 1960.
	Special Section, Annur ..	19th February 1960.
Nilgiris Division ..	Coonoor Special Section III ..	3rd August 1960.
Salem Division ..	Yercaud Special Section ..	24th May 1960.
	Sankari Special Section ..	16th November 1960.
	Kumarapalayam Special Section ..	Do.
Kamuthi Special Division.	Narikudy Special Section ..	30th May 1960.
	Tiruppuvanam Security works ..	25th March 1960.
	Kamuthy South Section ..	21st July 1960, a.n.
	Ramanathapuram Security works.	20th June 1960.
Nagapattinam Division ..	Tiruthuraiipoondi Special Section	2nd June 1960.
	Adapar bridge Special Section ..	11th February 1961.
	Kuttalam Special Section ..	6th August 1960.
	Vedaranyam Special Section ..	22nd October 1960.
	Pudukkudi Special Section ..	13th April 1960.
Villupuram Special Division.	Villupuram Special Section ..	23rd June 1960.

Name of division or circle. (1)	Name of section. (2)	Date of formation. (3)
Tiruchirappalli Division ..	Tiruchiaappalli Bridge Section ..	18th May 1960.
Nagercoil Division ..	Kottaram Special Section .. Nagercoil Section ..	15th May 1960. 25th August 1960.
Special Division, North Arcot	Cheyar Special Section II ..	11th June 1960.
	Wandiwash Special Section II ..	20th August 1960.
	Padavedu Special Section II ..	13th December 1960.
Investigation Madras.	Circle, Superintending Engineer's Office ..	16th December 1960.
	Do. ..	24th August 1960.
Investigation Week Madras.	Division of Structures, Special Section ..	25th August 1960.
	Do. ..	1st September 1960.
	Do. ..	4th January 1961.
Investigation Madras.	Division Special Section ..	31st October 1960. a. n.
	Special Section, Vellore ..	4th August 1960.
	Do. Cuddalore ..	29th August 1960.
	Special Section ..	13th October 1960. a. n.
	Do. ..	5th September 1960.
	Do. ..	2nd February 1961. f. n.
Investigation Coimbatore.	Division Special Division Investigation for Bridges and Road works. ..	9th September 1960.
	Investigation Special Section ..	17th September 1960.
	Do. ..	1st August 1960.
	Investigation Salem ..	13th October 1960.
	Do. ..	3rd October 1960.
	Division Office Investigation Coimbatore. ..	29th October 1960.

The special sections mentioned below were closed during the year under report on the dates noted against each.

Name of division. (1)	Name of section. (2)	Date of closure. (3)
Thanjavur Division ..	Tanjore Bridge Section Kumbakonam .. Special Section for Asphaltic Concrete works. ..	31st August 1960. a. n. 8th February 1961.
Krishnagiri Division ..	Krishnagiri Special Section 174/1 bridge work. ..	31st October 1960.
Salem Division ..	Yercaud Special Section ..	23rd August 1960.
Coimbatore Division ..	Annur Special Section ..	31st December 1960.
South Arcot Division ..	Tirukkoilur Section-I (Changed Head quarters to Villupuram). ..	31st October 1960.
Kolli Hills ..	Kolli Hills Special Section I .. Do. II .. Do. III ..	31st December 1960. 28th February 1961. 31st March 1961.

CHAPTER III.

WORKS.

General.—There were 11,185 miles of Government roads and 14,235 miles of District Board roads at the beginning of the year under review (i.e.), on 1st April 1960. Besides the regular maintenance of these roads 13 miles were cement concreted, 398 miles were black topped, 291 miles were metalled and 275 miles of new roads were formed under Government and District Boards during the year 1960-61 and 232 miles of roads were taken over from the District Boards under maintenance by the Department. Details of roads

improved and newly formed and taken over are given in Annexures 6 and 7 respectively. The position of various types of roads as on 31st March 1961 is as indicated hereunder :—

Type. (1)	Government. miles. (2)	District board. Miles. (3)
Cement concrete roads..	322	9
Black top roads ..	7,122	293
Metalled roads ..	3,670	6,586
Unmetalled roads ..	350	5,379
Total ..	11,464	12,267

2. *Maintenance.*—The expenditure on maintenance of Government and District Board roads compared with the preceding years is given below :—

Type. (1)	Government roads. (2) RS.	District Board roads. (3) RS.
1947-48 ..	26,203,053	9,154,213
1948-49 ..	35,015,182	11,583,288
1949-50 ..	33,791,000	12,985,735
1950-51 ..	38,773,748	13,363,439
1951-52 ..	41,635,671	14,182,154
1952-53 ..	45,129,912	14,539,379
<i>Residuary State of Madras.</i>		
1953-54 ..	26,125,682	8,343,187
1954-55 ..	23,821,198	7,678,244
1955-56 ..	26,729,550	9,104,922
1956-57 ..	..	..
1-4-56 to 31-10-56 ..	18,748,752	3,512,036
1-11-56 to 31-3-57 ..	6,341,373	5,215,151
1957-58 ..	24,599,891	7,490,387
1958-59 ..	29,281,057	7,262,373
1959-60 ..	33,433,323	8,924,374
1960-61 ..	33,523,710	7,958,754

The divisionwise details of expenditure on the maintenance of Government and District Board roads during 1960-61 are furnished in Annexure 11 (i) and (ii).

Cost per mile.—The average cost of maintenance per mile without regard to type of road surface for the past years and for the year under report is furnished in Annexure 2. An analysis of average maintenance cost of various categories of roads during the past few years is rendered below :—

Composite State of Madras.

Year. (1)	Average cost of maintenance of Government Roads.					District Board Roads.			
	National Highways. (2)	State Highways. (3)	Major District Roads. (4)	Other District Roads. (5)	Average cost on the total mileage. (6)	Major District Roads. (7)	Other roads. (8)	Village Roads. (9)	Average cost on the total mileage. (10)
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1950-51 ..	3,488	2,659	2,242	2,670	2,492	932	595	353	571
1951-52 ..	3,576	3,009	2,406	1,981	2,679	947	590	362	568
1952-53 ..	3,779	3,224	2,269	1,763	2,833	922	634	353	563

Composite State of Madras—cont.

Year	Average cost of maintenance of									
	Government Roads.					District Board Roads.				
	National Highways.	State Highways.	Major District Roads.	Other District Roads.	Average cost on the total mileage.	Major District Roads.	Other roads.	Village Roads.	Average cost on the total mileage.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
<i>Residuary State of Madras.</i>										
1953-54	4,474	3,448	2,651	2,283	3,028	1,071	515	245	482	
1954-55	3,842	3,057	2,466	1,986	2,759	962	459	230	433	
1955-56	3,971	3,238	2,693	1,703	2,932	1,230	580	262	519	
1956-57	2,227	2,274	1,860	1,160	1,966	592	260	92	203	
1st April to 31st October 1956.	1,461	887	619	200	738	637	425	217	336	
1st November 56 to 31st March 1957.	..	3,686	2,712	2,613	2,050	1,134	636	280	487	
1957-58	3,459	2,870	3,019	2,409	3,028	1,032	649	326	482	
1958-59	4,133	3,207	2,765	3,215	2,857	..	846	421	627	
1959-60	3,889	3,147	2,833	2,222	2,924	..	830	544	649	

The figures give a broad indication of the relative standards of the different categories of roads. The large disparity between the standards of Government roads and District Board roads is also an indication of the relative inadequacy of available funds on District Board side. This statement however needs be qualified by the fact that the traffic on District Board roads is generally much less than on Government roads. The divisionwise classification of maintenance expenditure according to categories of roads is given in Annexure 11 and an abstract of it is given in Annexure 3.

Black-topping in built-up area.—During the year the policy of black-topping in built-up area was pursued and several roads radiating from town limits and those in heavy traffic reaches were surfaced with precoated chips ensuring a better and more serviceable roads surface.

National Highways.—During the year a final grant of Rs. 41.63 lakhs including agency charges was sanctioned by the Union Government for the maintenance and repairs including special repairs of National Highways. Against this, the actual expenditure incurred for the maintenance of National Highways during the year was Rs. 42.43 lakhs.

3. Capital works.—The bulk of all works of improvements to roads such as providing improved surfacing to suit traffic needs, forming new roads and constructing and reconstructing bridges and culverts was being done under the National Plan. The rest of works was executed under Central Road Fund and Grants-in-aid to local bodies under "Excluding Post-War Reconstruction". A brief summary of the scheme is furnished below:—

(a) (i) **The Second Five-Year Plan.**—Under the Second Five-Year Plan, the State had an allocation of Rs. 547.00 lakhs which was prepared with the following provisions:—

(RUPEES IN LAKHS).						
State Highways	..	..	..	..	..	300.00
Other Roads	..	..	..	..	..	201.00
Tools and Plant	..	..	..	..	..	46.00
Total	..	..	..	..	..	547.00

During the year, an expenditure of Rs. 91.90 lakhs was incurred on State Roads and Rs. 51.41 lakhs on other roads. The expenditure against the provision for tools and plant was Rs. 10.25 lakhs during the year. The total expenditure was Rs. 153.51 lakhs.

The provision under other roads made in the Five-Year Plan was for the assistance that the State Government would give to the District Board as grants-in-aid under Post-War Road Development Schemes.

During the year Government sanctioned full grants to the extent of value of work done to eleven District Boards for meeting the expenditure on works in progress and new works under the head of account "81. Capital account—e. Development Scheme—1. Scheme included in the Five-Year Plan—(iv) Grants-in-aid—'A' Grants-in-aid to local bodies for new road works".

Under the Second Five-Year Plan, it was proposed to improve the existing State Highways and other roads maintained by Government and the District Boards. All the works proposed under this development schemes are of original in nature. The scheme framed under District Boards includes the formation of new roads also. The physical targets fixed for the Plan period and the progress achieved thereunder during year under report and in the previous years are given below:—

Nature.	State Highways.						
	Five-Year target.	Achievement.					
		1956-57.	1957-58.	1958-59.	1959-60.	1960-61	Total Achievement.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	M.F.	M.F.	M.F.	M.F.	M.F.	M.F.	M.F.
Cement Concrete ..	10-0	0-4	7-3	..	..	-7	8-6
Asphaltic Concrete ..	20-1	..	..	12-3	8-1	2-1	22-5
Black topping ..	324-7	28-0	173-7	56-5	105-4½	81-5	445-6½
New metalling ..	396-7	40-4	52-7	91-4	101-1	105-1	391-0
	NOS.	NOS.	NOS.	NOS.	NOS.	NOS.	NOS.
Improvements ..	28	1 No.	1 No.	12	19	12-06	45-70
Minor Bridges ..	105	5	12	32	48	18-45	115-72
Major Bridges ..	46	1 No.	4	7	13	11-83	36-98
New formations ...	56 M.	..	..	2	6	4-15 or 13-3½	6-1½

Nature.	Other Roads.						
	Five-Year target.	Achievement.					
		1956-57.	1957-58.	1958-59.	1959-60.	1960-61	Total Achievement.
(9)	(10)	(11)	(12)	(13)	(14)	(15)	
	M.F.	M.F.	M.F.	M.F.	M.F.	M.F.	
Cement Concrete ..	..	..	..	..	..	..	..
Asphaltic Concrete ..	..	..	..	..	..	..	..
Black topping ..	74-1	..	11-6	37-2	28-6	9-5	87-3
New metalling ..	708-0	63-3	134-1	208-7	219-3½	226-7	852-5½
Improvements ..	..	..	..	..	..	..	..
	NOS.	NOS.	NOS.	NOS.	NOS.	NOS.	NOS.
Minor Bridges ..	131	10	13	13	39	63-63	148-63
Major Bridges ..	35	3	2	1 No.	5	3-31	14-57
New formation ..	1,700-0	365-5	220-4	111-2	245-0	437-5	1,380-0

(ii) *National Highways*.—In respect of National Highways, the Government of India sanctioned during the year 1960-61 a final grant of Rs. 39,68,100 including agency charges under original works. Against this allotment an expenditure of Rs. 38,74,970 was incurred exclusive of agency charges.

(b) *Central Road Fund Scheme*.—Government of India have allotted a sum of Rs. 25.20 lakhs towards expenditure incurred on works during the year 1960-61 bringing up the total allotment under Central Road Fund Scheme to Rs. 672.90 lakhs. An expenditure of Rs. 23.36 lakhs was incurred against the allotment for the year, making the total progressive expenditure to end of 1960-61 to Rs. 567.72 lakhs both under Government and District Boards.

A statement of expenditure incurred during the past few years is given below :—

Year.	Expenditure incurred.		
	Government works	District Board works.	Total.
(1)	(2)	(3)	(4)
<i>Residuary State of Madras.</i>			
	Rs.	Rs.	Rs.
1953-54	20,14,861	15,06,139	36,21,000
1954-55	7,24,086	12,91,881	20,15,967
1955-56	10,83,332	7,22,317	18,05,649
1956-57	18,66,424	11,25,021	29,91,445
1957-58	42,70,000	34,74,000	77,44,000
1958-59	27,83,000	31,98,000	59,86,000
1959-60	15,64,000	18,41,000	34,05,000
1960-61	8,60,000	14,76,000	23,36,000

(c) *Grants-in-aid*.—Grants-in-aid to local bodies under “Excluding Post-War Reconstruction”.

Grants are allocated to the District Boards by the State Government under “Excluding Post-War Reconstruction Grants-in-aid”. Small works which do not come under the scope of Post-War Road Development and are considered essential to local needs, are given aid by the Government for their execution under the following categories :—

- (1) Village communications other than Post-War Reconstruction;
- (2) Roads and bridges other than village communications;
- (3) Improved surfacing of roads; and
- (4) Flood damage to roads.

Government have also been sanctioning grants for unemployment relief works necessitated by the adverse seasonal conditions, famine, etc., on the recommendations of the District Collectors concerned.

Grants thus sanctioned by Government and expenditure incurred thereon are given in the statement below in respect of the sub-heads mentioned above :—

Sub-head.	Accounts, 1959-60.	Revised estimate 1961-62.
(1)	(2)	(3)
	Rs.	Rs.
1 Village communications other than Post-War reconstruction.	6,35,649	16,68,800
2 Roads and Bridges (other than village communications).	21,27,374	14,18,400
3 Improved surfacing of roads	7,85,275	10,00,000
4 Flood damage to roads .. .. .	.. .. .	.. .. .
5 Special grants for road works to relieve unemployment due to failure of monsoon.	43,345	50,000

Capital expenditure.—The total expenditure on all Capital works during the year and the preceding years is furnished below :—

Year.	Expenditure on Government roads.	Expenditure on District Board roads.
(1)	(2)	(3)
	Rs.	Rs.
<i>Composite State of Madras.</i>		
1946-47	45,66,518	14,55,197
1947-48	33,49,405	60,22,963
1948-49	48,33,513	88,56,910
1949-50	1,45,34,000	1,30,97,570
1950-51	1,63,21,126	1,12,85,991
1951-52	1,56,13,516	1,18,63,708
1952-53	1,87,25,611	1,49,31,492

Residuary State of Madras.

1953-54	65,48,329	42,83,202
1954-55	65,05,104	41,96,401
1955-56	99,52,503	50,30,491
1956-57	..	..
(i) 1st April 1956 to 31st October 1956.	62,49,216	20,55,604
(ii) 1st November 1956 to 31st October 1956.	51,63,220	39,14,671
1957-58	1,63,44,741	72,58,040
1958-59	1,48,27,746	71,71,134
1959-60	1,57,68,122	91,20,423
1960-61	1,84,49,179	98,98,334

Divisionwise particulars of expenditure are given in Annexure 11 (i) and (ii).

Works completed.—A summary of new constructions and improvements completed during the year is rendered below :—

(a) *Government works—Upgrading*.—Fourteen works at a total cost of Rs. 17,03,218 were completed during the year, of which 5 miles of roads were cement-concreted and 368 miles were black-topped (including the length of roads black-topped under maintenance works).

Bridges, culverts and causeways.—Seventeen major bridges costing Rs. 93,71,108 and 43 minor bridges, culverts and causeways to total cost of Rs. 12,20,273 were completed.

New formation.—Seven works costing of Rs. 31,66,697 were completed of which 25 miles of roads were formed.

Improvements and special repairs.—Sixty-seven works costing Rs. 33,04,401 were completed.

(b) *District Board Works—Upgrading.*—Nine works at a total cost of Rs. 3,45,197 were completed by which 8 miles were cement-concreted and 30 miles of roads were black-topped including the length of roads improved under maintenance grant.

Bridges, culverts and causeways.—Four major bridges costing Rs. 9,84,236 and 50 minor bridges, culverts and causeways to a total cost of Rs. 6,57,272 were completed.

Improvements and special repairs.—Eighty-four works costing Rs. 14,68,700 were completed.

New formation.—Eighty works costing Rs. 12,17,420 were completed by which 250 miles of roads were formed.

Works in progress.—An abstract of the number and estimated cost of works that were under execution by the department during the year is furnished below :—

Nature of work.	Number.	Estimated cost.
(1)	(2)	(3)
		Rs.
(a) <i>Government Roads.</i>		
(i) Works costing over rupees one lakh each—		
Cement concrete and black-top	23	77,77,800
Bridges, culverts and causeways	51	2,49,71,900
New formations	24	70,86,200
Improvements and special repairs	41	1,12,57,400
(ii) Works costing less than rupees one lakh—		
Cement concrete and black-top	14	7,32,500
Bridges, culverts and causeways	63	24,01,850
New formations	24	10,88,550
Improvements and special repairs	91	26,07,750
(b) <i>District Board Roads.</i>		
(i) Works costing over rupees one lakh each—		
Cement concrete and black-top	Nil.	Nil.
Bridges, culverts and causeways	21	80,38,500
New formations	3	11,50,000
Improvements and special repairs	14	25,30,500
(ii) Works costing less than rupees one lakh each—		
Cement concrete and black-top	10	3,19,500
Bridges, culverts and causeways	72	22,80,490
New formations	287	32,28,160
Improvements and special repairs	106	30,42,660

A detained review of work costing over rupees one lakh each is given in Annexure 22 (i) and divisionwise figures of works costing less than one lakh of rupees each are furnished in Annexure 23 (i).

CHAPTER IV.

1. NATIONAL EXTENSION SERVICE AND COMMUNITY DEVELOPMENT PROGRAMME.

The following is a narrative report on the action taken by Highways Department in Community Development Programme :—

The Community Development Programme is devoted to improvement of conditions touching village life in all its aspects. The philosophy underlying the Community Development Programme profoundly believes that the salvation of man in the physical plane lies in himself. The programme is, therefore, based on the concept—a project of the people, by the people and for the people. The Programme aims at a real development of the human and material resources of the country side.

2. The Panchayat Administration under the name and style of Panchayat Union Councils has come into being in this State with effect from 2nd October 1960 and for the first instance 75 blocks have been converted as Panchayat Union.

3. The Highways Department hold a unique position in respect of the activities of this programme in this State inasmuch as almost all the Engineering personnel handling the programme are lent by this department. All possible measures have been taken to ensure the fullest co-operation and participation with the Block staff for the successful implementation of the programme.

4. Apart from the above, the Highways Department is in charge of the execution of the following works in the Blocks areas :—

- Construction of the office buildings for Panchayat Union Council.
- Construction of Block staff quarters.
- Construction of Agricultural Depots.
- Construction of Primary Health Centres (started under the Community Development Programme).
- Construction of schools.
- Construction of Veterinary dispensaries.
- Construction of Katcha roads, etc.

5. The preparation of estimates for the above work, getting administrative approval and according technical sanction thereto are also being attended to by this department officers.

6. The execution of Panchayat work in Panchayat Development Blocks (stages I and II) are being attended to by the Junior Engineers (Highways) or Supervisors of this department, in charge of the blocks concerned.

7. The Panchayat Union Council building and agricultural depot have been completed in 23 blocks. The remaining building works as well as other works in blocks are in progress. The bottlenecks and difficulties, if any,

experienced during the execution of works are being brought to the notice of the Development Commissioner in a monthly demi-official reports and this procedure has to some extent helped the speedy execution of the works in blocks.

8. The officers of this department are taking interest in the speedy and efficient execution of the works in Community Development areas.

2. REORGANISATION OF THE HIGHWAYS DEPARTMENT TO SUIT THE FUTURE PATTERN OF PANCHAYAT ADMINISTRATION.

To suit the panchayat administration envisaged in Madras Act XXXV of 1958, this department had to be reorganised as ordered in G.O. Ms. No. 851, Rural Development and Local Administration Department, dated 9th May 1960. The State had to be delimited into 373 Panchayat Unions in a phased programme and the first batch of 75 Panchayat Unions were constituted. On 2nd October 1960, District Board roads (other District roads and Village roads), roads formed under Local Development, Community Development and National Extension Service Schemes that were lying in Panchayat Unions so constituted and the powers envisaged in the act were also made applicable in these first batch of Unions except Water-supply Works, Minor Irrigation Sources and Grant works which were ordered to be entrusted only from 1st April 1961.

In G.O. Ms. No. 779, Education and Public Health, dated 29th March 1961, the water-supply schemes, viz., (1) Rural Water-supply (Comprehensive) Scheme and (2) National Water-supply and Sanitation (Rural) Scheme which were under the control of the Board of Revenue (Food Production) were transferred to the control of the Highways and Rural Works Department, with effect from 1st April 1961. The above schemes were practically under the control of the Board of Revenue during 1960-61. Information as far as available from the particulars furnished for the State Development Committee meeting for the quarter ending 31st March 1961 are given in respect of the schemes as detailed below :—

Rural Water-supply Scheme.—During 1960-61 water-supply works were undertaken under Local Development, Community Development, National Extension Service and Rural Water-supply (Comprehensive) Schemes. In respect of Rural Water-supply (Comprehensive) Schemes, an expenditure of Rs. 53.41 lakhs has been incurred during 1960-61. The physical achievements are as follows :—

(1) Wells—1773 Nos.

(2) Composite Schemes—98 Nos.

National Water-supply and Sanitation (Rural) Scheme.—An expenditure of Rs. 41.51 lakhs was incurred under the scheme during 1960-61. The physical achievements are given below :—

1. Water-supply	...	...	...	...	106 villages.
2. Sanitation works	...	...	...	...	126 villages.

CHAPTER V.

INSPECTIONS.

(a) *Inspection of Division Offices by the Superintending Engineers (Highways).*—During the year under report, the Division Offices were continued to be inspected by the Superintending Engineers as per the standing orders that the inspection of each Division Office should be conducted once a year. A brief summary of the inspection done by the Superintending Engineers (Highways) is rendered below :—

I. Madras Circle.—All Division Offices in the Circle were inspected by the Superintending Engineer (Highways) during the year under report on the dates noted against each in the statement below :—

Serial number and name of Division.	Date due for inspection.	Date of actual inspection.
1 South Arcot	June 1960	30th June 1960.
2 Nagapattinam	July 1960	22nd July 1960.
3 Thanjavur	August 1960	23rd August 1960.
4 Chingleput	September 1960	15th September 1960.
5 North Arcot	May 1960	10th May 1960.
6 Tiruvettipuram Special	October 1960	14th October 1960.
7 Villupuram Special	October 1960	26th October 1960.

The inspection of Division Offices disclosed that the work of the offices was generally satisfactory.

II. Tiruchirappalli Circle.—The inspection of division offices was conducted by the Superintending Engineer (Highways), Tiruchirappalli Circle as detailed below :—

Serial number and name of Division.	Date due for inspection.	Date of actual inspection.
1 Tiruchirappalli	July 1960	29th July 1960.
2 Madurai	August 1960	29th August 1960.
3 Ramanathapuram Special	May 1960	26th May 1960.
4 Tirunelveli	October 1960	30th October 1960.
5 Nagercoil	May 1960	19th May 1960.
6 Dindigul	June 1960	25th June 1960.
7 Pudukkottai	October 1960	12th October 1960.
8 Sivaganga	September 1960	26th September 1960.
9 Bodinayakanur	April 1960	23th April 1960.

The inspection of the Division Offices disclosed that the work in the offices of the various divisions was generally satisfactory.

III. Coimbatore Circle.—The Superintending Engineer (Highways), Coimbatore, conducted inspection of the division offices under his control on the following dates :—

Serial number and name of Division.	Date due for inspection.	Date of actual inspection.
1 Salem	July 1960	30th July 1960.
2 Ootacamund	May 1960	28th May 1960.
3 Krishnagiri	June 1960	17th June 1960.
4 Erode	August 1960	23rd August 1960.
5 Coimbatore	September 1960	24th September 1960.

All the division offices were inspected during the year. It was found that the work and condition of the offices were fairly satisfactory.

IV. *Highways Research Station.*—The Division Offices of the Transport and Machinery and Designs Divisions were inspected by the Director of Research Station (Highways) during the months of May and April 1960 respectively.

V. *Superintending Engineer (Highways), Rural Housing Cell.*—The Division Offices of Cauvery Bridge Division at Tiruchirappalli and Tenkasi Special Division were inspected by the Superintending Engineer (Highways), Rural Housing Cell, on 27th July 1960 and 31st October 1960, respectively.

(b) *Inspection of Circle Offices by Chief Engineer (Highways and Rural Works).*—During the year 1960-61, the Circle offices in the department were inspected by the Chief Engineer (Highways and Rural Works) on the following dates :—

Serial number and name of Circle.	Date of inspection.	Result of inspection.
1 Madras Circle	31st October and 1st November 1960.	The staff is fairly satisfactory. The work of the staff is fairly satisfactory. The control exercised by the Superintending Engineer (Highways) over the staff is satisfactory.
2 Coimbatore Circle	26th and 27th September 1960.	Do.
3 Tiruchirappalli Circle	14th and 15th June 1960.	Do.
4 Highways Research Station *	..	..
5 Superintending Engineer (Highways Rural Housing Cell. *	..	..

* The questionnaire for the inspection of Director, Research Station (Highways) and Superintending Engineer (Highways), Rural Housing Cell, has been finalised and submitted to Government for their approval. The inspection of these offices will be taken up as soon as the questionnaire is approved and programme of inspection fixed by Government.

CHAPTER VI.

STATISTICS.

(a) "Tests Experiments—Research."

A summary of the activities of the Highways Research Station, 1960-61, is presented below, sectionwise under the main heads of soils, concrete and Structures, Bitumen and Aggregate, Traffic and Library.

The annexure gives a list of various schemes undertaken during the period.

(1) *Soils Section.*—The work in Soils Section chiefly pertained to the design of stabilized soil mixes, investigations of road failures, subsoil investigation for bridges, and buildings and certain field tests in connection with the design and payment thickness and evolving specifications for the construction of roads in sandy areas.

Soil cement, modified gravel and sand cement-bitumen were the main constituents of the mixes designed. The investigations of road failure included a study for about 4 miles length in National Highway and for about 8 miles length in National Highway and for about 8 miles length in M.D.R. subsoil investigations have been conducted both for bridges and buildings, to suggest suitable foundation levels. The encouraging features during the year

under review, is the interest evinced by non-governmental instructions in seeking the services of Highways Research Station, for foundation consultations.

In connection with the design of thickness of payment field C.B.R. and in situ tests were conducted for a section of National Highway the representative stretches measuring a reach of 210 miles.

The stabilized soils sub-committee of Indian Roads Congress paid a visit to the soil stabilized roads in Madras State in April 1961 and inspected the performances of the various stabilisation technique. They were taken for the inspection of Thiruvanniyur-Muthukadu Road, Ramanathapuram-Mandapam Road and Kovalam-Mahabalipuram Road. Discussions at Mandapam and a visit to Highways Research Station by the Committee members followed.

(2) *Concrete and Structures.*—The study on mortars initiated last year was continued on a variety of soils for partial replacement and sand in cement mortars. Further tests on use of fly ash in concrete for evolution of relation between split tensile strength and compressive strength and flexural strength of concrete and study of yield strength of concrete were continued. A study of the economics and simplicity of constructions using lean concrete was special feature, an occasion for trial on which occurred in the widening of Mount Road in the City. The mix design also included one for the proposed pre-stressed concrete superstructure for the bridge across Cauvery near Tiruchirappalli on National Highways No. 45.

Consequent on the rapid development of industrial activities in the country there is a phenomenal growth in the number of heavy vehicles moved on our roads. Some of the heavy machinery required for the Neyveli Lignite Project were indivisible and the abnormal load ranging up to 98 tons were required to be moved over the road structures in this State. A pressing need for assessment of the capacity of these structures arose consequently the most important of which concerned a major bridge (Napier Bridge on the South Beach Road of the City). The details of the progressive tests conducted for package loads increasing from 62.98 tons to 98 tons are given in the report. The preliminary calculations revealed that the structural members withstood the load well and the stresses were within limits. Detailed analysis of the behaviour of the members is in progress.

Tests were carried out on the doubly curved shall roofs adopted for the workshop buildings as reported and the scheme on use of pre-stressed slab blocks for culverts sponsored by C.S.I.R. was continued.

(3) *Bitumen and aggregates.*—Schemes carried over from last year in this section included study on the effects of various additives for assessing relative advantages, comparative study of various adhesion tests and comparison of merits of various fillers as cement flysash, etc., in asphaltic concrete pavement construction.

The important field activities were study of the behaviour of "Adhevin-T" used in the experimental stretch laid in mile 2/2 to 3/6 of Mount-Poonamallee High Road with surfaces laid using wet and dry chips. Mix designs prepared for the asphaltic concrete pavement within the municipal limits of Virudhunagar and Aruppukottai towns and for the binder course of the heavy duty asphaltic concrete pavement for certain roads in Madras City deserve mention.

Testing of aggregates from the quarries of Madras State for compilation of a record of test values and for specific requirements to round project in bituminous surfacing were continued.

(4) *Traffic Section*.—Study of the various aspects of the City Traffic contained to occupy the main attention of this section through spot inspections, including to some mufassal stations.

In connection with the scheme for improvement to Mount Road, a National Highway running through the City, works of replacement of roundabouts by Traffic signal and design for adequate carriage way and suggestion of cycle and pedestrian traffic, were required to be studied. A pilot survey for a length of nearly a mile on the busiest section of the road, for various aspects as volume of traffic, classification of traffic, turning movements and speed, was conducted in collaboration with the State Police Department and City Corporation. A survey on the parking requirements of the area, the present availability and proposals for future provisions was also conducted.

During the year the estimate for laying a test track in the premises of Highway Research Station was accorded approval by Government of India and work of preparations of detailed estimates for the proposals for future provisions was also conducted.

During the year the estimates for laying a test track in the premises of Highway Research Station was accorded approval by Government of India and work of preparations of detailed estimates for the proposal commenced.

A traffic engineering cell, headed by a Divisional Engineer was formed during the year, to work on improvements to National Highways roads running through the City.

(5) *Library*.—Besides continuing the work of subjectwise classification, indexing and abstracting of collections of the Library, attention was paid to build up trade the catalogues section for reference regarding equipment purchases. Subject-cum-chronological arrangements of publications of institutions were commenced and gone through partly. The library also played a prominent part in bringing out two Research Notes published by Highways Research Station and preparation of the various reports on tests and surveys coming from the laboratories. A few more additions to membership to Research Institutions and establishment of exchange relationships with technical bodies were achieved.

The library also grew, though on a humble scale, the notable additions being a film on the Napier Bridge Load Test and another on Traffic survey conducted in Mount Road.

The institution attracted quite a number of distinguished visitors including eminent engineers during the year.

LIST OF SCHEMES.

A. Soils Section.

A.1. Stabilized Soil Road Pavements—

A.1.1. Design of sub-base over and sub-grade for the formation of road from Vembar to Kannirajapuram and to Syalgudi.

A.1.2. Design of suitable stabilised soil mix for sub-base for the formation of south approach road to Cauvery Bridge.

A.1.3. Design of pavement section for the proposed road from Madras to Ennore mile 0/0 to 6/2 along the sea coast.

A.1.4. Design of pavement section in the experimental stretches from mile 3/2 to 5/1 of Vedaranyam-Kodikkarai Road.

A.2. Study of Road Failures—

A.2.1. Investigations made to determine the causes for the failure of road structure in miles 214/0 to 218/0 and 221/1 to 8 of G.S.T. Road, N.H. No. 45.

A.2.2. Investigations made to determine the causes for the failure of road structure in miles 0/0 to 7/5 of Tiruvottiyur-Minjur Road.

A.3. Soil investigation for foundation of bridges and buildings—

A.3.1. Sub-soil investigations for construction of an over bridge at Spring Haven's Road near Light House.

A.3.2. Sub-soil investigations for the construction of a causeway at mile 7/5-6 of Vilathikulam-Perunjali Road.

A.3.3. Sub-soil investigations of the construction of wheels and rim manufacturing factory at Korattur.

A.3.4. Sub-soil investigations for the construction of a paper factory building at Pallipalayam near Erode.

A.3.5. Sub-soil investigations for the constructions of a chain factory at Ambattur.

A.4. Miscellaneous—

A.4.1. Field investigations in connection with the widening of the black top surface in the reach 64/0 to 188/0 of N.H. No. 45.

A.4.2. Field investigations in connection with the widening of the black top surface in the reach 215/4 to 290/0, N.H. Nos. 45 and 7.

A.4.3. Suggestions regarding criteria for soil cement in areas subject to periodical inundation based on findings on the behaviour of Ramanathapuram-Mandapam Road.

A.4.4. Training in soil mechanics and boring operations.

A.4.5. Special schemes.

A.4.6. Inspection of the stabilized soil roads by the stabilized soil sub-committee of the Indian Roads Congress.

B. Congress.

Schemes—

B.1. Study of the partial replacement of sand by soil in cement mortar (continued from 1959-60).

B.2. Flyash and clinker as part substitutes in concrete (continued from 1959-60).

B.3. Correlation of compressive strength, flexural strength and split tensile strength.

B.4. Investigation of yield and strength of concrete produced as per gradings specified in Madras Highways Manual.

Special works—

B.5. Design of concrete mix for the prestressed concrete bridge across the Cauvery in Tiruchirappalli.

B.6. Design of lean concrete mix for base course for Mount Road.

B.7. Routine testing of building materials—

B.7.1. Tests on clay building bricks.

B.7.2. Tests on cement.

B.7.3. Compression test on concrete cubes and cylinders.

B.7.4. Tension test on plain and welded rods.

C. Structures.

C.1. Load test on Napier Bridge.

C.2. Tests on doubly curve unit for roofs.

D. Bitumen Section.

D.1. Additives for improving adhesive characteristics of aggregates.

D.2. Influence of Adevia T in the adhesive properties of bitumen.

D.3. Comparative merits of fillers such as cement, fly-ash, granite quarry, dirt lime and combinations of the same in asphalt concrete mix.

D.4. Design of mixes for asphaltic concrete work.

D.4.1. Design of mix for asphaltic concrete work within Virudhunagar municipal limits.

D.4.2. Design of mix for asphaltic concrete work within Aruppukottai municipal limits.

D.4.3. Design of mix for the binder course of the heavy duty pavement for certain roads in Madras City.

D.5. A comparative study of various adhesion tests re-evaluate a reliable method of tests.

E. Aggregate Section.

E.1. Maintaining record of test values of aggregates in Madras City.

E.2. Testing of aggregates for use in black top work.

F. Traffic Section.

Traffic Survey—

(i) Vehicle—Volume and type survey.

(ii) Vehicles turning movement survey.

(iii) Pedestrian traffic survey.

(iv) Recommendations—Installation of automatic signals at Spencer and Willington intersections.

Parking Survey—

(i) Compilation of Parking Inventory.

(ii) Study of usage of parking spaces.

(iii) Cycle parking.

(iv) Analysis and recommendations.

Speed survey—

(i) Santhome High Road.

(ii) Mount Road.

(iii) Intersection of Nethaji Subash Chandra Bose Road and Broadway.

2. *Statistics.*—Accident studies and growth of vehicles.

3. Traffic Development Committee.

4. Laying and equipping a field test rack at Highways Research Station.

Tools and plant.

The Transport and Machinery organisation under the control of the Highways Department comprises of a Transport and Machinery division at Madras and two subdivisions at the regional headquarters at Tiruchirappalli and Coimbatore Circles. All the three workshops attend mainly to the repairs of plants and machinery required for the road construction. The Transport and Machinery division at Madras consists of a workshop wing, a central stores and a repair yard. Under the production side, the productions wing of the workshop manufacture Tar boilers, Drum mixers, hand-boring sets, wheel barrows, water carts, trailers, traffic signs, bridge bearings and water conveying trailers, etc. The aim of the department is to take up the production works with a view to equip the department with necessary tools and plant to keep a high standard of efficiency and economy in Road maintenance to meet the present day increased traffic intensity. The cost of production is considered competitive and the unit rate works out cheaper than the prevailing market rate. It was also proposed to take up the manufacture of hot mix and cold mix plant and it is being tried by making a sample unit. The division also undertake deposit works of local bodies and other Government departments for manufacture of plants like drum mixers and tar boilers, etc.

During the year under review the Central Workshop had undertaken manufacture of 244 items costing about Rs. 5.83 lakhs and repair works from various divisions.

The repair yards at Pudukottai and Coimbatore carried out minor repairs to plants of various divisions of the respective circles.

Purchase of tools and plant.—During the year under review Government sanctioned the purchase of machinery for the construction of road works, equipment for the Central Workshop and for Highways Research Station to an extent of Rs. 21.83 lakhs. Out of which purchase of plant and machinery including equipments for Research Station to an extent of Rs. 10.12 lakhs was made to restrict it to the budget allotment for the year (i.e., Rs. 10 lakhs). Important plants like tractors, concrete mixers, mathematical and scientific instruments were purchased and water carts, hand-bore sets, wheel barrows, tar boilers and drum mixers were got manufactured in the Central Workshop of this department itself. During the year under review much

equipments for the Highways Research Station could not be purchased owing to the non-receipt of import licence though foreign exchange sanction was received. Further proposals for foreign exchange have been submitted to Government of India through the State Government.

Purchase and distribution of Stores.—The extent of purchase and distribution of steel by Central Stores Organisation for the various works was appreciably large and the value of steel materials purchased during the year was Rs. 22.22 lakhs. Stock of stores like spares for plant and machinery were held in the three workshops viz., Madras, Pudukottai and Coimbatore to an extent of Rs. 15 lakhs, 1.20 lakhs and 0.84 lakhs respectively.

Annual inspection of plants.—The road construction machinery working in the divisions in Tiruchirappalli and Coimbatore circles were inspected by the Assistant Engineer, Transport and Machinery Division concerned. The plants in the divisions in Madras Circle were inspected by the Assistant Engineer (Highways, Stock Verification, as the Assistant Engineer, Transport and Machinery, Madras, could not attend to this work owing to the heavy programme in the workshop.

Building for Central Workshop.—The workshop building consisting of Central Workshop and Administrative Block were completed during the year including the formation of roads, fencing all round the workshop and electrification of Administrative Block except electrification of shed No. 1 and providing L.T. lines. The office and the workshop was shifted to the new building during the year.

Construction of 4 new sheds have also been completed except certain additional works. Addition of two bays have been completed during the year.

Other activities.—This department took part in the I.R.C. Exhibition held at Bhopal from 3rd to 10th January 1961.

This department also participated in the Christian Medical College Hospital Exhibition held at Vellore. The multi-colours frontages, working models of bridges, the revolving globe with a tiny car running around it and the charts and cut-outs fixed in the wall space were the main attraction of the exhibitions.

A list of plants available in this department as on 31st March 1961 is appended.

Machinery and Plant Purchased during the year 1960-61.

Serial number and date. (1)	Name of plant. (2)	Quantity. (3)	Authority. (4)	Total Cost. (5) RS. NP.
1. 9th April 1960 ..	Gear Pulley 5 Ton Capacity.	1 No.	1100/59.	1,162 40
2. 14th April 1960 ..	Immersion Vibrator ..	1 No.	D. 3/6913/59 dated 8th January 1960.	1,950 00
3. 15th July 1960 ..	Centrifugal Flower Motor and Strator.	1 No.	D. 3. 3289/60-1 dated 15th July 1960.	3,118 50
4. 27th July 1960 ..	Metallic Tapes 50' ..	89 Nos.	J. E. (P) 4541/60 dated 14th July 1960.	1,509 69
5. 8th August 1960 ..	Pick axes and Mammutties.	24 Nos.	387/60 dated 20th July 1960.	1,624 86

Machinery and plant Purchased during the year 1960-61—cont.

Serial number and date. (1)	Name of plant. (2)	Quantity. (3)	Authority. (4)	Total Cost. (5) RS. NP.
6. 8th August 1960 ..	Tar parlines 40' x 30' ..	4 Nos.	288/60 dated 27th June 1960 of S. O. (B).	1,450 92
7. 12th August 1960 ..	Iron chatties ..	..	388/60 dated 3rd August 1960.	72 46
8. 17th August 1960 ..	Furniture for Investigation Circle.	..	J.E. (P) 1784/60-2 dated 27th July 1960.	3,579 69
9. 24th August 1960 ..	Do.	..	Do.	1,528 92
10. 25th August 1960 ..	Do.	..	Do.	672 29
11. Do.	Do.	..	Do.	482 92
12. 1st September 1960.	Workington Simon Mano tax pumpset.	..	347/60 dated 26th July 1960.	785 00
13. Do.	Graptex panels ..	24 Nos.	J. E. (P) 2687/59 dated 15th July 1960.	2,472 59
14. 3rd September 1960	Graptex Signals Battle six station tell table clock with one year supply and spare diasl.	5000	293/60 dated 15th July 1960.	494 91
15. 14th September 1960.	Furniture for Investigation Circle Office.	..	J. E. (P) 1789/60 dated 27th July 1960.	65 72
16. Do.	Do.	..	Do.	508 00
17. Do.	Do.	..	Do.	1,152 48
18. 21st September 1960.	Tar parlines 40' x 30' ..	..	427/60 dated 5th September 1960.	362 10
19. Do.	Do. 40' x 20' ..	..	474/60 dated 5th September 1960.	426 66
20. Do.	G I. Bolts ..	36 Nos.	389/60 dated 3rd August 1960.	121 78
21. 12th October 1960.	Willys Jeeps ..	3 Nos.	Transport Commissioner Lr. 43721/91/60.	37,164 00
22. 17th October 1960.	50' Tapes and four fold foot Rules.	14	D.O. 387/60 dated 13th October 1960.	190 00
23. Do.	Willys Jeep ..	1	Transport Commissioner Lr. No. 43723/91.	12,388 00
24. 21st October 1960.	Pick axes and Mammutties.	250	P.O. 387/60 dated 12th October 1960.	2,416 13
25. 26th October 1960.	Double and spanners.	10 Nos.	P.O. 611/60 dated 22nd October 1960.	63 00
26. Do.	15 Metres met taps ..	..	P.O.D. 3. 5/60 dated 13th October 1960.	48 00
27. Do.	Double End spanners	10 Nos.	P.O. 608/60 dated 8th October 1960.	92 70
28. 27th October 1960.	T. W. Almirah and T. W. Record Box.	2 Nos.	J.E (P) 1784/60-2 27th July 1960.	296 92

Machinery and plant Purchased during the year 1960-61—cont.

Serial number and date.	Name of plant.	Quantity.	Authority.	Total Cost.	
(1)	(2)	(3)	(4)	(5)	RS. NP.
29. 27th October 1960.	T. W. Almirah and T.W. Record Box.	3 Nos.	J.E. (P) 1784/60-2 27th July 1960.	532	12
30. 29th October 1960.	Levelling Instruments.	1 No.	J.E. (P) 2607/60 dated 13th October 1960.	700	00
31. 31st October 1960.	Box spanner Set Screw driver Cutting plier D. E. spanners	10 Nos. 10 Nos. 10 Nos. 30 Nos.	P.O. 609/60 dated 22nd October 1960.	262	00
32. 14th November 1960.	Cooper Engine and H. P. Engine.	5/6 1 No.	D. 3. 7861/59 dated 7th November 1960.	2,399	84
33. 19th November 1960.	10/7 B. L. Model Concrete Mixer.	1 No.	D. 3. 7861/59 dated 10th August 1960.	7,373	00
34. Do.	Levelling Instrument 12" reversible type.	6	J.E. (P) 2607/60 dated 2nd November 1960	4,200	00
35. Do.	Instrument Boxes	48 Nos.	J.E. (P) 2607/60 dated 18th November 1960	1,713	60
36. 22nd November 1960.	Oil Immersed Stractor.	1 No.	D. 3/3289/60 dated 29th October 1960.	466	40
37. Do.	Levelling Staves	14 Nos.	J.E. (P) 2607/60 dated 10th November 1960	581	20
38. 25th November 1960.	Perdson Tractors	4 Nos.	D. 3. 9139/59-2 dated 18th November 1960	82,476	56
39. 29th November 1960.	Tar Pantins	11 Nos.	P.O. 474/60 dated 18th November 1960	1,994	60
40. 7th December 1960	Pick axes and Mamuties.	39 D.	387/60	2,835	85
41. 13th December 1960	Levelling Instrument	14 Nos.	J.E. (P) 2607/60, dated 2nd November 1960.	9,800	00
42. 1st December 1960 and 19th December 1960.	A. W. Fater casted alide rules.	5 Nos.	J.E. (P) 2607/60, dated 24th November 1960.	433	00
43. 19th December 1960	Pipe dia set 4" to 6"	1 Set	J.E. (P) 8300/60, dated 6th December 1960.	2,272	50
44. 1st December 1960 and 19th December 1960.	Set Square 45° and 600	40 Set	J.E. (P) 2607/60, dated 10th November 1960.	343	72
45. 19th December 1960	French curves	20 Nos.	J.E. (P) 2607/60, dated Nil.	1,081	20
46. 3rd January 1961	Metallic Tapes	29	J.E. (P) 2607/60, dated 24th November 1960.	727	93
47. 7th January 1961	Graphdex cut fit Boxes and Singals.	..	J.E. (P) 4829/60, dated 4th July 1960.	158	92
48. 12th January 1961	Levelling Instrument Staves.	4 Nos.	J.E. (P) 2607/60, dated 2nd November 1960.	166	05

Machinery and plant purchased during the year 1960-61.—cont.

Serial number and date.	Name of plant.	Quantity.	Authority.	Total cost.	
(1)	(2)	(3)	(4)	(5)	RS. NP.
49. 12th October 1960	Willys Jeeps Suppl. Bill.	3 Nos.	Lr. No. 4372/91/60, dated 26th October 1960.	3,574	01
50. 17th October 1960	Do.	1 No.	Lr. No. 44702/91/60, dated 8th October 1960.	1,000	00
51. 31st January 1961	Kirloskar Divisional Diesel Engine 5 H. P.	1 No.	D. 3/7861/59, dated 27th January 1961.	2,187	32
52. Do.	Flexible shaft Grinder	1 No.	D. 3/9201/60 dated 18th December 1960.	1,360	00
53. 15th December 1960	Spares for Vibrator	1 No.	..	140	45
54. 30th December 1960	Tar Paulins	8 Nos.	D.O. 474/60, dated 13th December 1960.	1,205	88
55. 15th February 1961	Kirloskar diesel Engine 20 H. P.	..	D. 3/7861/59 dated 7th February 1961.	5,934	86
56. 22nd February 1961	Winch 2 Ton	1 No.	P.E. 1256/60, dated 4th January 1961.	1,000	00
57. 24th February 1961	Millars concrete Mixer	6 Nos.	D.3. 7861/60, dated 19th November 1960.	44,238	00
58. 24th February 1961	Winch drums, 4, Gear Wheels 3 Numbers S. G. W. 1 No.	..	S.O. No. 274, dated 13th February 1961.	890	00
59. Do.	Winch drum and gear wheel.	2 Nos.	S.O. 221 dated 22nd January 1961.	245	00
60. 9th December 1960 and 3rd January 1961.	S. E. Spanners } D. E. Spanners }	Set.	P.O. 610/60 dated 22nd October 1960.	680	00
61. 1st December 1960	Scholar compensato Plannameter.	1 No.	J.E. (P) 2607/69, dated 24th November 1960.	265	20
62. 3rd February 1961	Ceylar Ghat Tracer	4 Nos.	J.E. (P) 2607/60, dated 1st February 1961.	102	00
63. 28th February 1961	Radiator assembly of Kir' dia' Eng' 20 H.P.	1 No.	D. 3/Misc/61 dated February 1960.	847	88
64. Do.	Gear Wheel and Winch drums.	Set	..	1,115	00
65. 2nd March 1961	Do.	..	..	435	00
66. 8th March 1961	10 T Hydraulic Jack	2 Nos.	P.O. 1038/60, dated 17th March 1961.	417	00
67. 9th March 1961	Gear Wheel and Winch drums.	Set	S.O. 336, dated 9th March 1961.	735	00
68. 14th March 1961	Flanges	..	S.O. 344; dated 14th March 1961.	25	00
69. 18th March 1961	50' Metallic Tapes	10 Nos.	J.E. (P) 61/GNL, dated 1st March 1961.	198	90
70. 22nd March 1961	50' Do.	58 Nos.	J.E. (P) 454/60, dated 14th March 1961.	1,153	6

Machinery and plant purchased during the year 1960-61.

Serial number and date. (1)	Name of plant. (2)	Quantity. (3)	Authority. (4)	Total Cost. (5) RS.	NP. (6)
71. 23rd March 1961 ..	Steel Racks with Sales pick.	..	D. 3./Misc dated 17th February 1961.	8,816	44
72. Do. ..	Ghat Tracers	3 Nos.	J.E. (P) 2607/60, dated 28th February 1961.	306	00
73. Do. ..	Aneroid Baro Metres	2 Nos	J.E. (P) 2,00 / 61 dated 28th February 1960.	85	68
74. 1st December 1960 and 24th March 1961.	Compensation meter.	Plan 5 Nos.	J.E. (P) 2607/60, dated 26th November 1961.	1,326	00
75. 24th March 1961 ..	Gear Wheels	..	S.O. 369 dated, 24th March 1961.	1,510	00
76. 27th March 1961 ..	Cold Mix Plant	3 Nos.	D. 3./17261/60, dated 18th February 1961.	50,783	70
77. 29th March 1961 ..	Concrete Mixer	6 Nos.	D. 3. 7,861/60 dated 19th November 1960.	44,238	00
78. Do. ..	Partoons	1,600	D. 3. Misc./60, dated 12th February 1961.	4,969	28
79. Do. ..	Willys Jeep	1	T. Co. Lr. No. 587/91 dated 25th January 1961.	12,388	00
80. 30th March 1961 ..	Metallic Tape 50'	31 Nos.	J.E. (P) 2607/60, dated 24th March 1961.	616	59
81. Do. ..	Gear Wheels and flanges.	..	S.O. 382 dated 30th March 1961.	260	00
82. Do. ..	Welding Transformer Set.	1 No.	J.E. (P) 8300/60, dated 1st February 1961.	2,729	00
83. Do. ..	20 H. D. Kirloskar Diesel Engine.	1 No.	D. 3./7861/61, dated 25th March 1961.	6,244	11
Total ..				4,00,750	19

STATEMENT I.

Serial number and name of the plant.	Total number of available.	Serial number and name of the plant.	Total number of available.
1 Asphalt Mixers ..	29	16 Power Pumpsets ..	34
2 Bitumen Boilers ..	571	17 Road Rollers ..	316
3 Breakdown Van ..	4	18 Seaman Mixers ..	1
4 Bull Dozers ..	7	19 Stone Crushers ..	3
5 Concrete Mixers ..	47	20 Screed Vibrators ..	25
6 Air Compressor ..	53	21 Tractors ..	59
7 Claycore Drill ..	5	22 Trailers ..	57
8 Cumflow Mixers ..	4	23 Trench Rollers ..	4
9 Dodge Tippers ..	3	24 Sheep foot Rollers ..	9
10 Generators ..	7	25 Welding sets ..	24
11 Graders ..	14	26 Vibrating Table ..	3
12 Immersion Vibrators ..	29	27 Clay diggers ..	10
13 Jeeps ..	34	28 Pneumatic drill ..	10
14 Laboratory Van ..	5	29 Hand Drum Mixers ..	2,382
15 Lorries ..	44		

STATEMENT II.

Statement showing the number of major plants available, their hire charges earned during 1960-61 and the cost of crew propulsion, etc.

Serial number and name of plant. (1)	Number available. (2)	Hire charges earned. (3) RS.	Cost of oil and fuel. (4) RS.	Cost of crew propulsion and running charges. (5) RS.	Expenditure on repairs. (6) RS.	Total operating cost (4)+(5)+(6). (7) RS.
1 Asphaltic Mixer ..	28	1,52,537.30	50,485.25	34,098.47	20,543.85	1,14,097.87
12 Bitumen Boiler ..	361	79,754.37	3,807.50	2,243.95	17,003.14	23,654.59
3 Stone crusher ..	3	..	1,603.04	3,349.63	133.00	4,993.69
4 Air compressor ..	29	9,961.50	1,610.73	2,204.58	3,353.30	7,198.61
5 Clay core drill ..	5	3,210.00	552.35	1,019.15	1,057.00	2,628.50
6 Bull dozer ..	10	91,849.07	32,818.99	14,565.35	45,776.30	93,160.64
7 Dodge Tipper ..	1	11,384.00	9,179.00	3,455.00	2,569.00	15,003.00
8 Tractor ..	60	3,02,633.49	1,15,863.23	1,38,763.85	1,29,349.17	3,83,976.25
9 Grader ..	17	88,337.15	56,039.97	39,776.47	32,617.94	1,28,434.38
10 Hand drum mixer ..	1,392	45,895.06	1,201.84	114.90	13,677.85	14,894.59
11 Jeep Vans ..	37	1,350.00	1,14,933.13	60,531.83	39,883.49	2,14,903.45*
12 Lorries ..	53	2,56,813.38	1,72,141.57	1,12,712.59	1,01,421.81	3,86,275.97
13 Rollers ..	334	22,81,559.95	6,77,133.19	5,79,073.50	2,98,634.22	15,64,840.91
14 Power pumps ..	17	4,889.00	2,240.00	2,912.00	1,393.74	6,545.74
15 Trench Roller ..	3	12,383.00	3,516.00	3,219.00	1,293.00	8,030.00
16 Welding set ..	15	2,210.00	2,075.93	2,061.00	406.00	4,632.93
17 Concrete Mixer ..	39	8,425.15	1,862.33	3,822.84	1,724.30	7,409.47
18 Breakdown lorry ..	4	22,267.00	3,953.00	7,415.20	3,892.06	15,260.26

* Including pickup van.

Contracts.—Statistics showing the contracts awarded for Government and District Board works during the year 1960-61 under different classifications are given below :—

	Government roads.		District Boards..	
	Number.	Cost.	Number.	Cost.
(1)	(2)	(3) RS.	(4)	(5) RS.
Maintenance works ..	4,750	3,10,40,113	3,080	87,17,220
Surfacing works ..	683	83,26,208	241	23,11,277
Bridges, culverts and causeways.	1,149	81,93,628	426	53,69,796

Comparative figures for the previous years are given in Statement I in Annexure 20 and the divisionwise particulars in Statement II.

Report of accident to property and person in the Highways and Rural Works Department during 1960-61.

Name of Division road and (Mileage).	Description of the locality.	Weather condition at that time.	Details of accident.	Probable reasons for the accident.	Remedial measures recommended.	Remedial measures undertaken.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 Tiruvettipuram Special Division—Bridge work at M. 25/3-4 of Arcot-Tindivanam road.	..	Drizzling..	On 27th July 1960 while concreting of the downstream side 'T' beams of span 11 was in progress the contractor's maistry Sri Doraiswamy was standing on the road kerb by the side of an electric light and owing to drizzling the bulb has burnt suddenly and he accidentally fell down on the ground from the deck to scare. Immediately he was admitted in Government Hospital.	..	..	The matter has been reported to the Commissioner for Workmen's compensation, Madras by the Divisional Engineer, Tiruvettipuram.
2 Tiruvettipuram Special Division—Bridge work at M. 25/3-4 of Arcot-Tindivanam road.	..	..	On 28th July 1960 while the contractor's mason S. Arjunan was attending to take up in span 13 he accidentally fell down on the ground from the scaffolding and he was immediately admitted in the Government Hospital at Cheyyar.	..	..	Do.
3 Vellore Division—M. 10/1 of Abdulla puram-Asanampet Alangayam road.	..	Hot	On 14th March 1961 the tractor MSY 5438 was conveying cut stones in Abdullapuram-Asanampet-Alangayam road for contractor and 3 contractor's coolies and the tractor cleaner were sitting on the trailer for loading and unloading of cut stones. While the driver was giving way for a bus to overtake him the tractor moved slowly to the berm at mile 10/1 of the road. At that time one contractor's quarry mazdoor by name Sri Rangan (one of the three contrac-	..	..	The police authorities have conducted the enquiries on 15th March 1961 between 9 a.m. and 1 p.m. and sent the body to Gudivatham Hospital for postmortem Examination. The tractor was also tested by the brake inspector and the tractor and trailer released. Further action is being taken by the Police Department the

A.P.H. 1-3A

4 Kamuthy Special Division—

Forming a road from M. 26/7 of Devakottai—Devipattanam to Valamanoor.

tor's coolies) suddenly fell down in front of the tractor and before the driver could stop the vehicle, the trailer ran over him and sustained severe wounds. The accident took place at about 2-45 p.m. and the cooly succumbed to the injuries at about 3 p.m. The matter was reported to the Police of Pallikonda Station.

Department tractor was lent to the contractors. Therefore the contractor is liable to pay compensation if awarded by the Commissioner.

Tharavai por-tion turning of the road.

The Driver of Tractor MSY 7652 fell down accidentally in turning of the road and wheel of the tractor trailer run over the driver and the driver expired in Ramanad Hospital.

The diver was immediately taken to hospital for treatment where he expired.

Necessary action has been taken to make payment of compensation for the driver.

5 Bodineyakannur—M. 11/5 of Bodimettu road.

Rainy .. On 6th August 1960 tractor 75391 while being turned back at 11/5 of road got off the road and fell into the valley along with the driver.

The driver was given first aid and then admitted in the Government Hospital, Madurai, for treatment. The tractor was lifted from the valley and sent to T. and M. Workshop.

New sheds were erected and labour recruited.

Windy .. Fire accidents to mazdoor shed .. One shed caught fire due to winds. This spread out.

6 Kamuthy—M. 8/2 of Mudukulathur Kamuthy road.

Fair .. On 17th February 1960 tractor MSXHD, 25.043 with trailer MSX. 8329 (HD. 12062) lent on hire on departmental contractor on 17th February 1960 met with an accident at M. 5/2 of Mudukulathur-Kamuthy road, when it was conveying 1½ quarts metal for Mudukulathur-Uthiragosa-mangai road.

The driver of the tractor has escaped with minor injuries and he was admitted into Mudukulathur hospital.

Due to unprecedented rains floods occurred in November 1960.

There was unprecended rains practically for more than a fortnight in the month of November 1960 throughout the whole State accompanied by cyclone in Chingleput district, paralysing the road traffic to a very great extent. Consequently, great havoc had been caused in the coastal districts of Chingleput, South Arcot and Ramanathapuram and considerable damages in other districts also.

There was a conference of the Divisional Engineers (Highways and Rural Works) held at Chepauk, in this connection during December 1960, wherein relief measures for restoring the damages caused were discussed in detail. Based on their recommendations, the Government were addressed to sanction the grants required for the various categories of roads in this office letter, dated 31st December 1960. Accordingly the Government have sanctioned a sum of Rs. 10,95,600 for flood damage repair works on Government roads during 1960-61. So also a sum of Rs. 11.22 lakhs have been sanctioned for carrying out flood damage repair works on District Board and Panchayat Union roads for the financial year 1960-61.

This department was alert in its duty to attend to the flood damage repair works then and there and also have taken prompt action in restoring them all for the use of the general public and vehicular traffic. Details of roads affected and the nature of damages caused are given in the statement attached.

Statement showing the flood and monsoon damages for 1960-61.

(1) Name of road.	(2) Month of occurrence.	(3) Date of interruption of traffic.	(4) Date of restoration of traffic.	(5) Extent of flood damaged caused and with cost of reconstructions of damaged.
Tiruvannamalai-Vettavalam Road ..	5/6	..	November 1960..	24th November..
Tiruvannamalai - Kancheepuram Road.	12/1	..	Do. ..	Do. ..
Arni-Cetpet Road ..	6/1	..	October 1960 ..	7th October 1960.
Acharapakkam-Wandiwash Road	28/8 and 21/6	..	November 1960..	24th November 1960.
Arcot-Tindivanam Road ..	25/3-4	..	September 1960..	22nd September 1960.
Arkonam-Ocheri Road causeway at..	8/3	..	November 1960..	23rd November 1960.
Kancheepuram-Wandiwash Road ..	11/6-7	..	Do. ..	22nd November 1960.
<i>Thanjavur Division.</i>				
Sengipattai-Pattukottai ..	6/0-9/0	..	November 1960	..
Do. ..	9/0-12/0	..	Do.	..
Thogur-Ayyampet Road ..	10/0, 15/0 and 15/0-20/0.	..	Do.	..
Lower Anicut to Tanjore ..	..	..	Do.	..
Grand Anicut to Cauveripattinam Road.	0/0-5/0 and 5/0-10/0.	..	Do.	..
Tittai-Mettur Road ..	8/0-12/0	..	Do.	..
Salanganalam-Papanasam ..	..	..	Do.	..
Orathanad-Tiruvonam Road ..	15/2-27/2	..	Do.	..
Vallam-Orathanad Road ..	7/0-13/4	..	Do.	..
Thanjavur-Pattukottai Road ..	1/0-10/0	..	Do.	..
Thanjavur-Vaduvur - Mannaagudy Road.	4/0-9/0	..	Do.	..
Thanjavur-Nagespattinam Road ..	9/0-24/0	..	Do.	..

Statement showing the flood and monsoon damages for 1960-61.

Name of roads. (1)	Mileage. (2)	Month of occurrence. (3)	Date of interruption of traffic. (4)	Date of restoration of traffic. (5)	Extent of flood damages caused and with cost of reconstruction of damages. (6)
MADRAS CIRCLE.					
<i>Chingleput Division.</i>					
Madras-Dindigul Road ..	63/2-3 ..	November 1960..	12th November 1960.	19th November 1960.	42,000
Do. ..	20/1-4, 21/5-6, 21/1-8, 23/3-4.	Do. ..	20th November 1960.	24th November 1960.	25,000
Wandalore-Walseja Road ..	21/1-2, 25/6-7, 26/3-6.	Do. ..	15th November 1960.	21st November 1960.	13,000
Wandalore-Kelambakkam Road ..	22/6, 24/2-5, 26/4-5, 31/1-3.	Do. ..	20th November 1960.	Do. ..	32,000
Singaperumal Koil-Sriperumandur Road ..	7/4 ..	Do. ..	15th November 1960.	20th November 1960.	6,000
Madras-Mahabalipuram Road ..	22/6-7 ..	Do. ..	11th November 1960.	14th November 1960.	10,000
Kelambakkam-Kovalam Road ..	1/1 ..	Do. ..	Do. ..	Do. ..	20,000
Sadras Surreppan Road at ..	21/1 ..	Do. ..	Do. ..	Do. ..	2,500
South Arcot Grattrin Road ..	0/2, 3, 5, 6, 1/8, 2/3-2/5.	Do. ..	19th November 1960.	25th November 1960.	15,000
Maduranthagam-Chunampet Road ..	63/3 ..	Do. ..	12th November 1960.	19th November 1960.	1,500
Cheyyar-Wandiwash Road ..	0/7 ..	Do. ..	14th November 1960.	16th November 1960.	25,000
Maduranthagam-Chunampet Road ..	Do. ..	Do. ..	Do. ..	17th November 1960.	5,000
Madras-Pulicat Road ..	27/1 ..	Do. ..	13th November 1960.	15th November 1960.	20,000
<i>North Arcot Division.</i>					
Cuddalore-Chittoor Road ..	64/5 ..	November 1960..	21st November 1960.	24th November 1960.	....

Pattukottai-Arantangi (via) Nageram.	0/0-26/0-	Do.	..	..	15,000
Mannargudi-Orathanad Road ..	3/0-8/0	Do.	..	..	10,000
Kumbakonam-Sirkali Road ..	2/0-12/5	Do.	..	..	5,000
Kumbakonam-Karikal Road ..	5/0-12/5	Do.	..	..	5,000
Aduthurai-Tirupananthal Road ..	0/1-6/4	Do.	..	..	5,000
Kuttalam-Pandanallur ..	3/6-6/1	Do.	..	..	22,000
Kumbakonam-Kodavasal Road ..	..	Do.	..	..	15,000
Nagore-Nannilam-Nandiyarkoil Road.	25/0-29/1	Do.	..	..	15,000
Kumbakonam-Coleroon Road ..	0/2-5/4	Do.	..	..	10,000
Thanjavur-Thiruvalli Road ..	..	Do.	..	..	5,500
Kumbakonam to Mannargudy Road ..	..	Do.	..	..	1,000
Kumbakonam to Mannargudi Road ..	6/5-6/7	Do.	..	..	1,000
Arantangi-Pudupatti Road ..	3/7	Do.	..	..	1,000
Madukkur-Peruvalandan Road ..	..	Do.	..	..	2,000
Arantangi-Mimisal Road ..	..	Do.	..	..	25,000
Kattumavadi-Mimisal Road ..	22/2-52/0	Do.	..	..	12,000
<i>Supplemental items.</i>					
Restoration of eroded berms in Mannargudy-Muthupet Road.	5/7-7/6	Do.	..	..	5,000
Restoration of eroded berms in Mannargudy-Muthupet Road.	8/0-11/6	Do.	..	..	10,000
<i>District Board Works.</i>					
Mannargudy-Pattukottai (via) Mahadevapattinam.	..	Do.	..	..	10,000
Vallam-Alakudy Road ..	..	Do.	..	..	7,000
Senampatti-Vallam Road ..	..	Do.	..	..	2,000
Thirumalaisamudram to Kumrumpoondi.	..	Do.	..	..	9,000

Statement showing the flood and monsoon damages for 1960-61—cont.

Name of roads. (1)	Mileage. (2)	Month of occurrence. (3)	Date of interruption to traffic. (4)	Date of restoration of traffic. (5)	Extent of flood damage caused and with cost of reconstruction of damages. (6)
District Board Works—cont.					
<i>North Arcot Division.</i>					
Thanjavur-Budalur Road ..	2/0-3/0	..	November 1960.	....	Rs. 11,000
Reddipalayam V. Road ..	..	..	Do.	....	5,000
Alakkudy-Perambur Road ..	..	..	Do.	....	10,000
Perambur-Rishiyur Road ..	..	..	Do.	....	1,000
Rajapayarachavadi to Rayapuram ..	2/1-3	..	Do.	....	1,000
Ammappet to Vaduvur Road..	..	..	Do.	....	1,000
Mannargudy to Pattukottai Road (via) Mahadevapattinam.	..	..	Do.	....	15,000
Muthupet-Mimisai Road ..	2/0-8/0	..	Do.	....	500
Reconstructing culvert at Mileage 4/4 of Mannargudy-Thirumakkottai Road.	..	..	Do.	....	5,000
Providing Reve'ment on the approach of causeway at 9/3 and providing granite at 9/4 of Mannargudy- Thirumakkottai road.	..	..	Do.	....	8,000
<i>Pattukottai Panchayat.</i>					
Serumelkudi V. Road ..	..	..	Do.	....	1,000
Vattakudy V. Road ..	..	..	Do.	....	1,000
Kothakudy-Pannavayal Road ..	..	..	Do.	....	1,000
Nambivayal Alivalam ..	..	..	Do.	....	1,000
<i>Kumbakonam Panchayat.</i>					
All roads ..	..	..	Do.	....	28,700
Panchayat roads ..	..	..	Do.	....	1,300
Providing Modasal work at 23/4 Kumbakonam—Korandacheri— Lakshmanagudi road and filling side.	24/8	..	Do.	....	1,800
<i>Government works (Permanent).</i>					
Constructing culvert at M. 6/7 and 7/1 of Kumbakonam—Mannargudy Road.	....	Do.	....	....	5,000
<i>Thanjavur (Panchayat) works.</i>					
Flood damage repairs to Sakkottai to Annalagraharam Road.	....	Do.	....	....	5,000
Flood damage repairs to Kalambaram to Devangudi V. Road.	....	Do.	....	....	4,000
Flood damage repairs to Korukkai V. Road.	....	Do.	....	....	5,000
Flood damage repairs to Devangudi to Kothangudi Road.	....	Do.	....	....	5,000
Flood damage repairs to Thiruppiram- biam V. Road.	....	Do.	....	....	5,000
Flood damage repairs to culvert at mile 0/4 of Bevangudi to Kothan- gudi.	....	Do.	....	....	850
<i>Thanjavur (District Board Works).</i>					
Flood damage repairs to Mannargudi to Thirumakkottai Road.	....	Do.	....	....	4,900
Flood damage repairs to Tiruvilai- marudur-Kovilacheri Road M.	2/4-8	Do.	....	....	4,950
Flood damage repairs to Annachattam- Tirunagesvaram road M.	0/2-8	..	November 1960.	....	4,700
Flood damage repairs Tirunelakudi to Kadalangudi road M.	0/1-5	..	Do.	....	4,600
Flood damage repairs to Tanjore- Budalur road M.	2/0-8/0	..	Do.	....	11,000
Flood damage repairs to Reddi- palayam V. Road.	....	Do.	....	....	8,300
Flood damage repairs to Thanjavur to Vilar.	....	Do.	....	....	5,600

Statement showing the flood and monsoon damages for 1960-61.

Name of road.	Mileage.	Month of Occurrence.	Date of interruption to traffic.	Date of restoration of traffic.	Extent of flood damage caused and with cost of reconstruction of damages.
(1)	(2)	(3)	(4)	(5)	(6)
South Arcot Division—Cuddalore.					
Madras-Tiruchi-Dindigul Road	64/0-69/0	..	November 1960.	11th November 1960 to 30th November 1960.	64/2—Revetment berms washed off.
Do.	Do.	Do.	Do.	....	64/3—Revetment berms washed off.
Do.	Do.	Do.	Do.	....	64/2, 3—Only revetment works.
				....	76/8—Weak culvert.
				....	77/1—Weak culvert.
				....	77/4—Weak culvert.
				....	78/3—Weak culvert.
				....	79/3—Weak culvert.
				....	85/1—Weak bridge.
				....	88/5—Weak bridge.
				....	86/4—Permanent restoration.
				....	Diversion road to N.H. from 84/3 to 87/1.
Do.	Do.	Do.	Do.	....	89/4 to 97/5 Pot holes developed in all furrows.
Do.	Do.	Do.	Do.	....	97/6, 7—Damages to berms and surface badly affected.
Do.	Do.	Do.	Do.	....	99/1, 3—
				....	99/4, 5—Damages to berms and surface badly affected.
Do.	Do.	Do.	Do.	....	100/2, 7, 102/2, 3, 7, 8, 103/6-8, 104/1-4.
Do.	Do.	Do.	Do.	....	104/5—B. T. surface work out.
Do.	Do.	Do.	Do.	....	110/0—Berms eroded.
				....	110/5—Wing walls of culvert on both sides with arched rings cracked and developed falling out. On the intruders of the arch 3,000 bricks have fallen down and cracks developed. A arched culvert 1 span of 8'-9".
				....	110/—About of 20 per cent of the the reachesurface.
				....	120/0—was damaged and requires repairs by wearing coat.

Do.	Do.	Do.	Do.	....	120/0—was damaged and requires repairs by wearing coat.
Do.	Do.	Do.	Do.	....	130/0—was damaged and requires repairs by wearing coat.
					134/5-6 Black to surface badly pitted.
					138/3-4.
					134/2, 3—Revetment for the bridge damaged.
					132/2, 3—Revetment for the bridge damaged.
					146/5—Revetment for the bridge washed away.
					141/7-8 B. T. surface badly pitted.
					143/1-6—B. T. surface badly pitted.
Chidambaram-Shiyali Road	26/0-31/2	..	Do.	....	27/7, 30/7, 31/7—Road breached 2 rows of 2' diameter pipe culvert and one row of 2' pipe culvert has to be provided.
					30/1-4—The entire B.T. has been completely washed out. Berms badly secured to.
					27/3, 28/8—Surface has been completely peeled out to a length of 50' each on both ends of the culvert to be constructed.
Chidambaram-Manargudi Road	0/0-8/0	..	Do.	....	5/1, 6/4—Arched culvert have been badly damaged require repairs.
					2/1, 2, 3/4 and 8, 4/1-6 and 5/2 to 5, 6/5 to 8—Surface badly pitted.
Do.	8/1 to 13/0	..	Do.	....	7/1-8—Side berms been badly secured. Casurina piles have to be driven at mile 7/1-8 to prevent further erosions. Earth have to be carted for closing these scours.
					8/1-6, 9/1-3, 10/3, 11/5, 12/4-6—B.T. Surface has been badly pitted.
					8/8, 11/3-4 and 6-8/3 to 5—The last-erite berms in Komarakshy street portion have been badly secured. Requires immediate renewals.
Do.	13/0-15/6	..	Do.	....	13/2, 3 and 5—Berms have been scoured surface pitted in M. 14/6.

Statement showing the flood and monsoon damages for 1960-61—cont.

Name of road. (1)	Mileage. (2)	Month of occurrence. (3)	Date of interruption to traffic. (4)	Date of restoration of traffic. (5)	Extent of flood damage caused and with cost of reconstruction of damaged. (6)
<i>South Arcot division—Cuddalore—cont.</i>					
Mannargudy-Eyyalur Road	0/0 to 6/3	November 1960.	11th November 1960 to 30th November 1960.	....	1/5, 1/6, 1/7, 3/1, 5/7—Arched culverts have been collapsed requires reconstruction. 2/4, 3/8—Surface scoured 5/1-2—Berms eroded. 0/1-8—Surface badly pitted. 2/1-8—Metal surface in Mile 2/2-7 have been scoured. 7/8, 8/1, 9/1—Culverts badly damaged. 1/8, 3/7-8—Surface scoured. 3/1-8—Surface badly pitted. 5/3—Road dam damaged requires repair. 6/5-8—Road surface scoured. 12/7—Deep pot holes. 13/4, 14/4 15/1-4—B. T. Surface along with W.B.M. have been completely washed out having very deep pot holes 1' to 18'-6" deep. 0/0-0/2—The entire granite surface has been scoured and peeled out. Requires immediate renewals of three inches (3") Thick to width of 12'. 16/2-4—Very deep pot holes 1'-6" to 2' deep. 17/1-4—B.T. Surface together with W.B.M. 20/1-8 21/1-4 —Surface washed off completely. Complete—renewals at least 2" thick to be given. 20/2—Arch culvert damaged.
Puthur Road	0/0-9/5	Do.	Do.	....	
Killai Road	1/7-7/1	Do.	Do.	....	
Vridhachalam-Porto Novo Road	12/0-16/4	Do.	Do.	....	
Vallampadugai Railway Feeder Road.	0/0-0/2	Do.	Do.	....	
Vridhachalam-Porto Novo Road	16/0-22/0	Do.	Do.	....	
16/1—South and north-eastern wings damaged and gone out of plumb, appreciably. To be filled in the water side with sand. Bags supported by casuarina piles, etc., as per instructions given by the Divisional Engineer (H), Cuddalore. 4/1-4 B.T. surface washed out. 6/7-8 and 7/1-2 W.B.M. have been completely washed out leaving very deep pot hole. 9/5 and 6 W.B.M. base washed out. 13/1-8 Casuring piles driven on right side fallen done and earth work done washed off. 132/2 Deep pot holes. 134/4 and 5 Deep pot holes. 137/7-8 Newly laid B.T. surface sunk very badly. 1 1/2" renewals 3" thick to be for 30' in 132/2 and 1.00' in 133/4-5. 5" renewals on 137/7-8 and B.T. over them. 0/7-4/3 Scours to half width of road. 0/5, 6, 0/7, 8 Metal surface completely washed off. 1/1-4 3/3 Pipe culvert badly scoured 2" thick renewal to be given in down stream approach for culvert at 3/3. Earth work for scours 0/5-6 and 1/3, etc., to be done. 6/3 Scours on the approaches of the submersible culvert. 8/8 Brick arch culvert damaged. Earth work and sectioning at 6/2 for one furlong to be done. Entire stretches. Berms badly eroded. 25/7-8 surface pitted 5" renewal required.					
Kesrapalayam-Sethiathope Road	9/4-11/2	Do.	Do.	....	
Vikravandi Lower Anicut Road	128 to 132/0	Do.	Do.	....	
Do.	M. 132/0-138/0.	Do.	Do.	....	
Solathiram-Srimushanam Road	0-6/0	Do.	Do.	....	
Do.	6/0-12/4	Do.	Do.	....	
Chidambaram-Bhuvanagiri Road	25/2, 26/0, 0/0-3/5	Do.	Do.	....	

Statement showing the flood and monsoon damages for 1960-61—cont.

Name of roads. (1)	Mileage. (2)	Month of Occurrence. (3)	Date of interruption to traffic. (4)	Date of resumption of traffic. (5)	Extent of flood damage caused and with cost of reconstruction of damages. (6)
<i>South Arcot division—Cuddalore—cont.</i>					
Vridhaachalam-Portonovo Road	22/0-28/0	November 1960.	11th to 30th November 1960.	....	24/1-8 Riding surface badly pitted. 25/1-8. 26/5 Culvert damaged. 28/5 Scours due to breach of the channel bund and they were closed by driving casuarina posts, etc. 20/1-4 Berms scoured completely. Earth has to be carted from 16/6 to 18/3 to 20/1-4 as there is still water stagnation at 20/1-4. 9/7, 8. Surface affected badly. 10/3, 11/1, 11/1-5. Seal coat with sand mastic to be given in 11/1-5. 12/1, 15/3-8, 14/3, 13/7 and 12/1 Surface was pitted badly; Bridge at 14/3 damaged; culverts in 12/1, 15/4 damaged badly. Earth work for berms has to be done. 6/5-8, 7/1-2 Berms completely washed out. 8/3-8, 9/1-6, 10/5, 8, 11/1 8. Scours and gullies formed. 0/4 Breach to a length of 50, 0/1-8, 1/6-8 3/1-7, Surface damaged badly and there are deep scours. 6/1 Road breached to a width of 18' and culvert damaged. 3/8-4/1 Surface badly pitted. 0/1 Chivert in M. 0/1 damaged Surface also affected badly over the road dam in 0/1. 0/1—Breach to a length of 600' surface badly affected. 11/7-8 } Wide gullies formed and 12/1-5 } berms scoured. 13/4-6 }
Puduchatram-Portonovo Road	16/6	..	Do.	....	
Cuddalore-Chidambaram Road	7/0-12/0	..	Do.	....	
Do.	12/0-20/7	..	Do.	....	
Cuddalore-Vridhaachalam Road	4/2-12/9	..	Do.	....	
Kullanchavadi cross Road	0/0-3/7	..	Do.	....	
Cuddalore-Chidambaram Road	3/7-7/0	..	Do.	....	
Alapakkam Railway feeder Road	.....	..	Do.	....	
Karalkadu cross Road	.....	..	Do.	....	
Perumal Tank Bund Road	10/3-14/0	..	Do.	....	
Urgent repairs to the bridge at M. 14/3 of Cuddalore-Chidambaram Road.	14/0-19/4	..	Do.	....	14/5, 6 16/5, 8 17/1-7 18/1-8 19/1-2 16/5-8 18/3, 6, 7 H.L. Metal Surface badly pitted. 14/3—Bridge damaged. For the safety of traffic and the bridge and in order to avoid any probable interruption of the traffic diversion road has been opened. Scoured portions around the third pier from Cuddalore is being filled up with sand bags and casuarina supports have been provi- ded to support the slabs on either side of the pier. Since the site selected for the diversion road was hard enough it did not require much each work. 8/6—Cut stones broken wings broken in the existing bridge in 8/6. 1/7—Approaches badly eroded. Quad- rant portions of the revetment fallen down. Dangerous and deep erosions had developed in the newly formed approaches.
Urgent repairs to the bridge at M. 8/6 of Chidambaram-Mannargudi Road. Do.	1/7	..	Do.	....	
<i>Vridhaachalam Subdivision.</i>					
Vridhaachalam-Ulundurpet Road	0/0-7/0	..	November 1960	11th to 30th November 1960.	3/1—Diversion road for the damaged culvert at mile 3/1 washed away. 2/8—Road at 2/8 breached.
Forming a diversion road to the breach at M. 2/8 of Vridhaachalam-Porto- novo Road.	.....	..	Do.	....	The road at mile 2/8 is breached.
Repairs to the road dip at 2/8 of Vridham-Portonovo Road.	.....	..	Do.	....	2/2—The culvert at M. 2/2 has been damaged.
Forming a diversion road for the damaged culvert at 2/2 of Vridha- chalam-Portonovo Road.	.....	..	Do.	....	2/2—Damaged culvert is propos- reconstruction.
Reconstructing the damaged culvert at M. 2/2 of Vridhaachalam-Porto- novo Road.	.....	..	Do.	....	

Statement showing the flood and monsoon damages for 1960-61—cont.

Name of roads. (1)	Mileage. (2)	Month of occurrence. (3)	Date of interruption to traffic. (4)	Date of restoration of traffic. (5)	Extent of flood damage caused and with cost of reconstruction of damages. (6)
<i>Vridhachalam Subdivision—cont.</i>					
Vridhachalam-Rejandrapattanam Road 3/8-8/0. Urgent repairs for closing the breaches at M. 4/8 of Vridha- chalam-Rejandrapattanam Road.		November 1960.	11th to 30th November 1960.	....	4/8—Damaged portion of the Vellar Causeway again breached.
Memathur channel Road. .. M. 0/3-3/7	..	Do.	Do.	....	0/3-3/7—Deep scours on berms.
Vridhachalam-Tholudur Road .. M. 0/0-10/0	..	Do.	Do.	....	3/4—C.C. Surface over the Causeway damaged.
Cuddalore-Vridhachalam-Salem Road. 32/0-32/0.	..	Do.	Do.	....	37/3-4, 39/2, 3, 4 Black top surface badly pitted up, sunken and damaged.
Plandurai Aniout Road .. 0/0-0/8	..	Do.	Do.	....	37/3—Culvert ventway apron flooring and retaining wall of flooring dama- ged washed away.
Forming diversion for the collapsed culvert at M. 14/2 of Cuddalore- Vridhachalam Road.		Do.	Do.	....	0/7 Diversion road for the co lap sed culvert washed away.
Reconstructing the culvert at M. 14/2 of Cuddalore Vridhachalam Road.		Do.	Do.	....	14/2 Culvert collapsed and so diversion road formed already.
Cuddalore-Vridhachalam Road .. 12/0-32/0	..	Do.	Do.	....	14/2 Collapsed culvert to be recons- tructed.
Carseway at M. 110/9 of V.L.A. Road.		Do.	Do.	....	12/0 to 32/0 Deep scours due to over- flow of floods. Revetment fallen down and washed away at mile 19/8, 21/2 and 29/6.
					110/3 Deep scours has taken place, the upstream side of Gadilam Causeway in the Non-vented portion adjoining the retaining wall on Lower Aniout side approach.

V.L.A. road 110/2-128/0	Do.	Do.	....	110/2, 128/0 Berms on the high embankment in M. 121/6 to 122/3 deeply scoured. Revetment at M. 124/6 to 125/4 disturbed. Brea- ched at M. 127/4-5.
Kullanchavadi-Kattugudalur Road .. 0/1-16/4	Do.	Do.	....	15/4-8 Metal surface sunk and requires renewals.
Cuddalore—Vridhachalam—Salem Road. .. 42/0-52/0	Do.	Do.	....	45/5-7, 42/1-8, 47-3/5—Black top surface sunk in many places.
Do. .. 52/0-62/0	Do.	Do.	....	54/7-8, 56/5-6—B. T. surface sunk. 57/7-8 59/4-8—Water bound Macadam surface sunk.
Kallakurichi-Koothagudi Road .. 10/0-15/4	Do.	Do.	....	11/6, 11/4, 11/1, 10/3, 10/2, 13/1, 12/2, 12/4—Culverts damaged required reconstruction.
<i>Cuddalore sub-division.</i>				
Cuddalore-Chittur Road .. 0/0-10/0	..	November 1960.	11th to 30th November 1960.	7/3, 4, 6/2-7, 3/8, 4/4, 5, 6/2-7—B.T. Surfaces at mile 7/3-4 full of pot holes and requires renewals, berms in the built up area in slushy and requires sanding.
Do. .. 10/0-17/0	Do.	Do.	Do.	14/1-8, 15/1-8—B. T. surface washed out 14/1-8 berms affected.
Do. .. 17/0-23/0	Do.	Do.	Do.	17/2, 19/1-3, 19/1-3—B. T. surface worn out in M. 17/2 19/1-3.
Do. .. 23/0-30/0	Do.	Do.	Do.	23/7-8, 26/1-25/4, 5, 28/1-8, 27/1-8 B.T. surface worn out in miles 27/7-8, 26/4-5, 26/1-8, 27/1-8, 28/1-8.
V. L. A. Road 92/3-98/0	Do.	Do.	Do.	92/3-98/0 Berms affected. W.B. Surface affected.
Do. .. 98/0-104/0	Do.	Do.	Do.	98/0-104 Berms Culverts at M. 100/4 103/2, 102/6, badly affected. Para- pet walls damaged.

Statement showing flood and monsoon damages in 1960-61—cont.

Name of roads. (1)	Mileage. (2)	Month of occurrence. (3)	Date of interruption of traffic. (4)	Date of restoration of traffic. (5)	Extent of flood damage caused and with cost of reconstruction of damages. (6)
<i>Cuddalore sub-division—cont.</i>					
V.L.A. Road ..	104/0-110/2	..	November 1960. 11th to 30th November 1960.	....	104/3, 105/1-8 108/5-6 110/1-2 W.B.M. Surface worn out in mile 104/3 105/1-8, 108/5, 6, 110/1-2.
Cuddalore-Tirukoilur Ancient Road..	0/0-8/0	..	Do.	....	2/1-4, 3/5-8, 4/1-2 Surface of the road is fully spotted and erotions have been formed river portion in mile 1/1-2 have been affected and sand deposited.
Do.	8/0-14/6	..	Do.	....	8/0-14/6 W.B.M. surface affected culverts damaged.
Do.	16/3-25/0	..	Do.	....	18/1-8, 19/1-8, 20/1-8, 23/1-8, 21/1, 2 3, 6, 22/1-8—W.B.M. affected in Mile 18/1-8 19/1-8, 20/1-8, 23/1-8, 21/1-2, 3, 6 and 22/1-8.
Do.	M. 25/0-30/0	..	Do.	....	26/1-8, 27/1-8—W.B.M. surface affected in Miles 26/1-8 and 27/1-8.
Cuddalore-Pallianalur Road ..	10/0-14-0	..	Do.	....	10/0-14/0—Berms affected.
Villupuram-Pondi Road ..	15/3-23/0	..	Do.	....	15/3-23/0—B. T. Pot holes developed.
Do.	23/0-25/0	..	Do.	....	23/0-25/0—B. T.—Pot holes deve- loped.
Cuddalore-Pondi Road..	113/3-117/3	..	Do.	....	114/1-6, 116/7, 117, 2-3—Road surface badly affected. Renewals proposed
Do.	117/4-118/3	..	Do.	....	117/7-8—B. T. surface completely pitted and potholes have been formed.
Villupuram-Tiruvannamalai Road ..	26/0-36/0	..	Do.	....	26-36/0—Damages to berms road surface and culverts.
Do.	36/-45/5	..	Do.	....	36/0-45/5—Damages to berms road surface and culverts.
Do.	...	..	Do.	....	3/7-9/0—Damages to berms road surface and culverts.
Villupuram-Gingee Road ..	3/749/0	..	Do.	....	3/7-9/0—Damages to berms road surface and culverts.
Cuddalore-Chidambaram Road.	0/0-3/7	..	Do.	....	1/6-7, 2/8, 3/2-7, 2/2—Surface badly affected.
Arungunam Road ..	0/0-2/6	..	Do.	....	0/3-1/6—Berms washed off in Mile 0/3-1/6 Surface badly affected.
Sihyasar Road ..	..	..	Do.	....	1/3—Culvert completely collapsed.
Villupuram-Gingee Road ..	9/0-15/0	..	Do.	....	9/0-15/0—Berms washed off. Road surface affected culvert affected.
<i>Tindivanam sub-division.</i>					
Merkanam-Tindivanam-Gingee Road.	0/0-10/0	..	November 1960. 11th to 30th November 1960.	....	0/0-10/0—Berms washed away.
Chunampet Road ..	0/0-1/7	..	Do.	....	0/0-1/7—Berms washed away.
Mortandi-Tindivanam Road ..	...	..	Do.	....	15/0-20/0—Berms washed away.
Do.	...	..	Do.	....	20/0-24/0—Berms washed away.
Tindivanam-Vellimedupet Road ..	...	..	Do.	....	28/5—Protective flood affected portion.
Merkanam-Tindivanam-Gingee Road.	...	..	Do.	....	20/2-22/3—Berms washed away.
Do.	89/0-95/0	..	Do.	....	28/0-31/0—Berms washed away.
Mylam Pondi Road ..	...	..	Do.	....	91/3—Wing walls washed away.
Mortandi-Tindivanam Road ..	12/6	..	Do.	....	9/3—Culvert collapsed.
Merkanam-Pondi Road ..	...	..	Do.	....	12/6—Road washed away.
Mortandi-Tindivanam Road ..	12/6	..	Do.	....	9/3—Culvert collapsed.
Merkanam Pondi Road ..	...	..	Do.	....	12/6—Road washed away.
Mortandi-Tindivanam Road ..	...	..	Do.	....	7/3-15/0—B.T. surface floated.
Mortandi-Tindivanam Road ..	...	..	Do.	....	0/0-10/0—Berms washed away to made of original condition.
Mortandi-Tindivanam Road ..	...	..	Do.	....	10/0-18/2—Berms washed away to made of original condition.
Mortandi-Tindivanam Road ..	...	..	Do.	....	7/3-15/0—Gravelled berms to be renewed.

Statement showing the flood and monsoon damages for 1960-61—cont.

Name of roads.	Mileage (2)	Month of Occurrence. (3)	Date of interruption to traffic. (4)	Date of restoration of traffic. (5)	Extent of flood damage caused and with cost of reconstruction of damage. (6)
(1)					
Villupuram-Gingee Road	.. 15-23	November 1960	11th to 30th November 1960.	..	17/1-4, 18/5-8, 19/2-5, 20/2, 3, 5 and 6, 21/2, 3, 7 and 8, 22/3-6—B.T. sur- face badly worn out and berms washed off. Culverts affected at miles 20/3 and 7. Road dam at mile 18/6 washed off.
Gingee-Chetpet Road ..	.. 28/7-31/0	Do.	Do.	..	Road dam at mile 28/1 29/14 and 30/7 Road dam affected at mile 28/1, 29/4 and 30/7 Berms washed off. Culvert affected.
Gingee-Chetpet Road ..	.. 31-38/6	Do.	Do.	..	Road dam at Mile 31/2, 37/8, 36/7, 35/7, 3, 1, 33/4, 32/7, 32/1, 31/8, Culvert at Mile 31/1, 36/2—Road dam washed off and metals run away. Culvert affected and berms washed off.
Tindivanam-Gingee-Tiruvannamalai Road.	40/50/7	Do.	Do.	..	40/1-3 and 50/2-4 Road dam at 49/8 —Berms washed off. Road surface worn out and road dam affected.
Pennathur-Chetpet Road	.. 4/5 to 16/5	Do.	Do.	..	Road dam at mile 16/1-4 and 15/4 and 14/7 Na. row culvert at mile 6/6— Berms washed off. Road dam affected and metal-run off. Culverts affected.
<i>Tirukattur sub-division.</i>					
Ulundurpet-Salem Road	.. 53/3	November 1960.	11th to 30th November 1960.	..	53/3—The berms of the approaches to Manimuttar washed out and the surface sunk (last year breached portion).
Ulundurpet-Salem Road	.. 51-61/0	Do	Do.	..	43/3—Retaining wall with stopped out springs washed off.
					52/7—Katcha rough stone walls of the culvert damaged and one cut stone broken.
Ulundurpet-Salem Road	.. 61-73/4	..	Do.	..	61/0-73/4—About 20 per cent of the surface was damaged with berms and requires B.T. widening.
Ulundurpet-Salem Road	.. 61-73/4	..	Do.	..	36-46—About 20 per cent of the surface was damaged with berms and requires B.T. widening.
Ulundurpet-Salem Road	.. 46-51/0	..	Do.	..	46/0-51/0—About 20 per cent of the surface was damaged with berms and requires B.T. widening.
Ulundurpet-Salem Road	.. 51/61/0	..	Do.	..	51/0-61/0—About 20 per cent of the surface was damaged with berms and requires B.T. widening.
Ulundurpet-Salem Road	.. 64/2	..	Do.	..	64/2—This cut stone slabs of 3 vents of 5 feet has broken and Katcha rough walls damaged.
Vriddhachalam-Ulundurpet Road	.. 7/0-13/3	..	Do.	..	7/0-13/3—About 20 per cent of the B.T. surface damaged with berms.
Tirukoilur-Thygarugam Road	.. 0/0-19/6	..	Do.	..	0/0-5/0—About 20 per cent of the surface damaged with berms.
Kallakurichi-Koothagudi Road	.. 0/0-10/0	..	Do.	..	5/0-12/0—About 20 per cent of the B.T. surface damaged with berms.
Kallakurichi-Sankarapuram Road	.. 0/0-11/0	..	Do.	..	12/0-19/6—About 20 per cent of the B.T. surface damaged with berms.
Kallakurichi-Kachirapalayam Road..	0/0-8/5	..	Do.	..	0/0-10/0—About 20 per cent of the B.T. surface damaged with berms.
Asanur Road ..	.. 8/8-14/0	..	Do.	..	0/0-11/0—About 20 per cent of the B.T. surface damaged with berms.
Do.	.. 14/0-19/0	..	Do.	..	8/8-14-0 About 20 per cent of W.B.M surface damaged with berms.
Sankarapuram Moongithursipattu Road	0/0-11/2	..	Do.	..	14/19/0—About 20 percent of W.B.M. surface damaged with berms.
Kallakurichi-Sankarapuram Road	.. 7-4	..	Do.	..	0/0-11/2—About 20 per cent of W.B.M. surface damaged with berms.
					7/4—Near the sluice of Meleri road has breached.

Statement showing the flood and monsoon damages in 1960-61—cont.

Name of roads. (1)	Mileage. (2)	Month of occurrence. (3)	Date of interruption of traffic. (4)	Date of restoration of traffic. (5)	Extent of flood damage caused and with cost of reconstruction of damages. (5)
<i>Tirukoilur Sub-division.</i>					
Kallakurichi-Sankarapuram Road	4/7	..	November 1960.	11th to 30th November 1960.	4/7—Approaches to the Pupakal Odai bridge washed (Last year breached portion).
Kullakurichi-Sankarapuram Road	0/8	..	Do.	Do.	0/8—Approaches to the Gomukhi bridge damaged.
Kallakurichi-Kootlagudi Road	2/2	..	Do.	Do.	2/2—Katcha rough stone abutments with their cut stone slabs broken and collapsed.
Tirukoilur-Sankarapuram Road	0/0-22/0	..	Do.	Do.	0/0-10/0—About 20 per cent W.B.M. surface damaged with berms. 10/0-16/0—About 20 per cent W.B.M. surface damaged with berms. 16/0-22/0—About 20 per cent W.B.M. surface damaged with berms.
Cuddalore-Chittur Road	32/0-42/0	..	Do.	Do.	32-42—About 20 per cent W.B.M. surface damaged with berms and requires B.T. wearing coat.
Do.	42/0-52/6	..	Do.	Do.	42/0-52/6—About 20 per cent W.B.M. surface damaged with berms and requires B.T. wearing coat.
<i>Government Roads.—Total Cost, Rs. 11,80,000</i>					
'Dated 11th November to 30th November 1960.					

Chidambaram sub-division.

Annaikar-nelastram-Manikollai Road.	0/0-2/0	..	November 1960.	11th to 30th November 1960.	0/1, 1/2, 1/4—Road has breached for length of 20' 30' and 50' and to depths of 3' x 4' and 7' res- pectively.
Adivarahallur Road	1/4	..	Do.	Do.	0/1-4, 1/5-8—Surface badly pitted. Wide gullies have formed.
Do.	0/1-6	..	Do.	Do.	0/1-6—Surface pitted badly.
<i>Ayipurem-Kuniamangalam Road</i>					
Do.	0/2-0	..	Do.	Do.	1/5—Road has breached for a length of 10' and to a depth of 3'
Do.	0/0-3/1	..	Do.	Do.	0/1-8—Surface badly pitted. 1/1-8—Wide gullies have formed.
B. Mutbur Village Road	0/0-0/6	..	Do.	Do.	0/1-4—Surface badly pitted with wheel tracks.
Theerthampalayam Road	0/0-1/4	..	Do.	Do.	1/3, 1/4, 1/6—Road has breached for a length of 60', 25', 18' and 25' and to depth of 2', 3', 4' and 5' respectively.
Periakonatti Road	0/0-0/6	..	Do.	Do.	0/1-3—Surface badly pitted. 0/1-6—Berms have been scoured.
Chinnakumatti Road	0/0-0/4	..	Do.	Do.	0/1-4—Surface badly pitted.
Kothattai Road	..	..	Do.	Do.	0/2-4—Wide gullies have formed with scours in certain stretches.
Puduchetram-Poovalai Road	0/0-5/3	..	Do.	Do.	0/1-6—Surface badly pitted. Needs immed. att. renewals. Wide gullies have formed with a breach at 0/1.
Ramanathakuppam Road	0-1/4	..	Do.	Do.	0/1-4—Wide gullies have formed with a breach at 0/1 for 30 x 12 x 3.
Soramandi Road	0-1/3	..	Do.	Do.	0/1-4—The road has breached for 30 x 12 x 3 x and 6/1 has also developed wide gullies throughout the reaches.
Biological Station Road	0/1-4	..	Do.	Do.	0/3, 1/1-4, 2/3-1/1, 2/3-8—Road has been scoured badly. This portion of the road has sunk appreciably.
Mettupalayam-Avidurai Road	0/0-3/0	..	Do.	Do.	4/1-8, 2/1-8—Wide gullies have formed.
Do.	0-1/4	..	Do.	Do.	0/3—Road has breached for a length of 40' and to a depth of 7' Non- standard pipe culvert of 1' dia. had also been washed off.
Do.	0-1/3	..	Do.	Do.	0/1-3—Berms scoured Earth work is to be done.
Do.	0/1-4	..	Do.	Do.	0/1-4—Berms scoured.
Do.	0/0-3/0	..	Do.	Do.	0/3—Road breached for length of 40' and to a depth of 4'.
Do.	0/1-4	..	Do.	Do.	0/2-5—Berms scoured.
Do.	0/1-4	..	Do.	Do.	0/1-4—Surface pitted badly.
Do.	0/1-5	..	Do.	Do.	0/1-5—Surface pitted badly.

Statement showing the flood and monsoon damage in 1960-61—cont.

Name of roads. (1)	Mileage. (2)	Month of occurrence. (3)	Date of interruption of traffic. (4)	Date of restoration of traffic. (5)	Extent of flood damage caused and with cost of reconstruction of damages. (6)
<i>Chidambaram Sub-division—cont.</i>					
Alapakkam-Chintamanikuppam Road	0/0-1/3 ..	.. November 1960.	11th to 30th November 1960.	..	0/6-8, 1/1-3—Wide gullies have formed.
Siruppulayur Theethanagari Road	0/0-2/4 ..	.. Do.	Do.	..	0/1-8, 1/1-3—Surface badly pitted.
Pallodi Road	 0/1-4 ..	.. Do.	Do.	..	0/5-8, 1/1-18—Wide gullies have formed. Surface badly pitted.
Poodiankuppam cross Road	 0/1-7 ..	.. Do.	Do.	..	0/1-4—Wide gullies have formed with berms scoured.
Thiruchopuram-Thigavalli Road	 0/0-0/6 ..	.. Do.	Do.	..	0/1-7—Wide gullies have formed with Metal floating.
Ramapuram Road	 0/0-3/4 ..	.. Do.	Do.	..	0/1-2—Wide gullies have formed.
Sodapalayam-Pudukuppam Road	 0/0-2/0 ..	.. Do.	Do.	....	0/3-6—Half portion of the road washed off.
Thondamanatham Road	 0/0-1/2 ..	.. Do.	Do.	....	3/2—Road has breached for a length of 20' and to a depth of 5'.
Chidambaram-Sivapuri Road.	Gavarapet 0/0-4/0 ..	.. Do.	Do.	....	0/7-8, 1/1-4—Surface badly pitted.

Natarajapuram Road	.. ..	November 1960	11th to 30th November 1960.	....	1/1, 3/3—The laterite surface has been badly pitted.
Cuddalore-Chidambaram Road	 22/4-25/2	.. Do.	Do.	....	0/1-7—The granite surface has been peaked out. Requires blinding.
Killai Road	 0/0-1/6 ..	.. Do.	Do.	....	23/1-8 and 24/1-8 The surface had been pitted badly.
Mannarkudi-Omanpuliur Road	 11/4-15/6..	.. Do.	Do.	....	25/2, 22/4-8 and 23/1—Laterite surface requires renewals.
Kandamangalam Road	.. ..	.. Do.	Do.	....	0/1-8, 1/1-6—Laterite metal surface has been pitted much. Requires renewal.
Thirunagar Road	 0-4/3	.. Do.	Do.	....	11/5-8, 13/1-8 and 15/1-6—The entire laterite surface has been completely scoured and is also much slushy. Requires renewals.
Veeranatham-Valathur-Thirupannaipuram Road.	 0/0-2/1 ..	.. Do.	Do.	....	1/1-8, 2/1-8—The surface has become much pitted.
Elleri village Road	.. ..	.. Do.	Do.	....	3/1-8, 4/1-8—The road has breached in mile 2/3, 2/7 and 2/8 culvert in mile 0/3-1/5, 6, 7 have been completely damaged.
Neyyassal village Road	.. ..	.. Do.	Do.	....	0/1-2 and 2/4—The Road has been breached. Berms have been badly eroded. Fifty Units of laterite metal kept at site has been washed off.
Velur Victor Road	 0/0-1/1 ..	.. Do.	Do.	....	0/1-3—Laterite metal surface has been pitted. Berms have been badly eroded. Fifty units of laterite metal kept at site has been washed off.
Nattaramangalam Road	 0/0-0/7 ..	.. Do.	Do.	....	2/1-4—Berms much pitted.

0/1 and 0/4—Culverts much damaged.
0/1-4—Requires renewals.
0/1-8, 1/1-8—Berms much pitted.
1/3-8—Requires renewals.
0/1—Culvert badly damaged.
0/1—The culvert in mile 0/1 badly damaged. Requires immediate repairs.
0/3, 4, 6 and 7—Road has breached.
0/2-2' diameter pipe culvert to be provided.

Statement showing the flood and monsoon damages for 1960-61.

Name of roads.	Mileage.	Month of occurrence.	Date of interruption of traffic.	Date of restoration of traffic.	Extent of flood damages caused and with cost of reconstruction of damages.
	(2)	(3)	(4)	(5)	(6)
<i>Chidambaram Sub-division—cont.</i>					
Bhuvanagiri-Kurinipadi Road	0/0-6/0	November 1960.	11th to 30th November 1960	....	1/8—Breached in road for 100' x 24' x 2'. 2/4—Breached in road for 50' x 25' x 4'-6".
Kumarakudi-Nachiarpet Road	....	Do.	Do.	....	4/7, 8 and 5/1, 1/3-5, 2/1-3, 4/1-3 and 4/2-8—Road scoured for 10' width, 3' depth. Metal surface (W.B.M.) completely spoiled due to overflow of water.
Bhudarayanpet-Krishnapuram Road.	1/0-5/3	Do.	Do.	....	1/0-3/0—H.L.M. Surface spoiled with deep pot holes. 3/1-4—Earthen portion washed off. Formation to be done.
B. Odaiyur-Thalaikulam Road	....	Do.	Do.	....	1/8—Breach in road for 40' x 10' x 4'. 0/1-0/4, 0/3, 1/8, 2/1, 2/3—Earthen portions of breaches closed during last year floods have been too slushy.
Sathapadi-Veyalamur Road	....	Do.	Do.	....	0/8, 1/1, 1/2—Scours due to overflow. 1/3 and 1/8—Road surface badly affected.
Nathamadu Road	....	Do.	Do.	....	0/4—Breach 10' long, 2' deep.
Srinushnam-Andinadam Road	....	Do.	Do.	....	0/0-2/1, 0/0-1/8, 1/4—Bad scours and gullies.
Kannanangalam Road	....	Do.	Do.	....	0/1-8, 1/1-8—H.L.M. surface spoiled with large pot holes.
Kalipadi Road	....	Do.	Do.	....	1/8 and 1/1-6, 0/5-8, 1/1-16—Badly scoured. 0/6-8—Scoured gravel surface badly pitted. Deep pot holes.
					0/6-8—Deep pot holes. 0/8—Road washed off due to the breach in Kilpaliangudi taluk.

Adivarahanallur Road..	..	0/0-1/1	..	Do.	....	0/1—Roadway over culvert washed off.
Nagarapadi Road	..	0/0-1/1	..	Do.	....	0/6, 0/7—Breach for 20' length scours.
Kondasamudram Road	..	....	..	Do.	....	0/1, 0/3—Dangerous scours. 0/5—Road surface slushy.
Therkupalsayam Road ..	..	....	..	Do.	....	0/1-2, 3—Scours.
Ramapuram Road	..	....	..	Do.	....	0/6—Breach 30' length, 2' deep. 0/8—Earth cushion over pipe washed off.
Nellikollai-Thurinipadi Road..	..	....	..	Do.	....	0/1-8—Bad gullies. 0/1-4—Side berms of gravelled roadway 8' width completely washed off.
Kurumbur Road	..	....	..	Do.	....	0/4, 5, 0/7-8—Bad scours and gullies. 1/1-8, 2/7 and 8—Approaches of pipes at 2/7 completely washed off on both sides.
Pallipadi Road ..	..	....	..	Do.	....	0/1—Scours. 0/5—Breach 18' long, 2' deep. 0/7—Breach 18' long and 1' 6".
Vanamadevi Road	..	....	..	Do.	....	0/8—Breach 20' long and 2'. 0/1-4—Scours.
						0/5—Breach 50' x 18' x 3' H.L.M. surface badly pitted.
						0/1-2—H.L.M. surface badly pitted with dangerous scours.
						0/1-4—Earthen surface very slushy due to overflow.

Cuddalore Sub-division.

Jailhill-Othiyadikuppam Road	..	3/2-7/5	..	November 1960.	11th to 30th November 1960.	....	Dip. at 6/4, 7/3-6 new metalling to be done—Dip. in 6/2-4 badly affected and metalling to be done in 7/3-6.
Vellapakkam-Alagianatham Road	..	0/0-1/6	..	Do.	Do.	....	0/1-8, 1/1-4—Deep scours and pot holes and needs renewals.
Thirumanikuli Road	..	4/4-8/7	..	Do.	Do.	....	5/7—Dip. to be culverted and earth work etc.
Venbakkam Road	..	0/0-2/0	..	Do.	Do.	....	0/3, 1/1-8, 2/1-0/3 to be reconstructed and renewals in 1/1-8 and 2/1.

Statement showing the flood and monsoon damages in 1960-61—cont.

Name of roads.	Mileage.	Month of occurrence.	Date of interruption of traffic.	Date of restoration of traffic.	Extent of flood damage caused and with cost of reconstruction of damages.
	(1)	(2)	(3)	(4)	(5)
<i>Cuddalore sub-division—cont.</i>					
Mulligrampattu Road ..	0/0-2/0	..	November 1960.	11th to 30th November 1960.	0/1-8, 1/1-4—Metal washed.
Maruthadu Road ..	0/0-2/0	..	Do.	Do.	0/4-0/1-8—Culvert at 0/4 to be reconstructed and 0/1-8 renewals.
Melpattambakkam-Penner Road ..	0/1-4	..	Do.	Do.	0/1-2—0/1-2 renewals 1/1-2—Apron to be repaired.
Kurinipadi-Palur Road ..	10-1/2	..	Do.	Do.	0/3—Renewals proposed.
Karamanikuppam Road ..	0/0-1/5	..	Do.	Do.	10/1-8, 11/1-8, 12/1-8—Renewals.
Melpathi-Sundaravandi Road ..	1/3	..	Do.	Do.	0/6, 7, 8, 1/1-2—Road dam disturbed.
Vennadevi Road ..	0/0-1/4	..	Do.	Do.	0/0-0/1-3—Surface badly affected.
Rengaredipalayam Road ..	0/0-0/4	..	Do.	Do.	0/0-1/4—Gravelling and earthwork.
Natham village Road ..	....	..	Do.	Do.	0/0-0/4—Earthwork renewals necessary.
Thirukandaswaram Road.	0/0-1/1	..	Do.	Do.	0/1-0/4—Earthwork renewals necessary.
Uchimedu-Nanamedu Road ..	0/0-1/1	..	Do.	Do.	0/0-1/1—Earthwork.
Thoosambakkam-Nathamadu Road.	0/0-1/0	..	Do.	Do.	0/0-1/4—Earthwork.
Bengaruchannel-Rendaiyara Vilagam Road.	0/0-2/0	..	Do.	Do.	0/1-8—Metalling washed—Metalling work to be done.
Thoosambakkam—Kilkumaramangalam Road.	0/0-4/5	..	Do.	Do.	1/1-8, 2/1-8 Metalling washed—Metalling work to be done.
Nallathur Road ..	0/0-2/6	..	Do.	Do.	0/1-1/4—Metalling work to be done.
Karnapattu Road ..	0/0-2/6	..	Do.	Do.	0/1-8, 1/1-8—Washed away.
Sellanjeri-Karnapattu Road ..	0/0-0/4	..	Do.	Do.	1/4—Road has to be reformed.
Bahur-Utheripattu Road ..	0/0-0/4	..	Do.	Do.	0/1-4—Metalling has to be done.
Uthripattu Road ..	0/0-1/1	..	Do.	Do.	0/1-8—Clayey soil, sand and metalling.
Varakalpattu Road ..	4/0-5/4	..	Do.	Do.	4/2-5/4—Metalled portion affected.

Nathapattu Road ..	0/0-0/7	..	Do.	Do.	0/1-7—Earthwork and metalling. Metalled portion washed.
Reddichavadi-Kilkumaramangalam Road.	0/0-3/0	..	Do.	Do.	0/1-8—Earth work to be done.
Singirigudi-Nallathur Road ..	0/1-2/7	..	Do.	Do.	1/6-2/7—Earthwork to be done. Metalled portion washed.
Sethukuttupalayam Road ..	0/0-0/4	..	Do.	Do.	0/1-4—Earthwork gravelling to be done.
Sellanjeri Road ..	0/0-0/6	..	Do.	Do.	0/1-6—Earthwork gravelling to be done.
Nathamadu Road branching from 9/1 of C.G. Road.	0/0-1/0	..	Do.	Do.	0/1-8—Earthwork gravelling to be done.
Viswanathapuram Road ..	0/0-1/5	..	Do.	Do.	0/0-1/5—Metal portion washed away and renewals proposed.
Villupuram-Mangalapattu Road ..	20/3-34/3	..	Do.	Do.	26/6-7, 28/2-5—Gullies formed; surface badly worn out and damages to culverts.
Ulundurpet-T.V. Nallur Road ..	31/7-37/4	..	Do.	Do.	34/5, 34/1-8—Surface badly affected. Culvert at 34/5 to be repaired and earth work to be done in 34/1-8.
Anniyur-Surapet Road ..	0/5-2	..	Do.	Do.	0/1-8, 2/1-8—Surface badly affected and submerged at 0/4-5, 2/1-3/7.
Elfishoultury to Memhalapattu Road.	0/0-5/0	..	Do.	Do.	0/1-8—Surface badly affected and submerged at 0/4, 5, 2/1, 3/7.
Sondanadu Road ..	9-12/0	..	Do.	Do.	10/1-8, 11/1-8—Erosions in entire reach.
Ananathur-Kuchipalayam Road ..	0-2	..	Do.	Do.	0/1-2, 1/1-8—Water bound macadam surface affected. Eroded in entire reach.
Parangiyur-Enathimangalam Road.	....	..	Do.	Do.	0/0-3/4—Entire stretch badly affected.
Veerappan-Gadilam Road ..	23/2-27/5	..	Do.	Do.	23/2 to 27/5, 24/1-8, 26/1-8, 26/7—Eroded entire stretch, badly affected the metal surface at M. 24/1/8, 26/1-8 culvert at 26/7 to be repaired.
Melpattambakkam-Soranavur Road.	0/0-5/0	..	Do.	Do.	1/4, 2/1-8, 2/8—Berms badly affected culvert at 2/8 revetment damaged.

Statement showing the flood and monsoon damages for 1960-61—cont.

Name of road.	Mileage.	Month of occurrence.	Date of interruption to traffic.	Date of restoration of traffic.	Extent of flood damage caused and with cost of reconstruction of damages.
(1)	(2)	(3)	(4)	(5)	(6)
<i>Cuddalore Sub-division—cont.</i>					
Valavanur-Poovarasankuppam Road.	0/0-5/0	..	November 1960.	11th to 30th November 1960.	2/2, 3/5-8, 4/1-8—Berms washed off W.B.M. metal edges 2/2, 3/5-8 and 4/1-8.
Varur-Kandamangalam Road	5/0-8/6	..	Do.	....	4/1-8, 5/1-4—Scours formed in 4/1-8 and 5/1-8.
Valavanur-Madukerai Road	0/3-2	..	Do.	....	1/1-8, 2/1-4—Scours formed in entire reach.
Seshanganur-Andipalayam ..	0/1-1/3	..	Do.	....	0/1, 1/3—Berms washed away.
Thirumangalam Road ..	0/0-1/4	..	Do.	....	0/1-1/4—Deep scours formed.
Vanathamalayam Road ..	0/1-4	..	Do.	....	0/0-1/4—Berms badly affected.
Veeranam-Thulukkanatham Road ..	0-2	..	Do.	....	0/0-2/0 Do.
Thendavarayamurthikuppam Road	0/0-0/2	..	Do.	....	0/0-2/0 Do.
Salliangunpalayam Road ..	0/0-1/7	..	Do.	....	0/0-1/7—Deep scours formed.
Ottaripalayam Road ..	0/0-2/7	..	Do.	....	0/0-2/7—Deep scours formed.
Pakkam-Krishnapuram Road	0/0-3/4	..	Do.	....	2/1-8, 3/2—Berms badly affected.
Valavanur-Sengadu Road ..	0-3/0	..	Do.	....	0/1-1/2 Berms culvert at M. 0/1 and 1/2 fallen down.
Suruppur-Rambakkam Road	0/5-7	..	Do.	....	1/1-4, 3/6-8, 4/4-6—Berms badly affected scours formed.
Pakkam-Veeranam Road ..	0/3-4	..	Do.	....	0-3/4—Berms badly affected scours formed.
Mandagapattu-Pudupet Road	0/0-1/6	..	Do.	....	0/0-1/6—Berms badly affected scours formed.
Navalmarudur Road ..	0/0-2/0	..	Do.	....	0/0-2/0—Berms badly affected scours formed.
<i>Tirukoyilur Sub-division.</i>					
Thyngandurgam-Manalurpet Road ..	....	Do.	Do.	....	7/7—Rough stone culvert disturbed.
Do.	....	Do.	Do.	....	9/3—Rough stone culvert disturbed.

Kandachipuram-Aragandenallur Road.	....	Do.	Do.	....	0/0-7/0—Surface damaged.
Kandachipuram-Aragandanallur Road.	....	Do.	Do.	....	5/2—Dry fixed P.C. Pipes washed off.
Kattuodayar Road ..	....	Do.	Do.	....	0/1—Road breaches for 30' long.
Menalur Road ..	....	Do.	Do.	....	0/5—Road breaches for 40' long.
Athiyur-Jambodai Road ..	....	Do.	Do.	....	0/1—Road breached for 40' long.
Musapurur Railway Feeder Road ..	....	Do.	Do.	....	0/0-6/2—Gravel surface washed off.
Eriyur-Rishivandiam Road ..	....	Do.	Do.	....	0/0-6—Gravel surface washed off.
<i>Vridhachalam subdivision.</i>					
Adarisakaluthur Road ..	....	Do.	Do.	....	0-7/3—Gravel surface washed off.
Pannadam T. Agaram Road	0/0-7/0	..	Do.	....	12/4—Breaches and scour.
Nallur Road ..	....	Do.	Do.	....	5/0-7/0—Extension breaches and scours.
Vridhachalam-Palakollai Road	6/0-13/4	..	Do.	....	1/6-7, 8—W.B.M. surface badly pitted.
Vridhachalam-Palakollai Road	0/0-5/0	..	Do.	....	10/3, 3, 4, 13/4—Breaches.
Vridhachalam ..	0/0-6/0	..	Do.	....	10/3, 3, 4, 13/4—Breaches.
Bhuvanagiri-Kurinipadi Road	....	Do.	Do.	....	0/3, 4/1, 5/1, 2, 8—Bad scours and breaches.
Kurinipadi-Palur Road	....	Do.	Do.	....	6/0-11/0—Bad scours H.B.M. 10/1 to 7 badly pitted.
Neyveli-Valayamadevi Road	....	Do.	Do.	....	0/1 to 6/0—Culvert at M.0/8 Collapsed W.B.M. surface badly pitted up in miles 0/1 to 2/3 and 3/4 to 4/8.
Vepankurichi Village Road ..	0/0-1/6	..	Do.	....	0/1 to 5/3 Breach at M. 3/4, W.B.M. surface 0/1-5, 1/3, 6, 7, 2/2, 5, 4/1-7-8.
Poovanur-Veerareddikuppam Village Road.	....	Do.	Do.	....	Breach and scours.
Sombalakurichi Village Road ..	....	Do.	Do.	....	0/0-3/2—Breach and Scours.
	....	Do.	Do.	....	0/0-0/6—Breach and Scours.

Statement showing the flood monsoon damages in 1960-61—cont.

Name of roads.	Mileage.	Month of occurrence.	Date of interruption of traffic.	Date of restoration of traffic.	Extent of flood damage caused and with cost of reconstruction of damages.
(1)	(2)	(3)	(4)	(5)	(6)
<i>Tindivanam Sub-divisions.</i>					
Vadalar-Veludayampattu Road	..	November 1960.	11th to 30th November 1960.	....	0/0-2/0 W.B.M. surface badly pitted up and sunk.
Vallam-Melolekkur Road	..	0/0-8/0	..	Do.	1/1, 2/3, 4/6 narrow culvert 0/3, 7/6 Tank Bund portion in M. 6/7, 7/1. Road dam and culvert affected and berms washed off.
Vallam-Kangerapattu Road	..	0/0-3/0	..	Do.	0/0-3/0—Berms washed off and ruts formed throughout.
Vallam-Melaisithamur Road	..	0-1/2	..	Do.	Road dam at M. 0/3 and 0/4, 0/0-0/6. Berms washed off and ruts formed throughout.
Perumbagai Village Road	..	0/0-1/2	..	Do.	0/0-1/2 Berms washed off and ruts formed throughout.
Brammadeam-Ulisanur Road	..	0-7/5	..	Do.	Road breached berms washed off and ruts formed throughout.
Avanipur Road	..	0/0-3/0	..	Do.	Road breach and reinstalling.
Kilathamur-Nallur Road	..	..	..	Do.	Do.
Aasur village Road	..	..	..	Do.	Road breach developed gullies earth-work.
Nallavur-Uppuvelur Road	..	..	..	Do.	Do.
Omasadur-Kilathamur Road	..	0/0-1/6	..	Do.	Do.
Koovadi village Road	..	0/0-2/0	..	Do.	Do.
Avanipur to Kadavambakkam Road.	..	..	..	Do.	Do.
Vittalapuram village Road	..	..	..	Do.	Do.
Kiladezur Road	..	..	..	Do.	Do.
Kolathur-Nachikuppam Road	..	0/5-3/5	..	Do.	Road breach developed gullies earth-work.
Thenkodi-pakkam-Peravur Road	..	..	..	Do.	Do.
Eruvadi Village Road	..	0/0-0/5	..	Do.	Do.
Moolasur V. Road	..	0/0-0/4	..	Do.	Roadway washed away.
Kolathur V. Road	..	0/0-3/0	..	Do.	Do.
Endur V. Road	..	0/0-3/0	..	Do.	Do.
Atalur Moolasur V. Road	..	..	..	Do.	Do.
Upli village Road	..	0-0/5	..	Do.	Do.
Alankuppam Manjur Road	..	0-2/0	..	Do.	Do.
Kondamur-Adanapattu via. Then-siruvelur Road.	..	0/0-3/0	..	Do.	Do.
Brammadeam Kilnemili Road	..	..	..	Do.	Metal renewal for 5 furlongs.
Sendur-Mylam Road	..	0/0-1/4	..	Do.	0-8/8—Berms washed away.
Do.	..	..	..	Do.	1/1-3—Do.
Do.	..	..	..	Do.	1/1-3—Do.
Do.	..	..	..	Do.	0/0-2/2—Do.
Pathirapuliur Veedur Road	..	..	..	Do.	0/5-8—Bldg surface washed away.
T. enpasar Omandur Road	..	0-2/0	..	Do.	1/1-4—Do.
Tindivanam-Virappuram Road	..	..	..	Do.	1/6 to 8—Do.
Veedur-Vikravandi Road	..	..	..	Do.	2/1-4—Do.
Vellimedupet-Sampakkam Road	..	..	..	Do.	2/5-8—Do.
Palakuppam Road	..	..	..	Do.	0/0-1/4—Berms washed away.
Kaduvanathan Road	..	..	..	Do.	1/5-3/0—Do.
Katambakkam-Kiludupet Road	..	0/0-8/0	..	Do.	0/0-4/0—Do.
Vanur-Kandanagalam Road	..	0-5/0	..	Do.	Berms washed away.
Papanapattu-Veludavur Road	..	..	..	Do.	Do.
Konamangalam Road	..	..	..	Do.	W. B. M. Surface within mile 1/1-8 2/1-4 and repairs to culvert.
Gravai Road	..	0/0-1/0	..	Do.	W. B. M. Surface sunk in M. 1/1-8. Gravelled road sunk in M. 0/1-8 and 1/1-6.
	..	..	..	Do.	Road eroded and culvert to be constructed.

Statement showing the flood monsoon damages in 1960-61—cont.

Name of road. (1)	Mileage. (2)	Month of occurrence. (3)	Date of interruption of traffic. (4)	Date of restoration of traffic. (5)	Extent of flood damage ceased and with cost of reconstruction of damages. (6)
L. F. Dispensary at Merkanam	..	..	..	..	Metalling to be approach road and rafter to be renewed. Do.
L. F. Quarters at Merkanam	..	..	..	..	Do.
L. F. Dispensary at Vanur	..	..	..	..	Do.
Urgent repairs to L. F. T. B. Tindi- vanam North wing.	..	..	..	..	Roofing timbers soaked in rain water and damaged roofing necessary.
Urgent repairs to L. F. T. B. Tindi- vanam South wing.	..	..	..	..	Do.

District Board Roads—Total Cost of damages. Rs. 6,36,950, Date—
11th to 31st November 1960.

Tirunelveli division.

No.	Name of road.	Mileage.	Month of occurrence.	Date of interruption of traffic.	Rs.
1	Tenkasi-Madurai Road	..	M. 13/1-2, 3 and 7.	..	2,000.
2	Tuticorin-Tiruchendur Road	..	..	Do.	7,000.
3	Do.	..	..	Do.	2,000.
4	Veerakeralambudur - Shanmuga- nallur Road.	..	6/6, 6/7, 8/6, 9/1, 9/4 and 11/6-7.	..	2,000.
5	Kayathar-Kalugumalai Road	..	..	Do.	200.
6	Kulathur-District Frontier Road.	51/0-55/0	..	Do.	2,000.
7	Benares-Cape Comorin Road	..	356/1-8	Do.	3,000.
8	Panagady-Koilpatti Road	..	22/9-25/0	Do.	50.
9	Tuticorin Ettayapuram Road	..	M. 16-26	Do.	Water overflowed the road damaging the surface cost Rs. 16,200.
10	Quilon-Shencottah Road	..	M. 50/8/59-4	..	Water overflowed the road damaging the surface cost Rs. 4,700.
11	Kulathapuzha-Chowkey Road	..	M. 0/1-8	Do.	Water overflowed the road damaging the surface cost Rs. 4,700.
12	Shenkottah - Samboorvadagarai Road.	M. 5/0 to 5/0	..	Do.	Water overflowed the road damaging the surface cost Rs. 4,000.

13	Do.	..	M. 5/0 to 11/0	..	October 1960.	Do.	..	Water overflowed the road damaging the surface cost Rs. 3,600.
14	3/6 of Shenottah-Samboorvada- garai to Achampudur.	..	..	..	Do.	..	..	Water overflowed the road damaging the surface cost Rs. 2,500.
15	Pambuli-Mekkara Road	..	M. 0/3-3/4	..	November 1960.	Do.	..	Water overflowed the road damaging the surface cost Rs. 5,500.
16	Kalangad - Kadayannallur (via) Balamarthandapuram.	..	..	..	Do.	..	..	Water overflowed the road damaging the surface cost Rs. 4,400.
17	Pambuli Mekhara Achankoil Road.	3/5-5/2	..	..	Do.	..	..	Water overflowed the road damaging the surface cost Rs. 3,000.
18	Palayamcottai-Ambasamudram Road.	1/3-7/0	..	..	Do.	..	..	Water overflowed the road damaging the surface cost Rs. 4,000.
19	Ambasamudram-Alangulam Road.	1/4	..	..	Do.	4th November 1960.	4th November 1960.	Surface in M. 2/1-4, 4/1-8, and 6/1-8 damaged. Top course of right side abutment and retaining wall. Slightly damaged.
20	Do.	6/4	..	..	Do.	12th November 1960.	12th November 1960.	Water flowed in road dam. Sandydips filled with sand in Odai at 6/4.
21	Tirunelveli-Pottalpudur Road	..	M. 14/1-2	..	December 1960.	Do.	Do.	Water overflowed and the surface damaged Rs. 14,000.
22	Ambai-Alangulam Road	..	M. 6/4-8/5	..	January 1961.	8th December 1960.	8th December 1960.	Water overflowed and the surface damaged.
23	Ambasamudram-Tenkasi Road	..	M. 6/4	..	Do.	8th January 1961.	18th January 1961.	Water overflowed and the surface damaged.
24	Tirunelveli-Shencottah Road	..	M. 1/3 2/4 and 7/5.	..	Do.	11th January 1961.	12th January 1961.	Water overflowed and the surface damaged Rs. 14,000.
25	Tuticorin-Tiruchendur Road	..	M. 13/3-6 14/3-4, 15/6, 7, 8, 17/1, 21/3-8 and 21/1-5.	..	Do.	13th January 1961.	21st January 1961.	Water overflowed and the surface damaged.
26	Alwarthirunagari-Sattangulam Road.	..	M. 8/1, 3, 7, 8, 3/4-8, 4/1-5, 7/2, 8/7, 11/8 and 12/2, 13/3, 13/7 and 14/1-2.	..	November 1960.	10th November 1960.	15th November 1960.	Water overflowed and the surface damaged.
27	Palayamcottai-Tiruchendur Road.	M. 17/4-8 and 30/1-2 and 25/2-7.	..	..	January 1961.	Do.	Do.	Water overflowed and the surface damaged.
28	Vilathikulam-Vendar Road	..	M. 2, 3 and 7/4.	..	November 1960.	Do.	Do.	Probable loss, Rs. 2,000.
29	Vilathikulam-Perunali Road	..	..	..	Do.	Do.	Do.	Probable loss, Rs. 1,000.

Statement showing the flood and monsoon damaged for 1960-61—cont.,

Name of work. (1)	Milage. (2)	Month of Occurrence. (3)	Date of interruption to traffic. (4)	Date of resto- ration of traffic. (5)	Extent of flood damage caused and with cost of reconstruction of damages. (6)
<i>Tiruchelveli Division—cont.</i>					
30 Sendamaram - Pambukoil Shandy Road.	0/1-8 ..	..	10th November 1960.	15th November 1960.	Probable loss, Rs. 500.
31 Muthukulam-Panbukoil Shandy Road.	..	Do.	Do.	Do.	Probable loss, Rs. 500
32 Tharuvaikulam-Surangudi Road ..	8/4-9/2 ..	..	January 1961.	Do.	Probable loss, Rs. 6,000.
<i>Bodi division.</i>					
33 Forming a ghat Road from Bodi to Bodimettu.	..	November 1961.	Will not arise as the road has not been opened for traffic.	..	Rs. 28,850 for removal of slips.
<i>Sivaganga Division.</i>					
34 Kamudi-Mandapasalai Road ..	2/4-3/2 ..	..	April 1960.	3rd April 1960.	16th April 1960.
35 Kamuti-Sayalgudi Road ..	..	59/7 ..	Do.	5th April 1960.	Do.
36 Mudukulathur-Peraiyur Road ..	M. 7-7/3 ..	..	November 1960.	5th November 1960.	9th November 1960.
37 Abiraman-Kamudi Road ..	..	..	Do.	Do.	19th November 1960.
38 Madurai-Dhauushkodi Road ..	M. 46/3-49/1-7 ..	..	Do.	6th November 1960.	18th November 1960.
39 Do.	33/8 ..	..	Do.	5th November 1960.	9th November 1960.
40 Do.	31/7 ..	..	Do.	13th November 1960.	16th November 1960.
41 Parthibanur-Narikudi Road ..	9/3 ..	..	Do.	7th November 1960.	14th and 19th November 1960.
42 D.D. Road ..	24-34 ..	..	Do.	Do.	21st November 1960.
<i>Paramakudi-Mudukulathur</i>					
43 Paramakudi-Mudukulathur ..	..	..	Do.	Do.	20th November 1960.
44 Kamudi-Mandapasalai Road ..	2/4-3/2 ..	..	Do.	Do.	9th November 1960.
45 Peraiyur-Kamuthi Road ..	7/1 7/3 ..	..	Do.	Do.	19th November 1960.
46 Kamuthi-Sayalgudi Road ..	59 and 47, 49/7, and 51/4.	..	Do.	Do.	26th November 1960.
47 Emaeswaram-Noinarcoil Road..	3/5 ..	..	Do.	18th November 1960.	28th November 1960.
48 Aruppukottai-Sayalgudi Road ..	29/5 and 6, 30/8.	..	Do.	28th November 1960.	1st December 1960.
49 Madurai-Aruppukottai Road ..	21/27 ..	..	Do.	3rd November 1960.	7th November 1960.
50 Aruppukottai-Pandalgudi Road ..	30/37 ..	..	Do.	13th November 1960.	13th November 1960.
51 Aruppukottai-Sayalgudi Road ..	M. 2/4 ..	..	Do.	4th November 1960.	Do.
52 Aruppukottai-Tiruchuli Road ..	M. 13/2 and 17/5-6.	..	Do.	12th November 1960.	Do.
53 Virudhunagar-Aruppukottai Road.	0/9 ..	..	Do.	3rd November 1960.	7th November 1960.
54 Kariapatti-Tiruchuli Road ..	..	..	Do.	4th November 1960.	12th November 1960.
55 Kallakurichi-Malliginagar Road..	..	..	Do.	Do.	15th November 1960.
56 Pattampudur-Melapatti Road ..	..	..	Do.	Do.	20th November 1960.
57 Madurai-Poovandi Road ..	4/1 ..	..	Do.	6th November 1960.	7th November 1960. Road breached due to heavy floods.
58 Madurai-Poovandi Road ..	8/8 ..	..	Do.	Do.	11th November 1960.
59 Bodi-Thevaram Road ..	6/0 to 12/0 ..	..	Do.	3rd November 1960.	14th November 1960. Rs. 50,000.

Statement showing the flood and monsoon damaged for 1960-61—cont.

Name of road. (1)	Mileage. (2)	Month of Occurrence. (3)	Date of interruption to traffic. (4)	Date of restoration of traffic. (5)	Extent of flood damage caused and with a cost of reconstruction of damages. (6)
<i>Madurai Division—cont.</i>					
60 Tenkasi-Madurai Road ..	M. 72 to 83/2 ..	November 1960 ..	3rd November 1960.	10th November 1960.	Repairs have been attended and completed in most of the roads and some roads are being attended in this year also. The traffic were allowed in the roads without any diversion.
61 Tirumangalam-Usilampatti Road	0/0-8/0 ..	Do.	Do.	Do.	....
62 Kalligudi-Kallipatti Road	..	Do.	Do.	Do.	....
63 Kalligudi Kariapatti Road	..	Do.	Do.	Do.	....
64 Tenkasi-Madurai Road	..	64/72/0 ..	Do.	Do.	....
65 Causeway at 1/2 of Alambatti-Sedapatti Road.	..	Do.	Do.	Do.	....
66 Madurai-Theni Road	..	11/0 to 18/0 ..	Do.	Do.	....
67 Do.	..	18/0 to 24/0 ..	Do.	Do.	....
68 Tirumangalam-Usilampatti Road	8/0 to 16/2 ..	Do.	Do.	Do.	....
69 Elumalai-Road	..	Do.	Do.	Do.	....
70 Manairoy-Elunalai Road	..	Do.	Do.	Do.	....
71 Batlagundu-Peiyur Road	..	9/0-14/0 ..	Do.	Do.	....
72 Do.	..	14/0 to 20/0 ..	Do.	Do.	....
73 Do.	..	20/0-26/0 ..	Do.	....	....
74 Do.	..	26/0-31/6 ..	....	....	....
75 Tirumangalam-Pallapatti Road..	0/0-11/0 ..	Do.	....	....	....
76 Vilpicheri Road	..	Do.	....	....	....
77 Madurai-Theni Road	..	0/0-3/0 ..	Do.	....	....
78 Madurai-Arappukottai Road	..	Do.	....	....	....
79 Koodarkoil Road	..	Do.	....	....	....
80 Madurai-Melakkal Road	..	Do.	....	....	....

Dindigul Division.

81 Dindigul-Vattanam Road Perfo. raised causeway.	11/7 ..	3rd November 1960.	3rd November 1960.	6th November 1960.	Body wall of length of 100' on left side and 75' on right side. Value of damage Rs. 2,500.
82 Dindigul-Karur Road	..	6/3 ..	6th November 1960..	17th November 1960.	Diversion washed away value of damage Rs. 1,500.
83 Thandigudi-Ghat Road	..	..	10th November and 15th November 1960.	15th November 1960.	Value of damage caused Rs. 10,000.
84 Batlagundu-Situberevu Road	..	..	11th November 1960.	15th November 1960.	Berms badly secured. Heavy land slush slips for about 1 1/4 miles value of damage, Rs. 3,500.
85 Madurai-Nelakottai Road	..	26/0-29/0 ..	11th November 1960..	Do.	Value of damage caused, Rs. 2,500.
86 Dindigul-Batlagundu Road	..	14/0-16/0 ..	Do.	Do.	Value of damage caused, Rs. 2,500.
87 Kodai-Ghat Road	..	6/0-21/6 and 23/1-2.	No interruption to traffic.	..	Improvements to 6/0 and 21/6 retaining wall collapsed 29/1 and 29/7. The surface eroded by water. Value of damage, Rs. 5,000.
88 Kodai-Munnar Road	..	34/1 to 36/7 ..	18th September 1960.	30th October 1960	34/1-36/7 retaining wall collapsed and earth slips value of damage, Rs. 1,500.
89 Koshen Road	..	20/7-22/5 ..	No interruption to traffic.	..	20/7 retaining wall of bridge collapsed and 22/5 culvert damaged. Seven berms washed value of damage, Rs. 3,000.
90 Madurai-Palamedu Road	..	14/7-8 15/1 and 11/1.	Do.	..	Retaining walls collapsed proposed to be reconstructed. Value of damage Rs. 2,500, berms washed.
91 G.S.T., Road]	..	217/1 ..	Do.	..	Retaining walls collapsed proposed to be reconstructed. Value of damage, Rs. 2,500, berms washed.
92 Flood damage repairs in G.S.T., Road.	217/0 to 279/0 ..	11th November 1960.	11th November 1960.	11th November 1960.	Black toping surface very badly pitted beyond patching. Bad funilongs proposed to be renewed. Approximate cost of restoration Rs. 10,000.

Statement showing the flood and monsoon damages for 1960-61—cont.

Name of road.	Mileage.	Month of occurrence.	Date of interruption of traffic.	Date of restoration of traffic.	Extent of flood damage caused and with cost of reconstruction of damage.
(1)	(2)	(3)	(4)	(5)	(6)
<i>Dindigul Division—cont.</i>					
93 Flood damage repairs in G.S.T., Road.	280/0, 282	11th November 1960.	11th November 1960.	11th November 1960.	Blacktopping surface very badly pitted beyond patching. Bad furlongs proposed to be renewed approximate cost Rs. 10,000.
94 Bridge at Dindigul-Palai road.	19/2	4th November 1960.	4th November 1960.	4th November 1960.	One pier collapsed and foundation for the abutment and pier exposed proposed to be strengthened. Value of damage Rs. 1,500.
95 Flood damage repairs in Dindigul-Palni Road.	29/8 to 30/1	10th November and 11th November 1960.	10th November and 11th December 1960.	..	Right side berms washed off. Proposed to be restored. Value of damage, Rs. 500.
96 Flood damage repairs in Palni Udumalpet Road.	31/1-2 4/1, and 6/6.	2	Do.	..	Right side berms washed off. Restoration, value of damage, Rs. 400.
97 Maintaining Tirumangalam-Pallipatti Road.	12/0 to 15/0	11th November 1960.	11th November 1960.	11th November 1960.	Right side berms washed off. Restoration, value of damage Rs. 2,000.
98 Maintaining Tirumangalam-Pallipatti Road.	16/0 to 18/0	..	Do.	Do.	Road berms badly scored proposed to be restored. Value of damage, Rs. 1,500.
99 Maintaining Tirumangalam-Pallipatti Road.	16/0 to 17/0	..	Do.	Do.	Road surface and berms badly scored and pitted. Proposed to be restored. Value of damage, Rs. 7,500.
100 Palni-Dharapuram East Road.	0/0-1/0	..	Do.	Do.	Left side berms washed off. Proposed to be restored. Value of damage, Rs. 500.
101 Thandigudi Ghat Road to hills side and valley in. Slips retaining walls in Blacktopping in ..	6/0 to 8/0 } 5/0-10/0 } 8/1-8 }	..	Do.	18th November 1960.	Retaining walls collapsed. B.T. surface in M. 8/1-8 badly pitted. Slush slips restored. Traffic restored. Bad B.T. surface in M. 8/1-8 is proposed to be restored. Value of damage, Rs. 10,000.

Pudukkottai Division.

102 Culvert of Pudukkottai-Yembal Road	26/3	..	November 1960.	..	The approximate cost of the damage is Rs. 500.
103 A body wall of Pudurvayal Road.	23/2	..	..	..	Approximate cost of the damage is Rs. 50.

Tiruchirappalli Division.

104 Jayancondam-Sendurai Road	0/1-15/7	..	November 1960.	13th November 1960.	Rs. 62,000.
105 Jayancondam-Madanathur Road	0/0-11/0	..	Do.	Do.	2,000.
106 Jayancondam - Virudhachalam R. ad.	11/0-25/6	..	Do.	Do.	5,000.
107 Tiruchy-Chidambaram Road	60/0 to 64/5	..	Do.	Do.	1,000.
108 V.A. L.A. Road	142 to 154/2	..	Do.	Do.	15,000.

Erode Division.

1 Perundurai - Maccanamcombai Road breached.	12/7	..	November 1960.	16th November 1960.	Body wall on the downstream side towards Maccanamcombai side has been damaged. A portion C 6 slab has badly cracked and to be replaced, Rs. 1,000.
2 Udumalpet - Chinnadharapuram Road.	29/4	..	Do.	Do.	The wearing coat and base concrete were broken and uplifted and damaged to a length of 105' 6" A portion of the body wall has to be reconstructed, Rs. 10,000.
3 Dharapuram-Dindigul Road	5/3	..	Do.	Do.	The approach on Dharapuram side was damaged to a length of 32' and to be restored and remodelled, Rs. 10,000.
4 Erode-Sathy Road	14/0 to 39/1	..	Do.	Do.	Berms have been badly eroded, washed away in some places and also in some places breaches in the berms have occurred, Rs. 10,000.
5 Erode-Muthur Road	..	..	Do.	Do.	Mile 1 1/8 and 12/1 duly fixed pipes perforated. Causeway patching washed out due to underpinning effect. Approaches outflanked, Rs. 10,000.

Statement showing the flood and monsoon damaged for 1960-61—cont.

Name of road. (1)	Mileage. (2)	Month of occurrence. (3)	Date of interruption to traffic. (4)	Date of restoration of traffic. (5)	Extent of flood damage caused and with cost of reconstruction of damages (6)
<i>Erode Division—cont.</i>					
6 Thoppur-Mettur Bhavani Road ..	....	November 1960	12th November 1960.	16th November 1960.	Berms have been badly eroded and washed away in some places. Rs. 10,000.
7 Erode-Perundurai Road ..	....	Do.	Do.	Do.	Deep scour on berms and badly eroded. Road dam at mile 6/3 washed and eroded. It is to be made good with underverted pipes. Rs. 10,000.
8 Coimbatore Sathy-Chamrajanagar Road.	58/3 to 60/0	Do.	Do.	Do.	Ghat section. Earth slip revetments damaged and also parapets. Rs. 10,000.

Avenues.

In G.O. Ms. No. 2738, Public Works, dated 1st October 1960, the Government have passed orders for constitution of a committee in each taluk headquarters to deal with the planting and maintenance of avenue trees on roads. The committee shall consist of the following official and non-official members :—

- 1) Assistant Engineer, Highways and Rural Works—*Convener*.
- (2) Tahsildar.
- (3) Inspector of Police.
- (4) Agricultural demonstrator.
- (5) All M.L.As. and M.L.Cs. in the area.
- (6) Chairman of the Union Panchayat Boards if there is one or a leading agriculturist of the taluk.
- (7) All Block Development Officers in the taluk.

The Committee shall function only as an advisory body and all important question and implementation of its recommendation will be looked into by the Divisional Engineer concerned with the co-operation of the concerned District Officers.

The meeting shall be convened once in four months and only as the time when the Legislature is not in session.

Avenues.—During the year 93,937 plants on Government roads and 24,750 plants on District Board roads were newly planted, out of which 73,180 and 17,418 plants survived respectively.

Divisionwise details of number of trees planted and number of trees survived, expenditure incurred and income derived are given in Annexure 26. An expenditure of Rs. 7,77,000 on Government roads and Rs. 97,358 on District Board roads was incurred during the year on the maintenance of avenues while the income on avenue was Rs. 8,12,232 and Rs. 1,63,917 in respect of Government and District Board roads respectively.

Ferries.—During the year 42 ferries were maintained by the department and an amount of Rs. 66,598.00 was realised towards revenue. Divisionwise particulars of ferries maintained are given in Annexure 28.

Inspection bungalows.—Twenty-three inspection bungalows were in charge of the department and an expenditure of Rs. 17,265 was incurred on their maintenance while an income of Rs. 4,047 was realised. Divisionwise details are furnished in Annexure 29 (ii).

Travellers' bungalows.—One hundred and eleven Travellers' bungalows of Classes I, II and III and 45 Rest Houses were maintained by the department. An expenditure of Rs. 1,63,858 was incurred towards their maintenance and an income of Rs. 34,697 was realised towards rents. Divisionwise details are furnished in Annexure 29 (iv).

Encroachments—Government roads.—Twenty-two thousand three hundred and forty-four cases of encroachments were detected during the year, 3,469 Nos. licenced, 15,731 Nos. evicted and 17,338 of objectionable and 14,086 Nos. of unobjectionable encroachments were pending disposal at the end of the year.

Details of encroachments in municipal and non-municipal areas are given in Annexure 27 (i).

District Board Roads.—One thousand two hundred and twenty-six cases of encroachments were detected during the year, 33 Nos. licensed, 497 Nos. evicted, 455 Nos. of objectionable and 1,763 Nos. of unobjectionable cases were pending disposal at the end of the year.

Divisionwise details of encroachments under municipal and non-municipal areas as furnished in Annexure 27 (ii).

Works approve by Government under Post-War Road Development Scheme.—During the year, 78 works at a total cost of Rs. 1,24,64,475 on Government roads and 273 works costing Rs. 40,56,406 on District Board works were approved by Government.

Divisionwise details showing the number of works approved during the year and those approved to end of the year are shown in Annexure 15.

Work done in the office of the Superintending Engineers (Highways and Rural Works) and Divisional Engineers (Highways and Rural Works).—Divisionwise particulars of technical sanction accorded to estimates, tenders and agreements accepted by the Superintending Engineers (Highways and Rural Works) and Divisional Engineers (Highways and Rural Works) are furnished in the statements in Annexures 16, 17 and 18.

Work done in the office of the Chief Engineer (Highways and Rural Works).—Details of technical sanction to estimates, tenders dealt with and contracts approved are furnished in Annexure 19.

CHAPTER VII.

ACCOUNTS AND AUDIT.

The scheme of accounting and integral audit of the Highways Divisions has been made permanent and has been working satisfactorily.

An analysis of the items of objections raised as a result of the audit of the accounts of the divisions to the end of 31st March 1961 and remaining unremedied till now is furnished below :—

Particulars.	Item over 3 years old.		Items over one year but less than 2 years.		Less than One year old.	
	NO.	RS.	NO.	RS.	NO.	RS.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Want of estimate ..	5	75,603	59	5,65,521	299	15,53,991
Excess over estimate ..	41	6,37,143	211	19,86,779	680	33,51,722
Want of vouchers and stamp d receipts.	105	37,385	164	4,59,411	375	9,11,167
Total ..	152	7,50,131	434	30,11,111	1,354	58,16,880

Total number of objections—1,940.

Total amount of objections—Rs. 95,78,122.

Special action is being taken from time to time for the speedy clearance of pending objections.

CHAPTER VIII.

COMMITTEES AND CONFERENCES.

(1) The annual conference of Superintending Engineers with Chief Engineer (Highways and Rural Works) was held on 18th and 19th August 1960 at Highways Research Station, Guindy.

The following officers were present on the occasion :—

- (1) Sri S. C. Nayak, Chief Engineer (Highways and Rural Works).
- (2) Sri P. Sirajuddin, Additional Superintending Engineer (Highways and Rural Works).
- (3) Sri S. R. Naidu, Superintending Engineer, Tiruchirappalli.
- (4) Sri K. Ramaswami Reddi, Director, Research Station.
- (5) Sri K. Namasivayam, Superintending Engineer (Rural Housing Cell).
- (6) Sri O. Sivasankaran, Superintending Engineer (Highways and Rural Works), Madras.
- (7) Sri T. M. Veeraraghavan, Superintending Engineer (Highways and Rural Works), Coimbatore.
- (8) Sri C. R. Muniswami Naidu, Deputy Chief Engineer.
- (9) Sri M. Balasubramaniam, Divisional Engineer, Salem.
- (10) Sri M. A. T. Arasu, Divisional Engineer, Pudukottai.
- (11) Sri K. S. Devarajan, Divisional Engineer, Tiruvettipuram.
- (12) Sri R. Thillainayagam, Divisional Engineer, Designs.
- (13) Sri G. Sundaram, Divisional Engineer, Transport and Machinery Division.
- (14) Sri V. S. Krishnamachari, Accounts Officer (Highways).
- (15) Sri J. Subramaniam, Engineer-Liasion Officer (attended on 19th August 1960 only).

The following subjects were discussed during the Conference :—

- (i) Reorganisation of Highways Department to suit the future pattern of Panchayat Administration.
- (ii) Definiteness about grant.
- (iii) Empowering Assistant Engineers to draw pay bills for his staff and other subordinates in the subdivisions.
- (iv) Supply of Fort St. George Gazette for Divisional Engineer's office.
- (v) Construction of buildings for office and quarters for Assistant Engineers and Section Officers.
- (vi) Increase of staff in Division and subdivision offices.
- (vii) Requirement of one jeep for each Highways subdivision.
- (viii) Control of special staff appointed in connection with land acquisition for formation of roads.
- (ix) Permission to enter into loads based on consent statements pending acquisition of lands.
- (x) Yardstick to be different for Division Office clerks in view of bills and vouchers not given correct numbers.

(xi) Deduction of cost of materials in tenders to be allowed for purposes of collection of Earnest money deposit and security deposit.

(xii) Delegation of powers to Superintending Engineers and Divisional Engineers to sanction expenditure incurred on demurrage.

(xiii) Sanction of powers to Divisional Engineers and Superintending Engineers for dispensation with tender call of additional items.

(xiv) Avoidance of recurring irregularities in Highways Department pointed by Accountant-General.

(xv) Bitumen drums—Marking for easy identification and avoidness of theft.

(xvi) Establishment—Highways Department—Madras General Subordinate Services—Divisional Accountants—Control by Superintending Engineers (Highways and Rural Works).

(xvii) Revision of road chart form.

(xviii) Relaxation of rules for Circle Office clerks to appear for initial recruitment examinations for Divisional Accountants.

(2) *Indian Roads Congress*.—The 25th Session of the Indian Roads Congress was held at Bhopal from 3rd to 10th January 1961.

The following officers attended the above session as official delegates of the State :—

- (a) Sri P. Sirajuddin, Chief Engineer.
- (b) Sri K. Ramaswami Reddy, Director, Research Station.
- (c) Sri R. Thillanayagam, Divisional Engineer, Traffic Engineering Cell.
- (d) Sri C. Sundararajulu Naidu, Municipal Engineer, Ootacamund.
- (e) Sri S. Radhakrishnan, Assistant Engineer (Research Station, Guindy).

(3) *Exhibitions*.—This department also participated in the Technical Exhibition arranged in connection with XXV annual session of Indian Road Congress held in Bhopal in January 1961.

(4) *Board of Communications*.—The Sixth Meeting of the Board of Communications, Madras, was held on 24th June 1960 at the Highways Research Station, Madras-25.

The following members were present on the occasion :—

- (1) The Honourable Minister for Works, Sri P. Kakkan—*Chairman*.
- (2) Sri S. K. Chettur, I.C.S., Transport Commissioner.
- (3) Sri E. P. Royappa, I.A.S., Secretary, Public Works Department.
- (4) Sri S. C. Nayak, M.L.B. (Ind.), Chief Engineer (Highways).
- (5) Sri S. Ramaswami Naidu, M.L.A.
- (6) Sri K. S. G. Haja Sheriff, M.L.A.
- (7) Sri V. K. Velu Ambalam.
- (8) Sri Desikan, Captain, Representing Military authorities.
- (9) Sri A. Azeez, Deputy Chief Engineer, Southern Railway.
- (10) Sri F. V. Arul, Deputy Inspector-General of Police, representing Inspector-General of Police.

(11) Sri Ramachandran, Deputy Chief Engineer (Irrigation), representing Chief Engineer, Irrigation.

(12) Sri T. N. Seshan, I.A.S., Deputy Secretary, Rural Development and Local Administration Department.

(13) Sri C. R. Muniswami, Secretary, Board of Communications and Deputy Chief Engineer (Highways).

The following subjects were discussed :—

- (1) Review of the action taken on the last year's resolutions.
- (2) Backwardness of Ramanathapuram district in communication facilities.
- (3) Construction of overbridges in lieu of existing level crossings sharing of cost between State Government and Union Government.
- (4) Destination-Aesthetic roads.
- (5) Maintenance of road strips at Railway level crossings.

The Seventh Meeting of the Board of Communications was held on 22nd March 1961 at the Library Hall, Chepauk. The following members were present on the occasion :—

- (1) Honourable Minister for Works, Sri P. Kakkan—*Chairman*.
- (2) Sri P. Sirajuddin, Chief Engineer (Highways and Rural Works).
- (3) Sri M. Sargunam, Deputy Secretary, Public Works Department.
- (4) Sri J. Deva Anugraham, Deputy Secretary, Rural Development and Local Administration Department.
- (5) Sri S. Krishnasami Pillai, Inspector of Local Boards.
- (6) Sri C. Raghupathi Rao Naidu, Deputy Transport Commissioner for Transport Commissioner.
- (7) Sri A. Azeez, Deputy Chief Engineer, Southern Railway.
- (8) Sri S. B. Shetty, Inspector-General of Police.
- (9) Major Abbas Medhi, General Staff Officer.
- (10) Sri T. M. Nallaswamy, M.L.A.
- (11) Sri M. Nazir Hussain.
- (12) Sri V. Govindasamy Pillai, Deputy Chief Engineer (Highways and Rural Works) and Secretary, Board of Communications.

The following subjects were discussed in the above meeting :—

- (1) Review of the motion taken on the proceedings of the previous meeting.
- (2) Widening of railway level crossing near Pachakuppam Railway Station on Katpadi Jalarpet Section in North Arcot district at mile 113/8 of Ranipet-Krishnagiri Road (N.H. No. 46).
- (3) Allotting greater funds to District Board roads.
- (4) Forming cement concrete roads leading to sugar factories.
- (5) Early payment of compensation for lands acquired for road formation.
- (6) The need for a net work of roads around Madras City.
- (7) Location of municipal and panchayat bus stands.

- (8) Constitution of Traffic Advisory Committees for important cities.
 (9) Licensing of lorry godowns and multi-storyed buildings, theatres, big commercial or industrial buildings.
 (10) Permitting display or roadside advertisement boardings.
 (11) Checking of encroachments on roads.

P. SIRAJUDDIN,
 Chief Engineer (Highways and Rural Works).

ANNEXURE 1.

Statement showing mileage of extra-Municipal Roads maintained by Public Authorities for the year ending 31st March 1961.
 ("Extra-Municipal" means outside the areas of jurisdiction of a Municipality, a City Corporation and Improvement or Port Trust or like Urban Body.)

(Figures to be rounded off to the nearest mile. Fractions of a mile or furlongs not to be shown.)

(1)	Black topped surface.				Surface type.				(9) Remarks.
	(2) Surface dressed with tar bitumen or in form of cut-backs or emulsions.	(3) Grouted sheet, asphalt or any base concrete or macadam, tar or asphalt concrete or macadam, including concrete or more.	(4) Cement concrete.	(5) Water bound macadam.	(6) Using artificially graded material, gravel, moorum, etc., on the natural soil.	(7) Natural soil.	(8) Total.		
1 National Highways—									
Mileage as on 31st March 1960	947	19.0	124.0	..	..	..	1,090.0	*	
New constructions during 19	..	..	..	..	..	..	..	..	
Five-Year Plan	..	..	..	..	..	..	..	..	
Outside	..	..	..	..	..	..	..	..	
Improvements from a lower category (+ or —) —	(—) 10	..	(—) 10	..	..	..	..	..	
Five-Year Plan	..	..	..	..	..	..	..	..	
Outside	..	..	..	..	..	..	..	..	
Mileage as on 31st March 1961	937	19.0	134.0	..	..	..	1,090.0	..	
* Current Five-Year Plan Targets—									
New constructions	..	..	..	..	..	..	..	..	
Improvements	..	..	..	..	..	..	..	..	
Other roads maintained by State Public Works Department—									
Mileage as on 31st March 1960	5,624	17	188.0	3,789.0	85.0	59.0	9,742.0	..	

ANNEXURE 1—cont.

Statement showing mileage of extra-Municipal Roads maintained by Public Authorities for the year ending 31st March 1961—cont.
 ("Extra-Municipal" means outside the areas of jurisdiction of a Municipality, a City Corporation and Improvement or Port Trust or like Urban Body.)

(Figures to be rounded off to the nearest mile. Fractions of a mile or furlongs not to be shown.)

Surface type i.e.

Surface type i.e.									
	Black topped surface.				Lower type.				Remarks.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
New constructions during 19 (+ or -) —									
Five-Year Plan		167.0	163	2	43.0	44.0	..	85.0	..
Outside		97.0	1	(-) 7.0	112.0	14.0	(-) 3.0	212.0	..
Improvements from a lower category (+ or -) —									
Five-Year Plan		226.0	5.0	(-) 4	92.0	33.0	(-) 23.0	329.0	..
Outside		42.0	..	..	31.0	..	..	11.0	..
Mileage as on 31st March 1961		(-) 5,822.0	184.0	(-) 179.0	4,005.0	156.0	33.0	10,379.0	..
* Current Five-Year Plan Targets—									
New constructions									
Improvements									
3 Roads maintained by Local Bodies—									
Mileage as on 31st March 1960		360.0	..	2.0	6,743.0	2,874.0	4,922.0	14,901.0	..
New constructions during 19 (+ or -) —									
Five-Year Plan		8.0	..	8.0	(-) 85.0	262.0	(-) 173.0	20.0	..
Outside		32.0	..	..	69.0	454.0	(-) 240.0	731.0	..
Improvements from a lower category (+ or -) —									
Five-Year Plan		(-) 17.0	..	..	(-) 664.0	279.0	(-) 494.0	(-) 896.0	..
Outside		383.0	..	..	(-) 15.0	19.0	(-) 389.0	(-) 423.0	..
Mileage as on 31st March 1961				10.0	5,910.0	2,942.0	3,626.0	12,871.0	..
* Current Five-Year Plan Targets—									
New constructions									
Improvements									
4 Total—									
Mileage as on 31st March 1960		6,883.0	25.0	315.0	10,357.0	2,935.0	4,924.0	25,440.0	..
New constructions during 19 (+ or -) —									
Five-Year Plan		(-) 160.0	163	10	(-) 42.0	306.0	(-) 173.0	104.0	..
Outside		119.0	(-) 1	2	43.0	441.0	(-) 242.0	520.0	..
Improvements from a lower category (+ or -) —									
Five-Year Plan		258.0	5.0	(-) 4	633.0	312.0	(-) 463.0	(-) 525.0	..
Outside		42.0	..	..	(-) 46.0	(-) 19.0	389.0	(-) 412.0	..
Mileage as on 31st March 1961		7,142.0	192.0	323.0	9,879.0	3,093.0	3,657.0	24,087.0	..
* Current Five-Year Plan Targets—									
New constructions									
Improvements									
5 Number of major bridges—									
Number completed as on 31st March 1960		80	..	..	..	..	..	80	..
Completed during 1961—									
Five-Year Plan									
Outside		2	..	..	..	..	..	2	..
Number completed as on 31st March 1961		82	..	..	..	..	..	82	..
* Current Five-Year Plan Targets—									
New constructions									
Improvements									

A.R.H. 1-6A

* 1 Mileage have been rounded off to the nearest mile.

† 2 The mileage of roads transferred to Panchayat Union have not been included. Hence the difference in total mileage.

Note.— 1 Statements in this schedule are intended to cover only P.W.D. Roads. Extra Municipal Roads maintained for public use by other Departments, such as Forest Departments, Irrigation Departments, Railways and Military Engineering Service should be furnished separately in Form 2 attached.
 2 Where trackways are included in the figures given (against any of the types) in the main statement, please give the mileage of those TRACKWAYS in the REMARKS COLUMN against the relevant entries in the statement.

3 'Major Bridges' means a bridge having a span of more than 800 feet.
 4 The figures relating to current Five-Year Plan Targets to be given against the items shown with an asterisk (*) are those for the whole five-year period, though actually one-fifth of these target figures will have to be compared with the actual achievements for assessing the progress during the year. The target figures must be given every year, because it is likely to be revised from time to time.

This statement is required to be completed and forwarded by the 31st December of the year following that to which the information relates to—
 The Consulting Engineer (Road Development),
 Ministry of Transport (Roads Wing),
 Jammagar House, Shahjahan Road,
 New Delhi-2.

ANNEXURE 2.

Statement showing the cost of maintenance of roads since 1946-47.

Year.	Total mileage of Government and District Board Roads.	Total expenditure on Government and District Board Roads.	Cost per mile.
(1)	(2)	(3)	(4)
	MILES.	RS.	RS.
1946-47	14,955	1,75,22,582	
	22,076	79,96,937	
	37,034	2,55,19,519	609
1947-48	15,024	2,62,03,053	
	22,025	91,54,213	
	37,049	3,53,57,266	954
1948-49	15,780	3,50,15,182	
	22,194	1,15,83,288	
	37,974	4,65,98,470	1,227
1949-50	15,460	3,37,91,000	
	22,587	1,29,85,735	
	38,047	4,67,76,735	1,229
1950-51	15,560	3,87,73,748	
	23,411	1,33,63,439	
	38,971	5,21,37,187	1,338
1951-52	15,599	4,16,35,671	
	24,957	1,41,82,154	
	40,556	5,58,17,825	1,376
1952-53	15,650	4,51,29,912	
	25,838	1,45,39,370	
	41,488	5,96,69,291	1,438

Residuary Madras State.

1953-54	8,626	2,61,25,682	
	17,301	83,43,187	
	25,927	3,44,68,869	1,326
1954-55	8,627	2,38,21,198	
	17,712	76,78,244	
	26,384	3,14,99,442	1,194
1955-56	9,141	2,67,29,550	
	17,540	91,04,922	
	26,681	3,58,34,474	968

ANNEXURE 2—cont.

Statement showing the cost of maintenance of roads since 1946-47—cont.

Year.	Total mileage of Government and District Board Roads.	Total expenditure on Government and District Board Roads.	Cost per mile.
(1)	(2)	(3)	(4)
	MILES.	RS.	RS.
1956-57—From 1st April 1956 to 31st October 1956.	9,538	1,87,48,752	
	17,282	35,12,036	
	26,820	2,22,60,788	830
From 1st November 1956 to 31st March 1957.	8,587	63,41,373	
	15,518	52,15,151	
	24,105	1,15,56,524	479
1957-58	9,930	2,45,99,891	
	15,368	74,90,387	
	24,398	3,20,90,278	1,315
1958-59	9,669	2,92,81,057	
	15,061	72,62,373	
	24,730	3,65,43,430	1,477
1959-60	11,185	3,30,76,188	
	14,235	89,24,374	
	25,420	4,20,00,562	1,658
1960-61	11,464	3,35,23,710	
	12,267	79,58,754	
	23,731	4,14,82,464	1,748

ANNEXURE 3.

Statement showing the classified cost of maintenance of roads for the year 1960-61.

Classification.	Government Roads.			District Board Roads.		
	Mileage.	Maintenance cost.	Cost per mile.	Mileage.	Maintenance cost.	Cost per mile.
		RS.	RS.		RS.	RS.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
National Highways ..	1,091	42,42,987	3,889	..	..	..
State Highways ..	1,092	34,37,346	3,147	..	..	..
Major District Roads ..	8,539	2,41,94,503	2,833	6	1,04,204*	..
Other District Roads ..	742	16,48,874	2,222	4,147	34,43,114	830
Village Roads ..	..	..	..	8,144	44,11,436	544
Total ..	11,464	3,35,23,710	2,924	12,267	79,58,754	649

* The figure include expenditure incurred on District Board Major District Roads, until they were taken over by Government during the year under report.

ANNEXURE 4.

Statement showing the length of roads maintained as on 31st March 1961.

Serial number and name of circle and division.	Government Roads.				District Board Roads.				Public Department Roads. Works (11)	Municipalities. (12)	Grand total. (13)
	National Highways. (2)	State Highways. (3)	Major District Roads. (4)	Other District Roads. (5)	Total. (6)	Major District Roads. (7)	Other District Roads. (8)	Village Roads. (9)	Total. (10)		
I. Madras Circle—											
1 Chingleput	133	..	645	..	778	..	333	624	957	78	1,818
2 South Arcot	86	90	693	..	869	..	444	769	1,213	118	2,289
3 Tharjavar	..	73	589	8	670	..	229	355	584	248	3,009
4 Nagapattinam	..	28	383	..	411	..	312	355	667	196	1,928
5 North Arcot	105	74	627	5 } V.R.4	815	..	379	527	906	..	..
6 Tiruvettipuram Special.	..	..	..	..	..	..	..	..	..	..	..
7 Villupuram Special	..	..	..	..	..	..	..	..	..	..	..
(e) Madras City	..	..	..	..	..	..	..	..	..	611	614
Total ..	324	265	2,937	17	3,543	..	1,697	2,630	4,327	1,251	9,658
II. Investigation Circle—											
8 Weak Bridges, Madras ..	..	..	..	..	..	..	..	..	..	..	..
9 Investigation, Madras ..	..	..	..	..	..	..	..	..	..	..	..
10 Investigation, Tiruchi- rappalli.	..	..	..	..	..	..	..	..	..	..	..
11 Investigation, Coimbatore.	..	..	..	..	..	..	..	..	..	..	..
III. Superintending Engineer (Rural Housing Cell), Madras—											
12 Cauvery Bridge Special.	..	..	..	..	..	..	..	..	..	..	..
13 Tenkasi Special	..	..	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..	..	..	..

ADMINISTRATION REPORT OF THE

IV. DISTRICTS ACCOUNTS CONTROLLING AUTHORITY

14 Designs Division	..	..	..	..	..	..	..	..	..	..	..
15 Transport and Machinery Division.	..	..	..	..	..	..	..	..	..	..	..

V. Tiruchirappalli Circle—

16 Tiruchirappalli	64	98	430	30	622	..	162	605	767	68	225	3,060
17 Pudukottai	71	92	374	..	537	6	388	447	841	..	..	..
18 Dindigul	75	48	361	15	499	..	49	583	632	17	305	2,332
19 Madurai	36	19	461	30	546	..	2	331	333	..	..	13
20 Bodinayakanur	..	..	..	..	13	..	..	..	..	..	..	1,664
21 Ramanathapuram	117	71	616	67	871	..	235	315	550	4	239	75
22 Ramanathapuram special.	..	..	17	..	17	..	58	..	58	..	..	..
23 Tirunelveli	85	106	799	20 } V.R. 32	1,042	..	124	882	1,006	17	114	2,239
24 Nagercoil	39	30	301	470	840	..	..	..	..	117	99	1,056
25 Kamuthi special	..	..	..	..	..	..	267	..	267	..	..	267
Total ..	487	464	3,372	664	4,987	6	1,285	3,163	4,454	223	1,042	10,706

VI. Coimbatore Circle—

26 Krishnagiri	122	..	569	21	712	..	318	363	681	8	156	2,797
27 Salem	80	62	419	9	570	..	354	316	670	..	..	..
28 Erode	28	59	591	10	688	..	193	896	1,089	..	266	3,682
29 Erode special	..	..	..	..	..	..	259	636	895	..	..	..
30 Coimbatore	50	138	556	..	744	..	41	110	151	..	138	509
31 The Nilgiris	..	104	95	21	220	..	..	..	..	..	..	..
Total ..	280	363	2,230	61	2,934	..	1,165	2,321	3,486	8	560	6,988
Grand total ..	1,091	1,092	8,539	742	11,464	6	4,147	8,114	12,267	768	2,853	27,352

ANNEXURE 5.

Statement showing the various types of roads as on 31st March 1961.

Serial number and name of Circle and Division.	Cement Concrete roads.						Black top roads.				Metalled roads.				Unmetalled roads.															
	Highways Department.			District Board.			Public Works Depart- ment.			Municipalities.			Total.			Highways Department.			District Board.			Public Works Depart- ment.			Municipalities.			Total.		
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)									
I. Madras Circle—																														
1 Chingleput ..	31	..	..	2	33	656	41	..	30	727	91	453	5	36	585	..	493	..	10	473	1,818									
2 South Arcot ..	21	1	..	2	24	564	6	..	31	601	278	557	2	39	876	6	649	87	46	788	2,289									
3 Thanjavur ..	8	..	..	..	..	467	32	..	..	..	195	29	..	..	..	..	523	320	63	1,333	3,009									
4 Nagapattinam ..	2	..	..	4	14	317	20	..	60	896	79	233	109	121	766	13	414	..	..	..	..									
5 North Arcot ..	22	..	..	16	38	731	21	5	46	803	48	376	1	80	505	14	509	5	54	582	1,928									
6 Tiruvettipuram special.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..									
7 Villupuram special.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..									
(a) Madras City ..	..	..	..	21	21	..	..	2	486	488	..	..	1	97	98	..	..	..	7	7	614									
Total ..	84	1	..	45	130	2,735	120	7	653	3,515	691	1,648	118	373	2,830	33	2,558	412	180	3,183	9,658									
II. Investigation Circle—																														
8 Weak Bridges, Madras.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..									
9 Investigation, Madras	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..									
10 Investigation, Thiru- chirappalli.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..									
11 Investigation, Coimba- tore.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..									

III. Superintending Engineer, Rural Housing Cell, Madras.

12 Cauvery Bridge special.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13 Tenkasi special	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14 Designs Division ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15 Transport and Machinery Division.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

IV. Director, Research Station, Madras.

16 Tiruchirappalli	22	..	..	19	49	238	12	..	..	..	362	245	..	..	..	..	510	32	25	952	3,060
17 Pudukkottai	..	8	..	..	..	359	17	..	110	736	149	460	..	..	..	..	29	29	..	..	..
18 Dindigul	26	..	..	..	..	370	3	..	76	600	76	600	..	..	..	..	27	29	..	..	..
19 Madurai	22	..	..	18	66	379	4	7	104	867	145	184	5	101	1,111	..	145	5	82	288	2,332
20 Bodinayakanur	..	..	..	..	..	..	11	..	..	11	2	..	..	..	2	..	..	..	..	..	13
21 Ramanathapuram	21	..	..	..	..	417	30	..	..	365	387	..	..	..	..	..	68	4	..	..	..
22 Ramanathapuram special.	..	..	..	40	61	..	..	..	43	490	5	58	..	..	884	12	133	..	87	304	1,739
23 Tirunelveli ..	19	..	..	43	62	544	14	4	41	603	472	842	5	38	1,357	7	150	8	52	217	2,239
24 Nagercoil ..	36	..	..	3	39	250	..	..	11	261	384	..	60	41	485	170	123	57	44	271	1,056
25 Kamuthy Special ..	..	..	..	..	..	..	..	..	..	..	..	144	..	..	144	..	..	..	..	123	267
Total ..	146	8	..	123	277	2,568	80	11	309	2,968	1,960	2,920	106	320	5,306	313	1,446	106	290	2,155	10,706

V. Tiruchirappalli Circle.

VI. Coimbatore Circle.

26 Krishnagiri	9	..	..	23	52	435	4	..	..	268	392	..	..	..	..	..	285	..	37	484	2,797
27 Salem	20	..	..	..	..	327	49	2	52	869	219	463	6	..	..	..	158	..	..	..	..
28 Erode	..	..	..	..	..	414	..	..	..	274	325	..	..	..	..	..	764	..	..	..	..
29 Erode special	..	..	..	8	71	..	..	..	138	1,010	..	..	..	..	..	..	..	..	49	966	3,882
30 Coimbatore	63	..	..	..	..	411	17	..	..	240	725	..	..	..	..	..	153	..	..	..	..
31 The Nilgiris	..	..	..	4	4	202	23	..	86	311	18	113	..	..	173	..	15	..	6	21	509
Total ..	92	..	..	35	127	1,819	93	2	276	2,190	1,018	2,018	6	157	3,200	4	1,375	..	92	1,471	6,988
Grand Total ..	322	9	..	203	534	7,122	293	20	1,338	8,673	3,670	6,586	230	850	11,336	350	5,379	518	562	6,809	27,352

ANNEXURE 6.

Statement showing the length of various classes of roads improved or newly formed during the year 1960-61.

Serial number and name of Circle and Division.	Cement concrete roads in Miles.					Black top roads in Miles.					Metalled roads in Miles.					Unmetalled roads in Miles.				
	Highways Department.	District Board.	Public Works Department.	Municipalities.	Total.	Highways Department.	District Board.	Public Works Department.	Municipalities.	Total.	Highways Department.	District Board.	Public Works Department.	Municipalities.	Total.	Highways Department.	District Board.	Public Works Department.	Municipalities.	Total.
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
I. Madras Circle.																				
1 Chingleput ..	..	..	..	..	..	37	..	..	1	38	..	..	..	1	1	..	..	..	..	..
2 South Arcot ..	..	..	..	..	..	11	..	..	2	13	1	8	..	..	9	..	..	..	..	..
3 Thanjavur ..	..	..	..	..	2	53	4	..	8	76	..	9	..	3	21	..	..	..	..	..
4 Nagapattinam ..	..	..	..	..	..	..	11	..	..	..	..	9	..	..	..	..	..	..	..	..
5 North Arcot ..	..	..	..	1	1	6	5	..	2	18	..	..	..	4	11	12	40	1	53	78
6 Tiruvettipuram Special ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7 Villupuram Special ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(a) Madras City ..	..	..	..	..	..	..	..	..	10	10	..	..	..	14	14	..	..	7	7	31
Total ..	2	..	..	1	3	107	20	..	23	150	1	33	..	22	56	12	40	8	60	289
II. Investigation Circle.																				
8 Weak Bridges, Madras ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9 Investigation, Madras ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10 Investigation, Tiruchy ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11 Investigation, Coimbatore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
III. Superintending Engineer (Rural Housing Cell), Madras.																				
12 Cauvery Bridge Special ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13 Tenkasi Special ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
IV. Director, Research Station, Madras.																				
14 Design Division ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15 Transport and Machinery Division ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

V. Tiruchirappalli Circle.

16 Tiruchirappalli ..	..	..	..	..	..	4	..	..	3	8	29	12	..	1	42	..	67	..	67	128
17 Pudukottai ..	..	..	..	..	..	7	7	..	1	47	..	6	..	..	48	..	11	1	30	138
18 Dindigul ..	..	..	..	..	..	21	7	..	..	..	..	30	..	..	..	..	5	..	..	..
19 Madurai ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20 Bodinayakanur ..	..	..	..	..	..	11	..	..	..	..	12	..	..	..	..	13	..	..	..	..
21 Ramanathapuram ..	..	..	..	..	..	29	..	..	8	32	15	..	..	2	22	..	4	..	4	59
22 Ramanathapuram Special ..	..	..	..	..	..	..	..	..	..	..	5	..	..	..	..	..	..	..	..	..
23 Tirunelveli ..	..	..	..	1	4	36	..	..	1	37	..	2	..	..	2	..	3	1	4	47
24 Nagercoil ..	..	..	..	..	..	76	..	..	1	77	53	..	..	..	53	..	..	1	1	131
25 Kamuthi Special ..	..	..	..	..	..	..	..	..	..	..	..	27	..	..	27	..	98	..	98	125
Total ..	3	8	..	5	16	184	8	..	9	201	114	77	..	3	194	13	188	3	204	615

IV. Coimbatore Circle.

IV. COMMERCIAL CROPS.																					
26 Krishnagiri ..	..	..	..	..	..	23	..	..	..	..	..	15	..	..	15	..	..	10	..	1	11
27 Salem ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	..	..	11
28 Erode ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11
29 Erode Special ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30 Coimbatore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
31 The Nilgiris ..	..	..	..	..	..	2	2	..	..	6	..	..	..	..	1	1	..	1	..	..	1
Total	..	..	..	1	1	77	2	..	6	85	4	62	..	5	71	..	22	..	1	23	180
Grand Total	..	5	8	..	7	20	368	30	..	38	486	119	172	..	30	321	25	250	..	12	287
																					1,064

ANNEXURE 7.

Statement showing the length of roads taken over from District Boards and Municipalities during the year 1960-61.

Serial number and name of Circle and Division.	Cement concrete and black top roads.			Metalled roads.			Unmetalled roads.			Total length.			Authority for tak- ing over and remarks.
	(2)			(3)			(4)			(5)			
	M.	F.	FT.	M.	F.	FT.	M.	F.	FT.	M.	F.	FT.	
Madras Circle—													
1 Chingleput ..	..	..		..			..			..			..
2 South Arcot ..	..	..		..			..			..			..
3 Thanjavur ..	..	..		..			..			..			..
4 Nagapattinam ..	..	..		..			..			..			..
5 North Arcot ..	..	..		..			..			..			..
6 Tiruvottipuram Special.	..	..		..			..			..			..
7 Villupuram Special	..	..		..			..			..			..
(a) Madras City ..	..	..		..			..			..			..
II. Investigation Circle.—													
8 Weak Bridges, Madras.	..	..		..			..			..			..
9 Investigation, Madras.	..	..		..			..			..			..
10 Investigation, Tiruchy.	..	..		..			..			..			..
11 Investigation, Coimbatore.	..	..		..			..			..			..
III. Superintending Engineer (Rural Housing Cell), Madras —													
12 Cauvery Bridge Special.	..	..		..			..			..			..
13 Tenkasi Special	..	..		..			..			..			..
IV. Director, Research Station, Madras—													
14 Designs Division	..	..		..			..			..			..
15 Transport and Machinery Divi- sion.	..	..		..			..			..			..
Total ..	..	..		..			..			..			..
V. Tiruchirappalli Circle—													
16 Tiruchirappalli ..	..	..		44	7	0	..			44	7	0	G.O. No. 1904, P.W., dated 28th June 1960.
17 Pudukottai ..	..	..		..			..			..			..
18 Dindigul ..	..	1	4	0	53	4	0	..		55	0	0	G.O. No. 1904, P.W., dated 28th June 1960.
19 Madurai ...	..	..		19	4	0	..			19	4	0	G.O. Ms.No. 555, dated 24th February 1961.

ANNEXURE 7—cont.

Statement showing the length of roads taken over from District Boards and Municipalities during the year 1960-61—cont.

Serial number and name of Circle and division.	Cement concrete and black top roads.			Metalled roads.			Unmetalled roads.			Total length.			Authority for tak- ing over and remarks.	
	(2)			(3)			(4)			(5)				(6)
	M.	F.	FT.	M.	F.	FT.	M.	F.	FT.	M.	F.	FT.		
V. Tiruchirapalli circle—cont.														
20 Bodinayakanur	..	..	..	..	..	..	..	..	..	..	..	..	..	
21 Ramanathapuram.	1	2	55	66	0	256	..	..	..	67	2	311	G.O.Ms. No. 655, P.W., dated 2nd March 1959.	
22 Ramanathapuram Special.	..	..	..	..	..	..	..	..	..	..	..	..	..	
23 Tirunelveli	..	..	..	0	3	460	..	..	..	0	3	460	G.O. Ms. No. 1021, dated 7th April 1961.	
24 Nagercoil ..	..	..	..	21	6	255	..	..	..	21	6	255	G.O. Ms. No. 2848, dated 13th October 1960 and G.O. Ms. No. 3363, P.W., dated 17th December 1960.	
35 Kamuthi Special..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Total ..	2	6	55	206	1	311	..	..	..	208	7	366	..	
VI. Coimbatore Circle—														
26 Krishnagiri	..	..	..	18	5	0	..	..	..	18	5	0	G.O. Ms. No. 2842, P.W., dated 13th October 1960. and G.O. No. 535, P.W., dated 24th February 1961.	
27 Salem	..	..	..	4	1	125	..	..	..	4	1	125	G.O. Ms. No. 3184, P.W., dated 24th November 1960	
28 Erode	..	..	..	..	..	..	..	..	..	..	..	..	..	
29 Erode Special	..	..	..	..	..	..	..	..	..	0	4	540	G.O. Ms. No. 793, L.A., dated 21st June 1960.	
30 Coimbatore	..	0	4 540	..	..	..	..	..	..	..	..	..	..	
31 The Nilgiris	..	..	..	..	..	..	..	..	..	..	..	..	..	
Total ..	0	4	540	22	6	125	..	..	..	23	3	005	..	
Grand total ..	3	2	595	228	7	436	..	..	..	232	2	371	..	

ANNEXURE 8.

*Road Mileage analysis as on 31st March 1961—
(Government and District Boards Roads).*

Serial number and categories of roads.	Cement Concrete.		Blacktop.		Metalled.		Unmetalled.		Total.	
	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.
	M.	M.	M.	M.	M.	M.	M.	M.	M.	M.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 National Highways ..	25	112	72	882	..	..	..	..	97	994
2 State Highways ..	19	103	70	880	..	210	..	..	89	1,003
3 Major District roads ..	9	63	270	4,904	210	2,761	..	328	489	8,056
4 Other District Roads ..	..	..	26	263	14	3,027	..	1,554	40	4,849
5 Village Roads ..	..	..	..	43	9	4,215	4	3,843	13	8,101
Total ..	53	278	438	6,977	233	10,023	4	5,725	728	23,003

ANNEXURE 9.

*Statement showing the appropriation and the outlay during 1960-61 relating to
Madras State for all Heads of Civil Works (Highways only).*

Service heads.	Original Works.		Repairs.		Total.	
	Appropriation.	Actual outlay.	Appropriation.	Actual outlay.	Appropriation.	Actual outlay.
	(2)	(3)	(4)	(5)	(6)	(7)
(1)	RS.	RS.	RS.	RS.	RS.	RS.
50. Civil Works—State—						
Communications ..	23,58,400	20,79,278	3,23,66,200	3,39,14,970	3,47,24,600	3,59,94,248
Miscellaneous ..	1,54,700	1,49,372	..	..	1,54,700	1,49,372
Establishment ..	..	..	..	..	49,51,000	54,92,005(a)
Tools and Plant..	..	..	..	..	37,99,400	36,55,408
Suspense ..	..	..	..	..	(—) 27,88,400	(—) 18,78,520
Total ..						4,34,12,513
81. Civil Works—State—						
Communications ..	1,16,87,100	1,19,22,640	..	..	1,16,87,100	1,19,22,640
Miscellaneous..	4,09,700	3,85,047	..	..	4,09,700	3,85,047
Communication Development Projects— National Extension Service and Local Development Works.	38,19,300	38,74,768	..	..	38,19,300	38,74,768
Tools and Plant ..	10,23,700	10,23,621	..	..	10,23,700	10,23,621
Total ..						1,72,08,076
Union (Madras)—						
50. Civil Works—						
Communications ..	..	..	41,62,600	42,31,160	41,62,600	42,31,160
81. Civil Works—						
Communications ..	38,68,100	38,74,829	..	..	39,68,100	38,74,829
(a) 62,53,597 relates to establishments including Rs. 71'00 relating to "Charged "						
(—) 7,61,592 relates to recoveries on account of establishment.						
						54,92,005

ANNEXURE 10.

*Statement showing the abstract the appropriation and the expenditure during 1960-61
under all Heads of Civil Works (Highways only).*

Finance heads.	Original Appropriation.	Final Appropriation.	Actual expenditure.
(1)	(2)	(3)	(4)
	RS.	RS.	RS.
50. Civil Works—State—			
Works and Repairs	2,89,11,200	3,48,79,300	3,61,43,620
Establishment	36,58,900	49,51,000	54,92,005
Tools and Plant	32,62,000	37,99,400	36,55,408
Suspense	8,22,900	(—) 27,88,400	(—) 18,78,520
81. Civil Works—State—			
Works	1,08,29,000	1,59,16,100	1,61,82,455
Tools and Plant	10,39,300	10,23,700	10,23,621
Union—Madras—			
50. Civil Work Union—			
Works and Repairs	36,00,000	41,62,600	42,31,160
81. Civil Works Union—			
Works	40,00,000	39,18,100	38,74,829
Total Highways—State and Union ..			6,87,24,578

ANNEXURE II.

(i) Statement showing the division-wise particulars of expenditure on Government Roads (State and Union) for the year 1960-61.

Serial number and name of the division.	(1)	State works.				Original works.			
		Union works	National Highways	State Highways	Other District roads and village roads	Major District roads	Other District roads and village roads	Miscellaneous	RS.
1 Chingleput ..	..	92,407	5,31,170	11,293	..	7,86,462	65,873	..	3,35,292
2 Transport and Machinery Division ..	..	7,92,147	3,60,461	..	(-) 9,364	1,99,827	..	..	..
3 South Arcot ..	..	..	..	..	..	3,37,339	..	..	..
4 Nagapattinam ..	..	..	..	..	..	3,88,466	2,04,413	..	..
5 Thanjavur ..	..	..	..	..	..	3,19,169	..	..	..
6 Villupuram ..	..	..	..	..	..	..	..	..	..
7 Research station ..	..	2,28,390	2,11,680	..	3,67,170	3,80,950	14,572	..	47,827
8 Tiruchirappalli ..	..	91,990	62,122	..	(-) 238	3,13,963	..	..	..
9 Pudukottai ..	..	9,67,196	1,91,081	..	(-) 79	6,01,076	..	..	..
10 Madurai ..	..	2,50,501	2,18,783	..	4,496	2,57,375	..	..	..
11 Dindigul ..	..	1,17,244	4,46,113	..	65,716	3,89,247	28,878	..	..
12 Ramanathapuram ..	..	..	2,92,054	..	78,578	2,71,577	..	..	..
13 Tirunelveli ..	..	8,00,200	..	..	..	..	..	..	..
14 Cauvery Bridges ..	..	..	..	..	..	4,26,201	..	..	..
15 Bodi ..	..	70	..	..	..	3,77,768	..	..	..
16 Ramanathapuram (Special) ..	..	1,24,242	3,52,293	..	48,723	8,48,513	..	..	..
17 North Arcot ..	..	..	1,41,482	..	1,552	4,39,681	..	..	..
18 Erode ..	..	1,41,997	2,47,336	..	1,51,581	3,32,874	..	..	..
19 Coimbatore ..	..	..	..	..	88	8,967	97,277	..	..
20 Nilgiris ..	..	80,534	4,33,968	..	..	1,79,117	..	..	..
21 Krishnagiri ..	..	37,998	3,10,201	..	..	5,84,163	10,113	..	..
22 Salem ..	..	..	..	..	2,84,888	6,57,591	..	..	..
23 Tenkasi ..	..	..	..	..	1,73,958	6,60,352	..	..	..
24 Tiruvettipuram ..	..	..	..	..	..	..	21,27,668	..	..
25 Kamuthy ..	..	1,50,064	1,16,693	..	28,974	4,82,685	1,83,194	..	..
26 Nagercoil ..	..	..	..	..	..	4,72,671	..	..	..
27 Erode (Special) ..	..	..	..	..	..	..	..	..	..
Total ..	..	38,74,970	30,15,437	11,239	17,31,749	97,16,114	27,31,988	..	3,83,119

ANNEXURE II—cont.

(ii) Statement showing the division-wise particulars of expenditure on Government roads (State and Union) for the year 1960-61—cont.

Serial number and name of the division.	State works.				Repairs.				Total.
	National Highways	State Highways	Major District roads	Miscellaneous	Other District roads and village roads	Avenues.	Tools and plant.	RS.	
1 Chingleput ..	..	..	34,33,886	567	..	55,958	3,32,315	53,40,931	..
2 Transport and Machinery Division ..	..	..	..	..	..	..	10,99,375	14,84,667	..
3 South Arcot ..	21,292	2,05,238	1,96,772	1,08,976	..	72,043	1,83,762	21,31,154	..
4 Nagapattinam ..	..	1,72,971	14,57,181	49,493	..	24,343	98,167	21,39,484	..
5 Thanjavur ..	..	2,85,545	21,07,535	2,473	1,01,533	27,634	1,70,263	34,97,922	..
6 Villupuram ..	..	..	..	1,22,598	..	..	1,768	5,37,899	..
7 Research station ..	23,770	3,79,798	11,71,504	1,26,059	76,566	45,181	1,39,687	4,13,191	..
8 Tiruchirappalli ..	31,698	3,10,371	8,20,925	1,20,546	..	66,169	1,92,687	31,93,911	..
9 Pudukottai ..	47,837	41,624	15,04,745	..	..	26,690	1,76,708	35,56,878	..
10 Madurai ..	28,946	1,81,909	10,29,601	1,00,117	..	13,137	1,71,566	22,56,435	..
11 Dindigul ..	44,819	2,22,113	19,99,811	1,86,687	50,860	53,367	1,67,222	37,72,116	..
12 Ramanathapuram ..	21,023	3,47,315	21,19,535	2,374	7,43,075	54,054	2,23,460	41,53,045	..
13 Tirunelveli ..	..	..	..	..	..	..	15,392	8,15,592	..
14 Cauvery Bridges ..	..	..	99,646	..	..	2,500	94,838	6,23,285	..
15 Bodi ..	..	..	41,802	..	..	..	14,652	4,81,015	..
16 Ramanathapuram (Special) ..	22,637	3,19,978	2,32,607	1,90,688	8,513	77,695	2,49,031	24,27,749	..
17 North Arcot ..	..	1,17,294	16,87,701	910	6,584	1,61,109	1,80,518	28,45,964	..
18 Erode ..	22,078	4,85,923	18,37,757	1,40,485	..	36,786	2,43,849	36,40,616	..
19 Coimbatore ..	..	4,035	3,21,783	34,464	4,170	84,334	1,60,448	5,61,118	..
20 Nilgiris ..	17,777	..	12,97,206	5,483	..	44,549	1,40,144	22,19,072	..
21 Krishnagiri ..	23,646	1,75,592	10,56,475	81,252	24,202	28,431	22,067	24,72,217	..
22 Salem ..	..	..	..	..	..	..	37,352	9,64,536	..
23 Tenkasi ..	..	..	..	..	..	..	1,55,179	8,71,562	..
24 Tiruvettipuram ..	..	..	..	..	..	..	..	22,82,847	..
25 Kamuthy ..	22,127	84,561	5,03,387	..	6,27,889	14,365	14,93,973	37,97,862	..
26 Nagercoil ..	..	..	..	1,051	..	..	1,910	4,75,632	..
27 Erode (Special) ..	..	..	..	..	..	..	..	..	..
Total ..	3,27,550	34,37,346	2,29,25,813	12,68,690	16,48,874	8,44,011	60,18,869	5,88,35,823	..

ANNEXURE II—contd.

(ii)—Statement showing the division-wise expenditure on District Board Roads and non-road works.

Serial number and name of circle and divisions.	Expenditure on original works.			Expenditure on repairs.				Avenues.	Non-road works.	Total.
	(1)	Major District Roads.		Other District Roads.		Major District Roads.		(3)	(9)	(10)
		(2)	(4)	(3)	(5)	(6)	(7)			
		RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
I. Madras Circle.										
1 Chingleput ..	..	..	3,89,603	..	..	2,81,088	5,08,853	7,622	..	11,87,166
2 Tiruvettipuram ..	..	..	..	..	..	..	..	..	..	..
3 North Arcot ..	..	..	4,20,519	..	17,087	3,61,061	2,10,188	17,121	1,13,670	11,39,646
4 Villupuram (Special)	..	..	5,06,664	..	..	..	22,965	..	..	5,29,629
5 South Arcot ..	..	..	..	..	..	4,01,467	4,01,879	24,688	2,76,680	11,04,714
6 Nagapattinam ..	..	..	4,28,799	..	..	2,80,133	1,22,864	3,508	2,39,626	10,62,518
7 Thanjavur ..	..	..	8,09,861	..	105	2,77,667	1,88,612	1,573	74,025	13,51,743
Total ..	..	..	12,38,660	13,25,363	17,192	15,81,422	14,55,261	54,512	7,04,001	63,76,416
II. Investigation Circle.										
8 Weak Bridges Division, Madras.	..	..	..	..	..	..	..	..	..	..
9 Investigation Division, Madras.	..	..	..	..	..	..	..	..	..	..
10 Investigation Division, Tiruchirappalli.	..	..	..	..	..	..	..	..	..	..
11 Do. Coimbatore ..	..	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..	..	..
III. Rural Housing Cell, Madras.										
12 Cauvery Bridge Division ..	..	..	..	..	..	..	..	..	..	..
13 Tenkasi (Special) ..	..	..	57,704	..	..	..	..	..	..	57,704
Total ..	..	..	57,704	..	..	..	..	..	..	57,704
IV. Director, Research Station, Madras.										
14 Designs Division ..	..	..	..	..	..	..	..	..	..	..
15 Divisional Engineer, Transport and Machinery Division.	..	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..	..	..
V. Tiruchirappalli Circle.										
16 Tiruchirappalli ..	..	..	2,56,021	..	..	..	5,61,843	..	2,21,796	10,39,660
17 Pudukottai ..	..	..	1,94,164	15,476	3,62,883	2,37,271	2,37,271	16,280	1,07,333	12,94,242
18 Dindigul ..	..	..	2,63,661	..	60,602	2,42,558	2,42,558	..	1,25,725	6,91,546
19 Madurai ..	..	..	2,55,127	3,865	44,549	3,22,934	3,22,934	..	1,30,074	7,56,549
20 Ramanathapuram ..	..	..	10,49,043	2,88,212	1,34,721	1,68,381	1,68,381	5,528	3,35,183	19,81,068
21 Bodinayakanur (Special)	..	..	..	..	..	..	..	..	..	..
22 Ramanathapuram (Special)	..	..	..	..	28,460	..	..	..	..	2,45,272
23 Tirunelveli ..	3,040	..	5,92,370	55,503	44,025	..	3,83,411	261	2,30,306	13,08,916
24 Nagercoil ..	..	..	..	..	..	..	..	..	..	..
25 Kamuthy ..	..	21,27,668	..	..	..	..	..	..	..	21,27,668
Total ..	3,040	36,94,358	18,49,555	74,844	6,75,240	..	19,16,398	22,069	11,50,417	93,85,921
VI. Coimbatore Circle.										
26 Krishnagiri ..	..	2,16,892	84,537	..	2,18,063	1,07,863	1,07,863	6,696	70,159	7,03,210
27 Salem ..	..	1,66,032	1,47,217	12,170	3,48,468	1,29,620	1,29,620	1,136	88,069	8,92,712
28 Erode ..	1,742	1,60,493	1,69,213	..	2,52,964	2,91,193	2,91,193	3,507	4,92,307	13,71,419
29 Erode (Special)	..	..	..	..	..	..	..	..	..	..
30 Coimbatore ..	..	3,26,659	..	..	3,34,808	3,98,736	3,98,736	2,984	3,25,750	13,88,937
31 The Nilgiris ..	..	1,90,287	2,67,577	..	32,149	1,12,365	1,12,365	..	41,950	6,44,328
Total ..	1,742	10,59,363	6,68,544	12,170	11,86,452	10,39,777	10,39,777	14,323	10,18,235	50,00,606
Grand total ..	4,782	59,92,381	39,01,171	1,04,206	34,43,114	44,11,456	44,11,456	90,904	28,72,653	2,08,20,647

ANNEXURE 12.

Statement showing the figures under XXXIX Civil Works—Rents and Miscellaneous—1960-61 (Highways only).

Heads of Account.	Actuals. RS.
XXXIX. Civil Works—State—	
Rents	14,889
Miscellaneous—	
Contribution towards leave salary of officers lent to foreign service.	45,272
Other receipts	22,71,783
Total ..	23,31,944

N.B.—(1) The figures include treasury transactions also.

ANNEXURE 13.
SECOND FIVE-YEAR PLAN
(i) Statement showing the Financial and Physical achievement made during 1960-61—
State Roads (Government Works).

Serial number and division.	Asphaltic concrete.		Cement concrete.		Black topping.		New Metalling.		Improvements.		Minor Bridges.		Major Bridges.		New Formation.		(Rupees in lakhs). Target Total for the ex- penditure for the year. (Fin.) the year.	
	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	RS.	RS.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1 Chingleput	..	..	..	..	2.49	18.3	..	..	2.02	0.14	1.24	1.01	..	0.93	..	..	2.51	5.75
2 Tiruvettipuram	..	..	..	..	..	..	..	..	..	..	..	..	7.94	0.93	..	..	9.94	7.94
3 North Arcot	..	..	..	..	..	..	0.58	2.3	0.16	0.62	2.07	0.40	..	0.40	..	..	0.13	2.80
4 Villupuram	..	..	0.64	..	..	..	2.01	3.7	..	..	0.50	0.38	1.08	0.54	..	..	4.68	3.63
5 South Arcot	..	..	..	..	0.13	2.1	0.27	2.6	..	..	1.23	2.30	..	0.31	..	..	1.77	1.63
6 Nagapattinam	..	..	..	..	0.67	3.4	3.75	10.2	0.11	..	0.28	0.61	..	0.28	..	..	5.69	4.31
7 Thanjavur	..	..	..	0.26	..	..	1.28	3.5	0.04	0.14	..	..	1.02	0.28	..	..	5.49	5.43
8 Tiruchirappalli	..	..	..	..	0.02	..	0.77	14.1	2.18	2.89	0.76	0.93	..	..	0.28	..	4.49	4.01
9 Pudukkottai	..	..	..	..	0.37	3.4	2.23	41.6	0.32	0.37	0.18	0.78	..	..	..	..	2.30	3.10
10 Dindigul	..	..	..	..	0.35	2.0	..	..	0.20	0.61	0.14	0.15	0.20	0.41	..	..	0.56	0.85
11 Madurai	..	..	..	..	1.81	10.4	..	..	0.93	0.47	2.39	1.49	0.97	1.72	..	..	5.90	6.10
12 Sivagange	..	..	..	..	0.21	1.0	..	5.2	0.20	0.78	0.98	1.15	2.06	1.17	..	..	6.29	3.49
13 Ramnathapuram	..	..	..	..	..	..	1.58	0.1	..	..	0.40	0.61	2.17	0.62	..	..	1.17	4.10
14 Tirunelveli	..	..	..	..	..	..	0.43	7.2	..	0.42	0.67	0.94	0.01	0.62	0.44	1.60	3.39	2.67
15 Tenkasi Special	..	..	..	..	1.68	14.0	..	..	..	..	0.78	1.19	5.34	2.75	..	..	8.12	8.50
16 Kanyakumari	..	..	..	..	3.62	18.4	..	..	0.80	0.26	0.16	0.80	0.58	0.34	0.71	2.42	5.00	5.57
17 Krishnagiri	..	..	..	..	0.03	..	..	..	0.91	0.98	0.28	0.35	0.26	..	..	..	0.43	1.48
18 Salem	..	..	..	..	..	..	..	..	0.64	1.39	..	2.97	0.69	..	0.32	0.18	3.07	7.65
19 Erode	..	..	..	..	..	..	0.54	3.2	1.69	2.44	1.17	1.35	0.35	0.49	..	..	6.33	3.75
20 Erode Special	..	..	..	..	0.40	1.4	0.97	10.4	..	..	..	..	4.73	..	..	..	..	4.73
21 Coimbatore	..	..	..	..	0.66	6.5	..	..	0.27	0.55	0.09	0.24	1.53	1.25	..	..	2.73	2.89
22 Nilgiris	..	..	..	..	..	..	..	..	..	0.55	0.09	0.24	..	..	..	..	0.55	1.02
Total	..	..	..	..	12.64	81.6	14.35	105.1	9.96	12.06	13.20	18.45	28.93	11.83	7.75	4.15	81.14	91.90

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ANNEXURE 13—cont.
(ii) Statement showing the financial and physical achievement made during 1960-61—
SECOND FIVE-YEAR PLAN
Other roads (District Board Works).

Serial number and division, (1)	Black-topping.		New metalling.		Improvements and minor bridges.		Major bridges.		New formation.		Target for the year (financial).	Expendi- ture for the year.
	Fin. (2)	Phy. (3)	Fin. (4)	Phy. (5)	Fin. (6)	Phy. (7)	Fin. (8)	Phy. (9)	Fin. (10)	Phy. (11)		
1 Chingleput ..	..	..	..	..	..	..	..	..	..	..	..	..
2 North Arcot ..	..	..	..	..	..	..	..	..	..	..	..	..
3 Villupuram ..	..	..	..	..	..	..	..	..	..	..	..	..
4 Nagapattinam ..	..	..	..	..	..	..	..	..	..	..	..	..
5 Thanjavur ..	..	..	..	..	..	..	..	..	..	..	..	..
6 Tiruchirappalli ..	..	..	..	..	..	..	..	..	..	..	..	..
7 Pudukkottai ..	..	..	..	..	..	..	..	..	..	..	..	..
8 Dindigul ..	..	..	..	..	..	..	..	..	..	..	..	..
9 Madurai ..	..	..	..	..	..	..	..	..	..	..	..	..
10 Sivaganga ..	..	..	..	..	..	..	..	..	..	..	..	..
11 Ramanathapuram Special.	..	..	..	..	..	..	..	..	..	..	..	..
12 Tirunelveli ..	..	..	..	..	..	..	..	..	..	..	..	..
13 Tenkasi Special	..	..	..	..	..	..	..	..	..	..	..	..
14 Krishnagiri ..	..	..	..	..	..	..	..	..	..	..	..	..
15 Salem ..	..	..	..	..	..	..	..	..	..	..	..	..
16 Erode ..	..	..	..	..	..	..	..	..	..	..	..	..
17 Coimbatore ..	..	..	..	..	..	..	..	..	..	..	..	..
18 Nilgiris ..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	1.57	9.5	14.77	226.7	11.35	63.63	5.67	3.31	18.05	437.5	49.00	51.41

ANNEXURE 14.

Financial statement of all disbursement.

Serial number and name of circle and division.	(1)	Total works expenditure Government and District Boards.	(2)	Tools and Plant Expenditure (new supplies and repairs.)	(3)	Pay and travelling allowance or establishment.		Percentage of establishment charge s to works ex endi- ture including tools and plant.	Contingencies.*			Total.	
						Engineering.	Ministrial.		Travelling allowance.	Rent.	Other items.		Litigation.
						(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I. Madras Circle.													
1 Circle Office	..	..	..	..	..	19,066	46,090	6,191	..	6,600	7,806	..	86,753
2 Chingleput Division ..	..	62,04,782	..	3,32,315	..	76,116	84,300	29,284	3.3	5,590	19,518	..	67,51,905
3 Tiruvettipuram Division ..	..	8,34,310	..	37,252	..	24,949	32,179	14,663	9.0	1,715	5,235	..	9,50,303
4 North Arcot	..	33,18,364	..	2,49,031	..	74,024	1,03,927	49,685	6.9	4,938	12,443	25	38,12,437
5 Villupuram Special ..	..	10,66,760	..	1,768	..	33,754	82,247	32,719	15.1	4,752	7,981	..	12,28,981
6 South Arcot	..	30,52,106	..	1,83,762	..	1,03,447	85,482	54,332	8.3	8,137	16,483	..	35,03,749
7 Nagapattinam Division ..	..	31,04,885	..	98,167	..	75,801	57,460	56,509	6.5	4,932	12,284	..	34,09,988
8 Thanjavur Division ..	..	46,79,402	..	1,70,283	..	31,610	1,24,308	27,275	4.1	2,421	15,222	..	50,50,501
Total	..	2,22,59,559	..	10,72,558	..	4,38,767	6,15,993	2,70,658	6.2	39,085	96,972	25	2,47,93,617
II. Investigation Circle.													
9 Circle Office	..	..	..	..	..	12,016	4,852	3,064	..	..	11,640	..	31,572
10 Weak Bridge Madras.	..	..	..	..	..	21,659	8,352	7,014	..	..	256	..	37,381
11 Investigation Madras.	..	..	..	..	..	29,672	13,083	10,506	..	213	232	..	53,706
12 Investigation Coimbatore.	..	..	..	..	..	13,603	7,596	6,344	..	..	989	..	28,532
13 Investigation Tiruchirappalli.	..	..	..	..	..	22,491	15,652	10,761	..	1,362	4,884	..	55,150
Total	..	..	..	..	..	99,441	49,525	37,689	..	1,575	18,101	..	2,06,341

ANNEXURE 14—cont. Financial statement of all disbursements.

Key'sal number and name of circle and division.	Total works expenditure—Government and district Boards.	Tools and Plant Expenditure (new supplies and repairs.)	Pay and travelling allowance of establishment.		Percentage of establishment charges to works expenditure including tools and plant.	Contingencies.			Total.		
			(2)	(3)		(4)	(5)	(6)		(7)	(8)	(9)	(10)	(11)
II Rural Housing Cell, Madras.											
14 Office	..	..	17,120	26,775	7,962	..	..	11,592	..	63,249	
15 Canvey Bridge Division Tiruchirappalli.	8,00,200	15,392	22,124	12,033	8,739	5.6	1,184	1,794	..	8,61,466	
16 Toikasi Division (Special).	10,00,183	22,057	44,062	40,956	15,503	10.8	1,200	9,656	..	11,33,617	
Total ..	18,00,383	37,449	83,306	79,764	32,204	12.0	2,384	32,842	..	20,58,332	
IV. Director, Research Station, Madras.											
17 Office	2,73,504	1,39,687	30,875	53,066	26,024	30.4	..	15,882	..	5,39,038	
18 Designs Division ..	..	..	13,667	29,729	11,266	..	..	35,821	..	90,482	
19 Divisional Engineer Transport and Machinery.	3,35,292	10,99,375	23,695	3,48,700	23,315	28.5	7,264	6,032	..	18,42,673	
Total ..	6,08,796	12,39,062	68,237	4,31,495	60,605	33.8	7,264	67,735	..	24,73,194	
V. Tiruchirappalli Circle.											
18 Circle Office ..	..	..	19,033	55,608	23,432	..	..	..	..	98,073	
19 Tiruchirappalli ..	40,65,299	1,68,272	54,374	44,972	30,943	3.3	2,475	6,087	..	43,72,402	
20 Pudukottai ..	30,61,678	7,92,687	60,488	45,963	42,583	5.0	3,095	10,889	..	34,07,983	
21 Dindikul ..	27,77,415	1,71,566	62,754	46,928	23,297	5.6	7,035	27,391	..	31,16,086	
22 Madurai ..	41,26,719	1,76,708	81,562	91,272	36,190	5.8	14,556	28,777	..	45,65,784	
23 Bodinayakanur ..	5,28,447	94,838	16,943	10,416	38,702	10.5	..	..	..	6,89,346	
24 Ramanathapuram ..	55,35,922	1,67,262	1,23,364	40,143	86,152	4.3	..	..	..	60,02,843	
25 Ramanathapuram Special.	7,11,635	14,652	27,608	15,788	16,193	9.1	1,698	4,993	..	7,92,567	
26 Tirunelveli ..	52,38,501	2,23,460	1,67,633	99,872	26,979	5.7	5,846	13,728	..	57,76,019	
27 Nagercoil ..	22,13,889	14,93,973	35,628	25,992	26,161	2.6	3,188	5,546	..	38,04,378	
28 Kamuthy ..	42,55,336	1,55,179	21,598	47,721	28,161	2.3	2,398	1,860	..	45,12,253	
Total ..	3,26,64,841	28,58,597	6,70,985	5,24,355	3,78,794	4.8	40,891	99,271	..	3,71,37,734	
VI. Coimbatore Circle.											
29 Circle Office ..	..	..	20,178	50,308	7,941	..	2,400	6,775	..	87,602	
30 Krishnagiri ..	27,61,834	1,60,448	52,124	54,918	56,367	6.0	4,105	9,731	..	30,99,527	
31 Salem ..	32,24,785	1,40,144	60,018	58,207	24,248	4.7	4,900	13,166	..	35,25,468	
32 Erode ..	40,36,865	1,80,518	92,194	81,204	32,020	5.5	8,137	19,107	..	44,50,045	
33 Erode Special ..	4,73,722	1,910	15,940	14,119	16,734	10.4	939	2,008	..	5,25,372	
34 Coimbatore ..	47,85,704	2,43,849	74,577	97,347	39,057	4.6	1,891	20,086	..	52,62,511	
35 The Nilgiris ..	11,21,112	84,334	17,442	52,243	16,104	7.8	2,607	5,667	..	12,99,509	
Total ..	1,64,04,022	8,11,203	3,32,473	4,08,346	1,92,471	6.0	24,979	76,540	..	1,82,50,034	
36 Office of the Chief Engineer (Highways and Rural Works). Grand total ..	..	..	1,31,720	2,27,980	18,491	..	..	40,400	..	4,18,591	
	7,36,37,601	60,18,869	18,24,929	23,37,468	9,90,912	7.1	1,16,178	4,11,861	25	8,53,37,843	

ANNEXURE 15.

Statement showing the works approved by Government under Post-war Road Development Programme during and to the end of the year 1960-61.

Serial number, name of circle and division.	Government roads.				District Board roads.			
	During the year.		To end of the year.		During the year.		To end of the year.	
	Number.	Cost.	Number.	Cost.	Number.	Cost.	Number.	Cost.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. Madras Circle—								
1 Chingleput	2	2,52,000	48	73,65,400	45	6,83,200	392	41,32,463
2 Tiruvettipuram Special	..	..	..	..	..	..	..	..
3 North Arcot	6	7,04,100	68	1,20,96,975	..	..	357	37,21,444
4 Villupuram Special	..	..	2	36,92,000	..	..	3	40,100
5 South Arcot	1	1,00,000	64	66,73,901	..	..	303	45,75,409
6 Nagapattinam	1	2,45,000	37	96,72,173	51	5,92,000	212	66,00,370
7 Thanjavur	2	25,83,000						
Total ..	12	38,61,100	219	3,95,00,454	96	12,75,200	1,267	1,90,62,786
II. Investigation Circle—								
8 Weak Bridges Division, Madras.	..	..	..	..	..	..	..	..
9 Investigation Division, Madras.	..	..	..	..	..	..	..	..
10 Investigation Division, Tiruchirappalli.	..	..	..	..	..	..	..	..
11 Investigation Division, Coimbatore.	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..
III. Rural Housing Cell, Madras.—								
12 Cauvery Bridge Division.	..	..	..	21,06,129	..	..	..	..
13 Tenkasi Special	..	..	..	..	..	..	..	..
Total ..	..	..	..	21,06,129	..	..	..	..
IV. Director, Research Station, Madras.—								
14 Designs Division	..	..	..	..	..	..	..	..
15 Divisional Engineer, Transport and Machinery Division.	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..
V. Tiruchirappalli Circle—								
16 Tiruchirappalli	6	16,41,000	114	1,16,31,385	5	2,77,200	532	61,92,950
17 Pudukottai	6	10,26,800			11	62,050		
18 Dinigul	11	88,375	183	97,88,050	56	1,75,316	237	49,29,846
19 Madurai	3	11,90,200			2	2,95,500		
20 Bodinayakanur Special	..	..	1	10,00,000	..	..	..	..
21 Ramanathapuram	8	10,11,900	148	1,19,05,400	19	10,24,100	223	60,78,150
22 Ramanathapuram Special	..	..	..	..	..	..	2	4,75,000
23 Tirunelveli	6	4,02,000	51	46,21,100	24	1,70,000	259	66,17,900
24 Nazareth	..	..	..	..	..	..	..	..
25 Kamuthi Special	..	..	..	..	..	..	..	..
Total ..	40	53,63,675	500	3,89,45,935	117	20,04,756	1,303	2,42,93,846
VI. Coimbatore Division—								
26 Krishnagiri	5	3,10,000	113	1,69,05,300	17	2,81,000	388	51,69,540
27 Salem	9	2,87,200			18	2,22,950		
28 Erode	4	3,30,500	144	1,04,98,515	7	41,000	335	52,64,187
29 Erode Special	1	12,05,000			..	..		
30 Coimbatore	5	9,08,000	..	..	7	1,03,000	..	..
31 Kollu Hills Special	2	1,99,000	41	42,14,610	11	1,28,500	177	22,67,450
Total ..	26	22,39,700	298	3,16,08,425	60	7,76,450	800	1,27,01,186
Grand total ..	78	1,24,84,475	1,017	11,21,60,943	273	60,56,406	3,470	5,60,84,818

ANNEXURE 16.

ANNEXURE 16.

(i) Statement showing the technical sanction to estimates during the year 1960-61 for Government works.

Serial number and name of circle and division.	Original works.			Repairs.		Tools and Plant's, new supplies and repairs.			Avenues.		Total.
	(1)	(2) Works for which estimates were sanctioned.	(3) Cost.	(4) Number.	(5) Cost.	(6) Number.	(7) Cost.	(8) Number.	(9) Cost.	(10) Number.		(11) Cost.
I. Madras Circle.											
1 Chingleput Division ..	97	16,77,900	478	58,66,900	131	5,91,100	93	1,76,100	799	83,12,000	
2 Tiruvettipuram Division ..	10	50,800	..	..	29	61,000	..	..	39	1,11,800	
3 North Arcot ..	62	3,72,700	731	41,59,000	40	3,72,700	25	71,600	858	49,76,000	
4 Villupuram Special ..	24	12,22,900	..	..	..	..	..	..	24	12,22,900	
5 South Arcot ..	45	5,90,000	551	54,00,400	40	3,00,000	40	60,000	676	63,50,400	
6 Nagapattinam Division ..	15	39,900	419	17,69,100	31	1,99,100	40	37,400	505	20,45,500	
7 Thanjavur Division ..	41	5,61,500	297	43,11,300	73	7,91,700	26	57,000	437	58,31,400	
Total ..	294	45,15,700	2,476	2,17,06,600	344	22,25,600	224	4,02,100	3,338	2,88,50,000	
II. Investigation Circle.											
Investigation Circle ..	5	2,84,500	..	..	5	14,500	..	..	10	2,99,000	
8 Weak Bridge Division, Madras.	11	7,537	..	..	6	5,850	..	..	17	13,437	
9 Investigation Division, Madras.	7	27,34,500	..	..	..	..	..	..	7	27,34,500	
10 Investigation Division, Tiruchirappalli.	9	18,000	..	..	10	9,500	..	..	19	27,500	
11 Investigation Division, Coimbatore.	21	11,030	..	..	4	3,900	..	..	25	14,930	
Total ..	53	30,55,617	..	..	25	33,750	..	..	78	30,89,387	

III. Rural Housing Cell, Madras.

12 Cauvery Bridge Division ..	..	..	..	..	..	..	..	..	..	..		
13 Tenkasi Special Division ..	3	14,240	..	..	20	1,18,700	..	..	23	1,32,940		
Total ..	3	14,240	..	..	20	1,18,700	..	..	23	1,32,940		

IV. Director Research Station, Madras.

Director, Research Station, Madras.	6	4,53,900	4	21,050	22	8,73,552	..	..	32	13,48,502		
14 Designs Division ..	..	..	..	..	..	..	..	..	..	..		
15 Divisional Engineer, Transport and Machinery Division.	21	1,36,824	15	15,089	..	..	..	..	36	1,51,893		
Total ..	27	5,90,724	19	36,119	22	8,73,552	..	..	68	15,00,395		

V. Tiruchirappalli Circle.

16 Tiruchirappalli ..	57	2,85,855	294	29,61,951	39	1,93,870	24	42,840	414	34,84,516		
17 Pudukkottai ..	55	4,17,610	202	23,24,580	41	1,87,685	46	1,16,752	344	35,46,627		
18 Dindigul ..	12	4,52,550	315	19,21,620	44	3,54,100	4	82,000	375	28,10,270		
19 Madurai Division ..	8	3,09,900	390	25,24,000	17	73,079	13	52,800	428	29,59,779		
20 Bodinayakanur Special Division.	2	6,90,000	7	2,11,900	11	74,270	1	2,500	21	9,78,670		
21 Ramanathapuram ..	31	7,27,400	536	28,58,125	46	2,85,780	8	33,000	621	39,04,305		
22 Ramanathapuram Special Division.	..	..	16	2,22,650	12	44,550	..	..	28	2,67,200		
23 Tirunelveli Division ..	39	17,86,260	648	53,95,972	24	1,21,770	79	1,03,670	790	74,06,962		
24 Nagarcot Division ..	14	2,61,450	598	18,80,734	55	2,22,780	7	13,830	674	23,78,794		
25 Karanthi Special ..	56	28,51,300	..	..	27	2,31,900	..	..	83	30,83,200		
Total ..	274	77,82,315	3,006	2,08,00,832	316	17,89,784	182	4,47,392	3,778	3,08,20,323		

ANNEXURE 16—cont.

(i) Statement showing the technical sanction to estimates during the year 1960-61 for Government works—cont.

Serial number, name of circle and division.	Original works.		Repairs.		Tools and Plant new supplies and repairs.		Avenues.		Total.	
	Number of works estimated for which sanction was granted.	Cost. (3)	Number. (4)	Cost. (5)	Number. (6)	Cost. (7)	Number. (8)	Cost. (9)	Number. (10)	Cost. (11)
<i>VI. Coimbatore Circle.</i>										
26 Krishnagiri Division ..	32	8,54,900	287	31,44,041	41	2,82,300	26	73,860	386	43,55,101
27 Salem Division ..	20	8,62,600	182	16,32,630	35	2,67,630	23	20,630	260	27,92,490
28 Erode Division ..	41	11,30,750	232	26,41,838	89	2,54,607	37	91,700	399	41,18,895
29 Erode Special Division ..	408	11,19,980	..	..	5	1,350	..	..	413	11,21,330
30 Coimbatore Division ..	82	21,87,525	96	31,39,400	67	5,18,078	24	37,650	269	58,82,653
31 The Nilgiris Division ..	8	4,37,850	131	13,54,670	21	1,21,860	2	1,000	162	19,15,300
Total ..	591	65,93,605	928	1,19,12,579	258	14,45,825	112	2,33,840	1,889	2,01,85,849
Grand Total ..	1,242	2,25,52,201	6,429	5,44,56,130	985	64,87,211	518	10,83,332	9,174	8,45,78,874

ANNEXURE 16—cont.

(ii) Statement showing the technical sanction to estimates for District Board works accorded by the Superintending Engineers (Highways) and the Divisional Engineers (Highways) during 1960-61.

Serial number and name of circle and division.	Original works.		Repairs.		Tools and Plant new supplies and repairs.		Avenues.		Non-road works.		Total.	
	Number of works sanctioned. (1)	Cost. (2)	Number. (3)	Cost. (4)	Number. (5)	Cost. (6)	Number. (7)	Cost. (8)	Number. (9)	Cost. (10)	Number. (11)	Cost. (12)
<i>I. Madras Circle.</i>												
1 Chingleput Division ..	72	7,65,400	468	21,63,600	..	..	1	3,000	131	4,39,200	672	38,71,200
2 Tiruvettipuram Division ..	..	..	..	..	..	..	..	..	..	..	..	..
3 North Arcot ..	122	18,88,800	272	18,15,000	..	..	8	9,500	..	3,62,100	725	40,75,400
4 Villupuram Special ..	45	3,98,300	..	..	..	..	..	..	..	..	45	3,98,300
5 South Arcot ..	1	4,61,000	894	22,42,000	..	..	28	39,500	190	2,03,000	1,113	29,43,900
6 Nagapattinam Division ..	44	8,37,400	262	9,52,300	1	1,100	7	3,900	61	1,29,800	375	19,24,500
7 Thanjavur Division ..	131	13,44,600	522	15,30,900	..	..	2	1,000	99	1,29,500	754	30,06,000
Total ..	415	56,94,500	2,418	87,04,200	1	1,100	46	56,900	804	12,62,600	3,684	1,57,19,300
<i>II. Investigation Circle.</i>												
8 Weak Bridges Division, Madras. 1	1	60,000	..	..	..	..	..	..	..	..	1	60,000
9 Investigation Division, Madras. ..	..	..	..	..	..	..	..	..	..	..	..	..
10 Investigation Division, Tiruchirappalli. 6	6	2,89,200	..	..	..	..	..	..	..	..	6	2,80,200
11 Investigation Division, Coimbatore. 24	24	9,575	..	..	..	..	..	..	..	..	24	9,575
Total ..	31	3,58,775	..	..	..	..	..	..	..	..	31	3,58,775

ANNEXURE 16—cont.

(ii) Statement showing the technical sanction to estimates for District works accorded by the Superintending Engineers (Highways) and the Divisional Engineers (Highways) during 1960-61—cont.

Serial number, name of circle and division.	Original works.			Repairs.			Tools and plant new supplies and repairs.			Avenues.			Non-road works.			Total.
	Number of works sanctioned.	Cost.	Number.	Cost.	Number.	Cost.	Number.	Cost.	Number.	Cost.	Number.	Cost.	Number.	Cost.	Number.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)				
<i>III. Rural Housing Cell, Madras.</i>																
12 Cauvery Bridge Division ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13 Tenkasi Special Division ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<i>IV. Director Research Station Madras.</i>																
14 Designs Division ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15 Divisional Engineer Transport and Machinery Division.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<i>V. Tiruchirappalli Circle.</i>																
6 Tiruchirappalli Division ..	26	4,87,037	57	3,27,895	6	29,100	6	5,170	62	2,94,880	157	11,44,082				
7 Pudukkottai Division ..	82	5,36,250	242	3,86,155	..	..	29	31,630	76	2,02,970	429	11,57,005				
18 Dindigul Division ..	7	2,46,900	282	9,51,232	..	..	..	..	53	2,35,415	342	14,33,517				
19 Madurai Division ..	2	2,99,500	185	2,39,000	..	..	2	2,500	75	3,07,240	264	8,48,240				
20 Bodinayakanur Special Division.	..	..	..	..	..	..	..	..	..	..	..	..				
21 Ramanathapuram ..	111	7,27,400	536	28,58,125	46	2,85,780	8	33,300	1	600	702	39,05,205				

22 Ramanathapuram Special Division.	2	59,200	17	1,78,600	..	..	..	..	..	..	19	2,37,800				
23 Tirunelveli Division ..	30	10,39,500	776	9,52,180	..	..	..	..	..	..	806	19,91,680				
24 Nagercoil Division ..	..	..	..	..	..	..	..	..	..	..	..	..				
25 Kanyakumari ..	..	..	..	..	..	..	..	..	..	..	..	..				
Total ..	260	33,95,787	2,095	58,92,187	52	3,14,880	45	72,600	267	10,41,105	2,719	1,07,17,559				

VI. Coimbatore Circle.

26 Krishnagiri Division ..	42	3,07,000	188	7,25,530	..	..	4	1,475	67	1,03,951	301	11,39,956				
27 Salem Division ..	35	3,01,450	260	7,57,090	..	..	..	..	..	..	295	10,58,540				
28 Erode Division ..	14	4,79,200	70	60,525	1	6,800	7	12,500	..	..	92	5,59,025				
29 Erode Special Division ..	..	..	..	..	..	..	..	..	..	..	..	..				
30 Coimbatore Division ..	6	1,10,500	64	2,30,050	..	..	..	..	21	5,50,000	91	8,90,550				
31 The Nilgiris Division ..	3	57,400	102	1,37,752	..	..	..	..	26	74,560	131	2,69,712				
Total ..	100	12,55,550	684	19,10,947	1	6,800	11	13,975	114	7,30,511	910	39,17,783				
Grand total ..	806	1,07,04,612	5,197	1,65,08,334	54	3,22,780	102	1,43,475	1,185	30,34,216	7,344	3,07,13,417				

ANNEXURE 16—cont.

(iii) Statement showing the technical sanction to estimates for Municipal and Panchayat works accorded by the Divisional Engineers and Superintending Engineers (Highways) during the year 1960-61.

Serial number and name of Circle and Division. (1)	Municipal works.		Panchayat works.	
	Number of works. (2)	Cost. (3) RS.	Number of works. (4)	Cost. (5) RS.
I. Madras Circle.				
1 Chingleput	7	29,400	5	35,000
2 Tiruvettipuram Special	25	3,51,200	4	15,500
3 North Arcot	1	22,000	..	..
4 Villupuram Special	3	26,400	5	1,71,000
5 South Arcot	1	4,000	17	2,39,800
6 Nagapattinam	..	..	..	..
7 Thanjavur	..	..	..	..
Total	37	4,33,000	31	4,61,300
II. Investigation Circle.				
8 Weak Bridges Division Madras	..	..	..	..
9 Investigation Division Madras	..	..	..	..
10 Investigation Division Tiruchirappalli	..	..	..	..
11 Investigation Division Coimbatore	..	..	..	..
III. Rural Housing Cell, Madras.				
12 Cauvery Bridge Division	..	..	..	..
13 Tenkasi Special	..	..	..	..
IV. Director Research Station, Madras.				
14 Designs Division	..	..	..	..
15 Divisional Engineer Transport and Machinery Division	..	..	..	..
Total	..	..	..	..
V. Tiruchirappalli Circle.				
16 Tiruchirappalli	..	..	16	1,03,650
17 Pudukottai	..	..	4	62,500
18 Dindigul	6	1,67,000	9	1,81,700
19 Madurai	..	..	..	..
20 Bodinayakanur	..	..	..	..
21 Ramanathapuram	..	..	..	..
22 Ramanathapuram Special	..	..	..	..
23 Tirunelveli	9	1,88,100	4	14,830
24 Nagercoil	10	15,154	1	57,000
25 Kamuthy Special	..	..	..	..
Total	25	3,70,254	34	4,19,680
VI. Coimbatore Circle.				
26 Krishnagiri	..	..	20	2,28,220
27 Salem	..	..	13	1,05,660
28 Erode	5	23,000	4	10,800
29 Erode Special	..	..	..	..
30 Coimbatore	10	2,83,000	13	40,925
31 The Nilgiris	..	..	21	1,42,450
Total	15	3,06,000	71	5,28,055
Grand Total	77	11,09,254	136	14,09,035

ANNEXURE 17.

Statement showing the number of tender cases approved by the Superintending Engineers (Highways and Rural Work) and Divisional Engineers (Highways and Rural Work) during the year 1960-61.

Serial number and name of circle and division.	Government works.			District Board works.			Municipal works.			Total.
	Number approved by the Divisional Engineer (Highways).	Number approved by the Superintending Engineer (Highways).	Number approved by the Chief Engineer (Highways).	Number approved by the Divisional Engineer (Highways).	Number approved by the Superintending Engineer (Highways).	Number approved by the Chief Engineer (Highways).	Number approved by the Divisional Engineer (Highways).	Number approved by the Superintending Engineer (Highways).	Number approved by the Chief Engineer (Highways).	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I. Madras Circle.										
1 Chingleput	168	27	..	271	4	..	..	..	..	470
2 Tiruvettipuram Special	..	2	..	..	..	..	..	..	..	2
3 North Arcot	352	17	..	218	..	..	..	..	..	587
4 Villupuram Special	11	..	..	83	..	..	..	..	..	94
5 South Arcot	327	..	..	555	..	..	..	..	..	882
6 Nagapattinam	75	42	..	76	2	..	..	..	..	195
7 Thanjavur	63	..	2	113	1	..	1	..	..	180
Total ..	1,006	90	2	1,316	7	..	1	..	..	2,422
II. Investigation Circle.										
8 Weak Bridges Division Madras. ..	..	..	..	..	..	..	..	..	..	..
9 Investigation Division Madras. ..	..	..	..	..	..	..	..	..	..	..
10 Investigation Division Tiruchirappalli. ..	..	..	..	..	..	..	..	..	..	..
11 Investigation Division Coimbatore. ..	..	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..	..	..
III. Rural Housing Cell, Madras.										
12 Cauvery Bridge Division. ..	9	1	..	..	..	..	..	..	..	10
13 Tenkasi Special	..	..	..	..	..	..	..	..	..	..
Total ..	9	1	..	..	..	..	..	..	..	10
IV. Director Research Station, Madras.										
14 Designs Division	..	10	..	..	..	..	..	..	..	10
15 Divisional Engineer Transport and Machinery. ..	7	5	2	..	..	..	..	..	..	14
Total ..	7	15	2	..	..	..	..	..	..	24
V. Tiruchirappalli Circle.										
16 Tiruchirappalli	212	2	..	159	20	..	..	..	..	393
17 Pudukottai	129	12	..	61	6	..	..	..	..	208
18 Dindigul	93	29	..	47	7	..	..	..	..	181
19 Madurai	60	30	..	67	12	..	..	..	..	169
20 Bodinayakanur Special. ..	359	..	..	..	..	..	..	..	..	607
21 Ramanathapuram	8	15	..	248	9	..	..	..	..	32
22 Ramanathapuram Special. ..	..	..	..	..	..	..	..	..	..	..
23 Tirunelveli	181	25	..	107	9	..	..	..	..	322
24 Nagercoil	222	12	..	..	..	..	..	..	..	234
25 Kamuthy Special	34	23	..	..	..	..	..	..	..	56
Total ..	1,303	147	..	693	54	..	..	..	..	2,202
VI. Coimbatore Circle.										
26 Krishnagiri	122	4	..	56	1	..	..	..	..	183
27 Salem	108	2	..	189	1	..	..	..	..	300
28 Erode	104	8	..	48	1	..	..	..	..	161
29 Erode Special	23	1	..	..	..	..	..	..	..	24
30 Coimbatore	245	2	..	88	..	..	..	..	..	335
31 The Nilgiris	18	27	..	15	1	..	..	..	..	61
Total ..	620	44	..	396	4	..	..	..	..	1,044
Grand total ..	2,945	297	4	2,410	65	..	1	..	..	5,722

ANNEXURE 18.

(i) Statement showing the number of agreements accepted by the Superintending Engineers (Highways and Rural Work) and Divisional Engineers (Highways and Rural Work) for Government works during the year 1960-61.

Serial number and name of circle and division.	Accepted by the Divisional Engineer (Highways).		Accepted by the Superintending Engineer (Highways).		Total.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.
	(2)	(3) RS.	(4)	(5) RS.	(6)	(7) RS.
<i>I. Madras Circle.</i>						
1 Chingleput ..	605	51,08,629	9	5,484	614	51,14,114
2 Tiruvettipuram ..	5	5,474	..	..	5	5,473
3 North Arcot ..	584	35,79,478	8	5,16,185	592	40,95,663
4 Villupuram Special..	115	1,19,949	1	11,81,000	116	13,00,949
5 South Arcot ..	567	27,04,905	1	1,08,000	568	28,12,905
6 Nagapattinam ..	385	15,23,832	1	5,99,300	386	21,23,132
7 Thanjavur ..	707	28,12,968	1	6,33,547	708	34,46,515
Total ..	2,968	1,58,55,235	21	30,43,516	2,989	1,88,98,751
<i>II. Investigation Circle.</i>						
8 Weak Bridges Division Madras.	..	..	..	..	..	..
9 Investigation Division Madras.	..	..	..	..	..	..
10 Investigation Division Tiruchirappalli	..	..	..	..	..	..
11 Investigation Division Coimbatore.	..	..	..	..	..	..
Total ..	..	..	..	..	..	..
<i>III. Rural Housing Cell Madras.</i>						
12 Cauvery Bridge Division.	42	2,06,360	4	28,81,698	46	30,88,058
13 Tenkasi Special	59	1,43,473	8	1,55,293	67	2,98,766
Total ..	101	3,49,833	12	30,36,991	113	33,86,824
<i>IV. Director Research Station, Madras.</i>						
14 Designs Division	..	..	..	..	..	..
15 Divisional Engineer Transport and Machinery.	16	1,05,795	5	34,354	21	1,40,149
Total ..	16	1,05,795	5	34,354	21	1,40,149
<i>V. Tiruchirappalli Circle.</i>						
16 Tiruchirappalli ..	524	7,33,219	2	2,12,681	526	9,45,900
17 Pudukottai ..	192	14,61,217	..	..	192	14,61,217
18 Dindigul ..	228	16,67,337	2	1,19,593	230	17,86,930
19 Madurai ..	311	14,82,324	2	6,05,000	313	20,87,324
20 Bodinayakanur special	151	1,78,383	..	..	151	1,78,383
21 Ramanathapuram ..	359	29,78,121	..	..	359	29,78,121
22 Ramanathapuram Special.	29	2,60,457	13	9,51,615	42	12,12,072
23 Tirunelveli ..	569	27,19,670	..	..	569	27,19,670
24 Nagercoil ..	433	14,61,244	8	4,52,716	441	19,13,960
25 Kamuthy Special ..	120	13,18,312	5	3,93,365	125	17,11,677
Total ..	2,916	1,42,60,284	32	27,34,970	2,948	1,69,95,254

ANNEXURE 18—cont.

(i) Statement showing the number of agreements accepted by the Superintending Engineers (Highways and Rural Works) and Divisional Engineers (Highways and Rural Works) for Government works during the year 1960-61—cont.

Serial number and name of circle and division.	Accepted by the Divisional Engineer (Highways and Rural Work).		Accepted by the Superintending Engineer (Highways and Rural Work).		Total.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.
	(2)	(3) RS.	(4)	(5) RS.	(6)	(7) RS.
<i>VI. Coimbatore Circle.</i>						
26 Krishnagiri ..	344	17,00,349	2	80,538	346	17,80,887
27 Salem ..	439	10,89,336	1	1,15,352	440	12,04,688
28 Erode ..	356	22,36,505	4	1,37,292	360	23,73,797
29 Erode Special ..	514	3,27,986	..	..	514	3,27,986
30 Coimbatore ..	497	14,50,000	2	2,01,600	499	16,51,600
31 The Nilgiris ..	171	7,72,152	9	1,37,810	180	9,09,962
Total ..	2,321	75,76,328	18	6,72,592	2,339	82,48,920
Grand Total ..	8,322	3,81,47,475	88	95,22,423	8,410	4,76,69,898

(ii) Statement showing the number of agreements accepted by the Superintending Engineers (Highways and Rural works) and Divisional Engineers (Highways and Rural works) for District Board works during the year 1960-61.

Serial number and name of circle and division.	Accepted by the Divisional Engineer (Highways and Rural works).		Accepted by the Superintending Engineer (Highways and Rural Works).		Total.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.
	(2)	(3) RS.	(4)	(5) RS.	(6)	(7) RS.
<i>I. Madras Circle.</i>						
1 Chingleput ..	423	17,84,750	..	..	423	17,84,750
2 Tiruvettipuram ..	..	..	..	..	..	..
3 North Arcot ..	248	6,21,936	..	..	248	6,21,936
4 Villupuram Special ..	69	3,01,110	..	..	69	3,01,110
5 South Arcot ..	555	18,11,062	..	..	555	18,11,062
6 Nagapattinam ..	298	13,48,969	..	..	298	13,48,969
7 Thanjavur ..	203	19,66,163	..	..	203	19,66,163
Total ..	1,796	78,13,990	..	..	1,796	78,13,990
<i>II. Investigation Circle.</i>						
8 Weak Bridges Division Madras.	..	..	..	..	..	..
9 Investigation Division Madras.	..	..	..	..	..	..
10 Investigation Division Tiruchirappalli	..	..	..	..	..	..
11 Investigation Division Coimbatore.	..	..	..	..	..	..
Total ..	..	..	..	..	..	..
<i>III. Rural Housing Cell, Madras.</i>						
12 Cauvery Bridge Division.	..	..	..	..	..	..
13 Tenkasi Special ..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..

ANNEXURE 18—cont.

(ii) Statement showing the number of agreements accepted by the Superintending Engineer (Highways and Rural works) and Divisional Engineers (Highways and Rural works) for District Board works during the year 1960-61—cont.

Serial number and name of circle and division.	Accepted by the Divisional Engineer (Highways and Rural Works).		Accepted by the Superintending Engineer (Highways and Rural Works).		Total.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.
	(2)	(3)	(4)	(5)	(6)	(7)
		RS.		RS.		RS.
IV. Director Research Station, Madras.						
14. Designs	..	..	..	..	..	..
15 Divisional Engineer, Transport and Machinery.	..	..	..	..	..	..
Total	..	..	..	..	..	..

V. Tiruchirappalli Circle.

16 Tiruchirappalli	..	..	..	..	..	..
17 Pudukkottai	223	11,35,511	..	..	223	11,35,511
18 Dindigul	196	9,41,464	..	..	196	9,41,464
19 Madurai	136	4,91,783	..	..	136	4,91,783
20 Bodinayakanur	..	..	..	..	..	..
Special.	..	..	..	..	..	..
21 Ramanathapuram	248	14,54,782	..	..	248	14,54,782
22 Ramanathapuram	14	2,69,926	..	..	14	2,69,926
Special.	..	..	..	..	..	..
23 Tirunelveli	320	12,22,780	..	..	320	12,22,780
24 Nagercoil	..	..	..	..	..	..
25 Kamuthi special	..	..	..	..	..	..
Total	1,137	55,16,246	..	..	1,137	55,16,246

VI. Coimbatore Circle.

26 Krishnagiri	189	10,65,312	..	..	189	10,65,312
27 Salem	261	8,07,111	..	..	261	8,07,111
28 Erode	167	14,08,671	..	..	167	14,08,671
29 Erode Special	..	..	..	..	..	..
30 Coimbatore	272	10,67,898	..	..	272	10,67,898
31 The Nilgiris	58	3,11,407	..	..	58	3,11,407
Total	947	46,60,399	..	..	947	46,60,399
Grand total	3,880	1,79,90,635	..	..	3,880	1,79,90,635

ANNEXURE 19.

Work done in the office of the Chief Engineer (Highways and Rural Works) during the year 1960-61.

TENDER.

I. Tender—(Government Works).

	Number.	Cost (in lakhs).
1 Government works for which proposals were approved by Chief Engineer (Highways and Rural Works),	35	8.78
2 Government works for which proposals were approved by Government.	4	2.59
Total	39	11.38

ANNEXURE 19—cont.

Work done in the office of the Chief Engineer (Highways and Rural Works) during the year 1960-61—cont.

TENDER.

II. Tender—(District Board Works).

1 District Board works for which proposals were approved by Chief Engineer (Highways and Rural Works).	2	0.87
2 District Board works for which proposals were approved by Government.	14	3.76

Total ..	16	4.63
Grand Total ..	55	16.01

III. Estimates.—59 estimates to a total of Rs. 2,42,03,300 were dealt with during the period 1960-61.

	Number of works.	Rupees.
(a) Road Works	19	1,14,93,700
(b) Bridges Causeways and Culverts	24	97,37,700
(c) Other Works	2	11,32,000
(d) Tools and Plants	14	18,39,900
Total	59	2,42,03,300

The details of estimates are given below.—

(a) Road Works.

Serial number and date.	Description of work.	Estimated cost in rupees.
(1)	(2)	(3)
Government Works.		
1 April 1960 ..	Metalling and Block topping the Ghat road from Bodinaikanur to Bodimettu.	3,50,000
2 June 1960 ..	Black topping 22'-0" wide in mile 47/6 to 54/4 of Trivandram Nagercoil road N. H. 47 (existing 12'-0" width B. T.).	3,10,000
3 ..	Widening the road crust to two lanes in mile 261/0 to 276/1 of B. C. C. road.	4,96,500
4 ..	Widening the formation 38'-0" including Land Acquisition in mile 289/5 to 295/1 of N. H. 7 near Madurai.	3,75,700
5 ..	Second revised estimate for forming a Ghat road from Bodinaikanur to Bodimettu.	13,20,000
6 ..	Upgrading Vedaranyam Kodikarai road mile 0/0-7/0.	7,15,000
7 ..	Upgrading by granite metalling Devakottoi Devipattinam road 0/3-28/0.	5,50,000
8 ..	Upgrading by granite metalling Aruppukottai Sayalkudy road 10/1-32/6.	3,22,600
9 ..	Improvements such widening and metalling Manachanallur Elandalapatti connecting Turaiyur Perambalur road 0/0-18/3.	4,35,000
10 ..	Cement concreting Thanjavur Nagapattinam road mile 3/4-9/0.	8,40,000
11 ..	Widening B. T. to 22'-0" and formation to 38'-0" in mile 278/4 to 288/0 of B. C. C. road.	2,56,000
12 ..	Black Topping Marthandam Peetipara road mile 0/0 to 15/2.	2,60,000

ANNEXURE 19—cont.

Works done in the office of the Chief Engineer (Highways and Rural works)
during the year 1960-61—cont.

Serial number and date. (1)	Description of work. (2)	Estimated cost in Rupees. (3)
(a) Road works—cont.		
13 ..	Widening and improving Arkonam Tiruvallur road along the Route from Tiruvallur to Arkonam (via) Thiruvengadu in the districts of Chingleput and North Arcot.	13,71,000
14 ..	Cement concreting Trichirappalli-Coimbatore road in mile 112/0-120/0 (Revised Estimate).	9,33,000
15 ..	Forming a bye pass at Dindigul for N. H. 45 and 7	7,66,000
16 ..	Forming a byepass from 45/3-46/3 of Madurai Thondi road.	1,22,000
17 ..	Improvements to the road on the left Bank of G. A. Canal (18 miles).	7,90,000
18 ..	Widening B. T. to 22'-0" and formation to 38'-0" width in mile 214/0 to 240/2 of N. H. 45.	8,53,000
	Total ..	1,10,65,800
District Board Works		
19 ..	Forming metalling and Construction, culvert in the road from 6/1 of Ramnad Devipattinam road to Athangarai (via) Chittarakottai.	4,27,900
	Government Works ..	1,10,65,800
	District Board Works ..	4,27,900
	Grand total ..	1,14,93,700
(b) Bridges, Cause ways and Culverts.		
Government Works.		
1 May 1960 ..	Constructing culverts in the North and South approaches to the Cauvery bridge (on N. H. 45) near Tiruchirappalli.	3,66,100
2 ..	Improvements to and construction of additional culverts and bridges on Bodi Bodimettu road including construction of Rest Houses.	3,40,000
3 ..	Constructing a bridge at mile 7/4 of Aranthangi Mimisal road.	5,00,000
4 ..	Constructing a submersible bridge across Mudalamuthivani at M. 8/7-8 of Trichirappalli Tanjore road.	4,25,000
5 ..	Reconstructing the bridge across Arasalur at mile 170/7 of Lower Anicut Tanjore road.	2,66,000
6 ..	Constructing a submersible bridge at mile 104/2-6 of Vikravandy Lower Anicut road.	11,81,000
7 ..	Constructing a Bridge across Malattar Odai near Merinjipatti at mile 4/2 of Poraiyur Kovilangulam road.	3,95,000
8 ..	Reconstructing the bridge at mile 63/1 of Madras Chittoor Bangalore road.	50,000
9 ..	Constructing a bridge at mile 8/4 of Tharuvai-kulam Surangudi road.	3,54,000
10 ..	Constructing a bridge in place of the existing dip at mile 317/5 of Madras Calicut road. N. H. 47.	41,600
	Total ..	39,18,700

ANNEXURE 19—cont.

(b) Bridges and Culverts—cont.

(c) Other Works.

Serial number and date. (1)	Description of Work. (2)	Estimated cost in rupees. (3)
District Board Works.		
11 ..	Constructing a bridge across Aliyar at Mile 2/2 of Kottur Thengaparai Road.	2,50,000
12 ..	Constructing a causeways across Maharajasamudram and Agniar at M. 1/7-8 and 4/2-3 of Pattukottai Sethubavachatram road (2 Sub estimates).	19,00,000
13 ..	Constructing a causeway across river Gadilam at mile 3/5-6 of Narimedu Palapattu Road.	4,60,000
Government Works—cont.		
14 ..	Constructing a causeway at 12/7 of Vilathikulam Vembar Road.	2,00,000
15 ..	Constructing a causeway across the Vaigai near Kurivikaram Salai within Madurai Municipal limits.	4,75,000
16 ..	Constructing a bridge across Kaduvaiyar in Vadakkuppyyur village limits.	5,28,000
17 ..	Reconstructing the damaged bridge at mile 12/2 of Ooty-Mysore Road.	2,07,000
18 ..	Constructing a bridge across Kaduvaiyar at Mile 3/7 of Sikkil to Ottathattai Road.	2,75,000
19 ..	Constructing a bridge at M. 6/7 of Gopalasamudram Voimedu Road.	3,62,000
20 ..	Constructing a bridge across Pandavayar at M. 0/3 of Andagudi Vallivalam Road.	1,29,000
21 ..	Constructing a submersible bridge across Gadilam river at M. 2 10/2 of Vikravandy Lower Anicut Road.	2,58,000
22 ..	Constructing a bridge across Kuppudevanam at mile 0/5 of Thennalakkudi Vaitheeswarankoil Road.	2,28,000
23 ..	Constructing a bridge across Nondian at mile 18/1-2 of Anjugramam Ovari Road.	4,54,000
24 ..	Constructing from bridge across the four rivers on Papanasam Kabistalam Road.	9,93,000
	Total ..	58,19,000
	Government Works ..	39,18,700
	District Board Works ..	58,19,000
	Grand Total ..	97,37,700
Government Works—cont.		
1 ..	Construction of Building for Central Workshop at Guindy.	10,12,000
District Board Works.		
2 -	Constructing a Board High School Building at Anicorai.	1,20,000
	Total ..	11,32,000

ANNEXURE 19—cont.

(b) Bridge and Culverts—cont.

Serial number and date.	Description of Work	Estimated cost in rupees.
(1)	(2)	(3)
(D) Tools and Plant.		
1 May 1960 ..	Purchase and manufacture of 23 Nos. of Trailers ..	2,50,000
2 June 1960 ..	Purchase of furniture to the Office of the Chief Engineer (Highways).	4,900
3 ..	Purchase of equipments for the different laboratories in Highways Research Station.	1,00,000
4 ..	Purchase of 1 No. X-Ray diffraction apparatus required for the soils laboratory of the Highways Research Station.	15,000
5 ..	Purchase of 1 No. differential thermal analyser for the soils laboratory of the Highways Research Station.	15,000
6 ..	Purchase of 1 No. Versa tester for the bitumen laboratory of Highways Research Station.	20,000
7 ..	Purchase of 2 Nos. of Mechanical Kneading compactors for the bitumen laboratory of Highways Research Station.	20,000
8 ..	Purchase of 1 No. of Heavy Duty Triaxial apparatus for the bitumen laboratory of Highways Research Station.	25,000
9 ..	Purchase of 1 No. of Stabilometer and 2 Nos. Cohesimeters for the bitumen laboratory of Highways Research Station.	17,500
10 ..	Purchase of 1 No. of Battalo fan and its Installation in the Highways Research Station.	12,000
11 ..	Purchase of 1 No. of Diversion Portable 150 Ton compression testing machine for Highways Research Station.	13,000
12 ..	Construction of additional accommodation for storing T and P and machinery of the Central Workshop, Gaiindy.	3,85,000
13 ..	Purchase of minimum requirements under First Five Year Plan Items of T. and P. Sanctioned under Annexure I.	6,20,000
14 ..	Purchase of minimum requirements under First Five Year Programme Items of T. and P. Sanctioned under Annexure II.	3,42,000
Total ..		<u>18,39,900</u>

ANNEXURE 20.

(i) Statement showing the contracts awarded since 1946-47

Government Roads.							
Year.	Maintenance.		Surfacing.		Bridges, culverts and causeways.		
	Number.	Cost.	Number.	Cost.	Number.	Cost.	
	(1)	(2)	(3) RS.	(4)	(5) RS.	(6)	(7) RS.
1946-47 ..	2,087	1,03,91,377	36	6,16,240	80	1,86,825	
1947-48 ..	3,816	1,85,83,683	72	6,07,192	324	6,33,520	
1948-49 ..	3,569	2,37,90,402	90	20,94,744	163	30,19,713	
1949-50 ..	3,631	2,96,01,947	169	66,75,229	372	28,11,250	
1950-51 ..	3,888	3,18,93,090	405	79,42,106	514	52,12,011	
1951-52 ..	3,787	4,10,35,074	487	63,01,105	366	51,99,521	
1952-53 ..	3,399	3,21,17,336	690	95,30,243	368	33,36,209	
1953-54 ..	1,944	1,82,44,849	246	18,86,254	86	27,56,742	
1954-55 ..	2,055	1,33,63,860	452	60,23,497	180	45,82,692	
1955-56 ..	2,449	1,74,79,137	531	69,12,684	213	71,15,318	
1956-57 ..	..	..	..	..	..	..	
1-4-1956 to 31-10-1956.	1,362	81,73,447	271	35,00,078	104	34,60,513	
1-11-1956 to 31-3-1957.	1,024	66,55,202	266	43,91,174	70	10,97,339	
1957-58 ..	2,254	1,52,10,359	425	1,03,53,443	229	29,32,247	
1958-59 ..	2,702	2,05,73,332	463	51,00,568	547	70,22,685	
1959-60 ..	3,095	2,70,46,345	397	67,02,280	780	41,62,970	
1960-61 ..	4,750	3,10,40,118	683	88,26,208	1,149	81,98,862	

District Board Roads.								
Maintenance.		Surfacing.		Bridges, culverts and causeways.		Total number.	Total cost.	
Number.	Cost.	Number.	Cost.	Number.	Cost.			
(8)	(9) RS.	(10)	(11) RS.	(12)	(13) RS.			
1946-47 ..	3,908	63,57,633	29	3,23,805	131	2,52,845	6,271	1,81,28,725
1947-48 ..	4,611	83,95,396	114	12,06,933	274	5,64,000	8,911	2,99,90,727
1948-49 ..	4,945	1,10,18,893	89	12,38,877	703	9,21,674	9,259	4,20,84,603
1949-50 ..	5,067	1,34,98,933	220	34,55,378	269	22,59,252	9,723	5,83,01,989
1950-51 ..	5,333	1,49,00,947	237	34,43,615	332	35,01,012	10,714	6,68,92,781
1951-52 ..	5,767	1,65,97,371	481	38,25,215	392	34,98,002	11,280	6,64,56,238
1952-53 ..	4,613	1,60,38,968	380	22,19,258	359	29,04,209	9,808	6,61,46,133
1953-54 ..	2,677	94,37,537	57	6,99,943	193	22,22,279	5,203	3,52,47,604
1954-55 ..	2,722	81,64,164	74	8,29,254	106	18,52,712	5,589	3,48,16,179
1955-56 ..	3,566	94,88,913	148	9,23,274	222	22,35,810	7,129	4,41,55,136
1956-57 ..	..	..	..	..	..	..	..	..
1-4-56 to 31-10-56	1,590	58,64,417	168	24,26,693	82	5,89,620	3,577	2,57,43,237
1-11-56 to 31-3-57	1,637	60,37,993	135	16,64,448	70	7,72,726	3,202	2,06,18,882
1957-58 ..	2,808	1,25,20,303	248	34,86,917	147	32,45,983	6,111	4,77,49,252
1958-59 ..	2,081	78,39,101	291	36,23,338	146	10,80,161	6,230	4,52,99,175
1959-60 ..	2,231	80,43,930	305	36,76,441	231	44,83,741	7,039	5,41,15,707
1960-61 ..	3,080	87,17,320	241	23,11,277	426	53,69,796	10,329	6,44,58,347

NOTE.—Divisionwise details for the year 1960-61 are given in statement (ii).

ANNEXURE 20—cont.

(ii) Statement showing the contracts awarded during 1960-61.

Serial number, name of circle and division.	Government roads.					
	Maintenance.		Surfacing.		Bridges, culverts and causeways.	
	Number. (2)	Cost. (3) RS.	Number. (4)	Cost. (5) RS.	Number. (6)	Cost. (7) RS.
I. Madras Circle—						
1 Chingleput ..	347	37,34,409	44	6,12,612	57	6,63,382
2 Tiruvettipuram Special.	..	..	..	..	..	..
3 North Arcot ..	350	10,99,700	152	12,79,800	32	8,22,300
4 Villupuram Special	5	5,771	..	..	23	1,06,254
5 South Arcot ..	552	23,27,469	15	3,77,436	1	1,08,000
6 Nagapattinam ..	332	13,46,000	4	97,900	50	6,79,100
7 Thanjavur ..	642	14,00,028	2	4,81,143	64	16,09,344
Total ..	2,223	99,19,377	217	27,98,891	227	39,88,380
II. Investigation Circle—						
8 Weak Bridges Division, Madras.	..	..	..	..	..	..
9 Investigation Division, Madras.	..	..	..	..	..	..
10 Investigation Division, Tiruchirappalli.	..	..	Nil.	..	..	..
11 Investigation Division, Coimbatore.	..	..	..	..	..	..
III. Rural Housing Cell, Madras—						
12 Cauvery Bridge Special.	..	..	..	..	2	4,255
13 Tenkasi Special ..	..	..	..	..	59	1,43,473
Total ..	..	..	..	..	61	1,47,728
IV. Director Research Station, Madras—						
14 Designs Division ..	..	..	..	..	..	..
15 Divisional Engineer Transport and Machinery.	..	..	..	..	..	..
Total ..	..	..	..	..	..	..
V. Tiruchirappalli Circle—						
16 Tiruchirappalli ..	236	14,70,209	16	1,03,635	57	1,05,672
17 Pudukkottai ..	95	15,19,338	34	2,12,036	26	68,785
18 Dindigul ..	107	12,80,409	23	6,19,490	5	2,15,580
19 Madurai ..	63	6,11,210	23	3,68,720	11	1,19,835
20 Bodinayakanur Special.	31	39,100	33	38,571	77	74,712
21 Ramanathapuram ..	449	49,35,925	3	83,000	73	2,91,685
22 Ramanathapuram Special.	3	27,092	25	6,91,419	14	4,43,561
23 Tirunelveli ..	343	29,51,000	7	2,40,300	63	3,04,850
24 Nagercoil ..	517	18,24,208	14	3,05,100	34	56,528
25 Kamuthy Special ..	..	..	91	14,00,894	3	1,81,725
Total ..	1,850	1,46,61,579	274	40,63,165	363	18,62,933
IV. Coimbatore Circle—						
26 Krishnagiri ..	132	14,91,096	38	1,82,438	26	1,02,183
27 Salem ..	198	14,32,650	..	..	10	1,69,520
28 Erode ..	112	13,69,466	21	55,200	24	4,36,900
29 Erode Special ..	3	900	..	..	410	11,29,430
30 Coimbatore ..	96	15,19,400	131	16,20,000	18	3,31,055
31 Ootacamund ..	131	6,45,650	2	1,06,514	10	34,494
Total ..	672	64,59,162	192	19,64,512	493	21,64,587
Grand total ..	4,750	3,10,40,118	683	88,26,203	1,149	81,93,826

ANNEXURE 20—cont.

(ii) Statement showing the contracts awarded during 1960-61—cont.

District Board roads.								
Serial number, name of circle and division.	Maintenance.		Surfacing.		Bridges, culverts and causeways.		Total Number. (14)	Total Cost. (15) RS.
	Number.	Cost.	Number.	Cost.	Number.	Cost.		
	(8)	(9) RS.	(10)	(11) RS.	(12)	(13) RS.		
I. Madras Circle—								
1 Chingleput	297	11,50,170	35	3,38,889	92	2,74,077	872	67,78,539
2 Tiruvettipuram Special.	..	..	..	..	..	..	..	..
3 North Arcot	170	3,83,600	61	3,21,500	7	1,27,900	772	40,34,800
4 Villupuram Special.	18	27,541	1	19,163	7	22,703	51	1,81,432
5 South Arcot	522	16,24,753	..	..	33	1,86,309	1,123	46,23,967
6 Nagapattinam	217	7,60,000	..	..	81	5,89,000	684	34,72,000
7 Thanjavur	178	8,05,700	..	..	25	11,60,463	911	54,12,673
Total ..	1,402	47,51,764	97	6,79,552	245	23,60,452	4,416	2,44,98,416
II. Investigation Circle—								
8 Weak Bridges Divi- sion, Madras.	}	Nil.	}	Nil.	}	}	}	}
9 Investigation Divi- sion, Madras.								
10 Investigation Divi- sion, Tiruchirap- palli.								
11 Investigation Divi- sion, Coimbatore.								
III. Rural Housing Cell, Madras—								
12 Cauvery Bridge Division.	..	..	..	..	..	..	2	4,255
13 Tenkasi Special ..	..	..	..	..	1	70,000	60	2,13,473
Total ..	..	..	..	..	1	70,000	62	2,17,728
IV. Director Research Station, Madras—								
14 Designs Division ..	..	..	..	..	..	..	..	..
15 Divisional Engineer Transport and Machinery.	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..
V. Tiruchirappalli Circle—								
16 Tiruchirappalli ..	217	5,34,307	14	44,574	9	6,429	549	22,67,626
17 Pudukkottai	128	4,67,882	44	1,94,865	6	3,84,426	331	28,47,332
18 Dindigul	71	3,69,190	15	1,39,907	3	53,500	224	26,78,166
19 Madurai	185	2,39,000	2	2,95,500	77	3,07,240	371	16,41,505
20 Bodinayakanur Special.	..	..	..	..	..	..	141	1,52,383
21 Ramanathapuram ..	195	4,04,700	41	6,72,000	7	58,400	668	64,45,710
22 Ramanathapuram Special.	9	13,937	1	4,200	4	2,51,789	56	14,31,993
23 Tirunelveli	580	7,57,980	15	2,07,890	15	5,79,800	1,003	50,41,804
24 Nagercoil	..	..	..	..	..	..	565	21,85,834
25 Kamuthi Special ..	..	..	..	..	..	..	94	15,82,619
Total ..	1,265	27,86,976	132	15,58,936	121	16,41,584	4,005	2,65,75,173
IV. Coimbatore Circle—								
26 Krishnagiri	52	1,73,764	..	..	15	2,21,095	263	21,70,581
27 Salem	154	4,56,752	..	..	2	68,400	364	21,27,322
28 Erode	43	1,73,500	..	..	9	4,07,442	209	24,42,508
29 Erode Special	..	..	..	..	..	..	413	11,21,330
30 Coimbatore	62	2,30,050	4	44,200	23	5,50,000	334	42,94,705
31 The Nilgiris	102	1,44,514	8	28,589	10	50,823	263	19,10,584
Total ..	418	11,78,580	12	72,789	59	12,97,760	1,846	1,31,67,030
Grand total ..	3,080	87,17,320	241	23,11,277	426	58,69,796	10,329	6,44,58,847

ANNEXURE 21.

(i) Statement showing the number of investigations since 1946-47.

Year.	Number of investigations.		Total.
	Government.	District Board.	
(1)	(2)	(3)	(4)
1946-47	60	61	121
1947-48	179	489	668
1948-49	262	288	550
1949-50	263	399	662
1950-51	116	428	544
1951-52	91	506	597
1952-53	93	312	305
1953-54	30	46	76
1954-55	148	33	181
1955-56	173	24	197
1956-57	79	44	123
1957-58	75	87	162
1958-59	133	132	265
1959-60	82	208	290
1960-61	505 and 1,890 structures.	164	669 and 1,890 structures.

(ii) Statement showing the number of investigations in the year 1960-61.

I. Madras Circle.

1 Chingleput	3	..	3
2 Tiruvettipuram Special	..	..	..
3 North Arcot	..	..	..
4 Villupuram Special	..	..	..
5 South Arcot	..	..	..
6 Nagapattinam	1	..	1
7 Thanjavur	6	6	12
Total ..	10	6	16

II. Investigation Circle.

8 Weak Bridges Division, Madras	2 and 1,890 Structures	..	2 and 1,890 structures.
9 Investigation Division, Madras	31	20	51
10 Do. Tiruchirappalli	25	19	44
11 Do. Coimbatore	16	23	39
Total ..	74 and 1,890 structures.	62	136 and 1,890 structures.

ANNEXURE 21—cont.

(ii) Statement showing the number of investigations in the year 1960-61—cont.

Serial number, and name of circle and division.	Number of investigations.		Total.
	Govern-ment.	District Board.	
(1)	(2)	(3)	(4)
III. Rural Housing Cell, Madras.			
12 Cauvery Bridge Division	..	..	..
13 Tenkasi Special	..	..	..
Total ..	..	..	..
IV. Director Research Station, Madras.			
14 Designs	..	..	..
15 Divisional Engineer Transport and Machinery	..	..	..
Total ..	..	..	..

V. Tiruchirappalli Circle.

16 Tiruchirappalli	3	2	5
17 Pudukkottai	..	7	7
18 Dindigul	..	..	..
19 Madurai	..	..	..
20 Bodinayakanur Special	..	..	..
21 Ramanathapuram	11	5	16
22 Ramanathapuram Special	1	..	1
23 Tirunelveli	46	67	113
24 Nagercoil	17	..	17
25 Kamuthi Special	..	..	..
Total ..	78	81	159

VI. Coimbatore Circle.

26 Krishnagiri	5	1	6
27 Salem	3	6	9
28 Erode Special	320	..	320
29 Erode	9	..	9
30 Coimbatore	5	6	11
31 The Nilgiris	1	2	3
Total ..	343	15	358
Grand Total ..	505 and 1,890 structures.	164	669 and 1,890 structures.

ANNEXURE 22.

(i) Review of works costing over Rs. 1 lakh each in progress during the year 1960-61.

Serial number, name of works and estimated cost (classification and division.) (1)	Expenditure during the year. (2) RS.	Expenditure to end of the year. (3) RS.	Remarks. (4)
A. GOVERNMENT ROADS.			
I. Bridges, Culverts and Causeways.			
1 Construction of 11 bridges on Ponneri-Pulicut Road—Estimate Rs. 3,20,000 Chingleput Division.	45,350	3,44,549	....
2 Constructing a bridge at M. 8/8 of Uthiramerur—Karumalampoodi Road—Estimate Rs. 1,97,500—(Chingleput Division).	41,495	41,495	....
3 Constructing a bridge across Asnampet river at mile 16/6 of Abdullapuram-Asanampet Alangiyam Road—Estimate Rs. 1,75,000 (Arcot Division).	86,494	86,494	....
4 Reconstructing a subway at mile 75/4 of Madras-Chittoor-Bangalore Road (N. H. 4.)—Estimate Rs. 1,13,700 (North Arcot Division).	27,638	27,638	....
5 Constructing a submersible bridge across Ponnai at mile 104/2-6 of V.L.A. Road—Estimate Rs. 11,81,000 (Villupuram Division).	67,708	67,708	....
6 Constructing a bridge across Ponnai at mile 44/4 to 45/2 of Cuddalore-Chittoor Road—Estimate Rs. 19,22,000 (Villupuram Division).	1,07,177	19,10,000	....
7 Constructing culverts and causeways in Mercanam-Pondy Road—Estimate Rs. 1,25,000—(Villupuram Division).	46,067	87,942	....
8 Constructing a bridge across Padavedu at mile 99/4 of Cuddalore-Chittoor Road—Estimate Rs. 3,70,000 (Tiruvettipuram Division).	1,35,607	2,99,655	....
9 Constructing a bridge across Cheyyar at mile 25/3-4 of Arcot-Tindivanam Road—Estimate Rs. 14,20,000—(Tiruvettipuram Division).	6,12,536	13,70,458	....
10 Constructing a bridge at mile 16/1 of Arcot-Arni-Wandiwash Road across Kamandalanaghandhi—Estimate Rs. 5,00,000 (Tiruvettipuram Division).	46,816	1,09,390	..
11 Constructing a bridge near Kannamangalam at mile 105/4 of Cuddalore-Chittoor Road—Estimate Rs. 3,23,000 (Tiruvettipuram Division).	38,352	3,15,396	....
12 Constructing a bridge across Vettar at mile 21/8 of Mayuram-Muthupet Road—Estimate Rs. 3,29,500 (Nagapattinam Division).	1,53,519	1,82,305	....
13 Reconstructing the bridge across Pamanai at M. 40/6 of Thanjavur-Muthupet Road—Estimate Rs. 4,55,000 (Nagapattinam Division).	1,01,839	4,18,360	....
14 Constructing a bridge at M. 16/4 of Pattukottai-Aranthangi Road—Estimate Rs. 1,54,000 (Thanjavur Division).	..	1,37,092	Work completed and L.A. pending with Revenue Department.

ANNEXURE 22—cont.

(i) Review of works costing over Rs. 1 lakh each in progress during the year 1960-61—cont.

Serial number, name of works and estimated cost (classification and division.) (1)	Expenditure during the year. (2) RS.	Expenditure to end of the year. (3) RS.	Remarks. (4)
A. GOVERNMENT ROADS—cont.			
I. Bridges, Culverts and Causeways—cont.			
15 Constructing a bridge at mile 20/4 of Pattukottai-Aranthangi Road—Estimate Rs. 1,25,000—(Thanjavur Division).	..	1,34,147	Do.
16 Constructing a submersible bridge across Madalamuttivari at M. 8/7-8 Thanjavur-Trichy—Road Estimate Rs. 4,25,000 (Thanjavur Division).	56,065	56,065	....
17 Reconstructing the bridge across Arasalar and Vettar in Thanjavur Lower Anicut road. Estimate 2,60,000 (Thanjavur Division).	8,903	8,903	....
18 Constructing a bridge across Vellar at 7/4 of Aranthangi-Mimisal Road. Estimate Rs. 5,00,000 (Thanjavur Division).	33,197	33,197	....
19 Reconstructing Kalil bridge at mile 28/6 of Koviloor-Kulasakaran Road. Estimate Rs. 3,30,000—(Nagarkoil Division).	29,025	29,025	....
20 Constructing a submersible bridge across Vaigai at Tiruppuvanam on Melur Poovandhi—Tiruppuvanam Road (Estimate Rs. 8,14,000 Special Ramnad Division).	1,96,471	1,96,471	....
21 Reconstructing the Melakkal Causeway at mile 11/7-8 of Tirumangalam—Pallapatty Road Estimate Rs. 4,70,000—(Dindigul).	5,068	4,60,004	....
22 Construction and improvements to culverts and minor bridges at mile 4/6-33/1 of Tirunelveli Sencottai Road Estimate Rs. 1,73,000—(Tuticorin).	34,377	1,90,000	....
23 Construction of bridge and improvements to culverts in Tenkasi Madurai Road, 10/0 to 33/1—Estimate Rs. 3,00,000.	40,683	1,47,500	....
24 Constructing a bridge at 60/8 of Tenkasi Madurai Road—Estimate Rs. 4,51,000.	1,71,000	2,50,024	....
25 Reconstructing the bridge M. at 22/8 of Palayamcottai Ambasamudram Road—Estimate Rs. 5,64,000	2,01,965	5,64,000	....
26 Constructing a bridge at 6/5-6 of Ambasamudram-Tenkasi Road. Estimate Rs. 4,50,000.	33,655	3,13,000	....
27 Constructing a Causeway at M. 8/3 of Ambasamudram-Tenkasi Road. Rs. 2,00,000.	21,906	1,96,000	....
28 Providing culverts to dips in Tuticorin-Ettayapuram Road (Rs. 1,15,400).	6,016	1,15,400	....
29 Reconstructing the bridge at M. 41/1 of Tirunelveli-Ikajapalayam Road. (Tenkasi Division Estimate Rs. 1,75,000).	42,599	1,67,000	....
30 Constructing a bridge at M. 47/5 of Kulathur District Frontier Road. Estimate Rs. 1,86,000 (Tuticorin Division).	33,064	1,78,000	....

ANNEXURE 22—cont.

(i) Review of works costing over Rs. 1 lakh each in progress during the year 1960-61—cont.

Serial number, name of work and estimate cost (classification and division).	Expenditure during the year.	Expenditure to end of the year.	Remarks.
(1)	(2)	(3)	(4)
RS.	RS.	RS.	
A. GOVERNMENT ROADS—cont.			
I. Bridges, Culverts and Causeways—cont.			
31 Constructing a Causeway at M. 1/8 of Parthibanur Narikudi Road (Sivaganga Division) Estimate Rs. 1,30,000.	1,25,186	1,25,186	..
32 Constructing a Causeway at M. 28/6 Devakottai Devipatnam Road—Estimate Rs. 1,93,000 (CR. 76/58-59).	1,51,494	1,51,494	..
33 Constructing a bridge M. at 25/3 of Manamadurai Tirupattur Pudukottai Frontier Road—Estimate Rs. 5,00,000 (CR. 17/58-59)	3,85,455	5,66,852	..
34 Constructing a bridge across River Kousiga in Virudunagar Municipal limits Estimate Rs. 1,73,400 (CEL. 59/56-59).	1,28,491	1,28,491	..
35 Constructing culverts and minor bridges in Virudunagar Aalagapuri Road—Estimate Rs. 1,75,000 (CR. 42/60-61).	48,143	48,143	..
36 Reconstructing the bridge at 354/2 of B. C. C. Road Estimate Rs. 1,22,000 (Sivaganga District).	16,802	16,802	...
37 Reconstructing the bridge at 345/7 of B. C. C. Road Estimate Rs. 9,49,000 Sivaganga Division.	12,72,175	24,67,878	...
38 Constructing a byepass to N.H. 7 near Madurai—Estimate Rs. 8,00,000—Madurai Division.	7,90,507	17,75,316	...
39 Constructing a bridge at M. 44/2 of Madurai—Theni Road—Estimate Rs. 3,20,000 (Madurai Division).	95,338	1,34,064	...
40 Constructing a Causeway across Grithmal river near Veerasholam Road Estimate Rs. 1,65,000.	20,816	20,816	...
41 Constructing a bridge across the river Cauvery at N.H. 45 near Tiruchirappalli Estimate Rs. 45.37 lakhs (Cauvery Bridge Division).	8,00,000	20,06,329	...
42 Constructing a bridge at M. 20/7 of Sathy Mettupalayam Road. Estimate Rs. 1,47,000 (Coimbatore Division).	70,688	70,688	...
43 Constructing a bridge across Cauvery between Erode and Pallipalayam. Estimate Rs. 11,00,000 (Erode Division).	1,78,260	12,80,550	...
44 Constructing a cross drainage works on Government and District Board Road affected by seepage and drainage water from L. B. P. Estimate Rs. 12,33,200—Erode Division).	4,72,954	4,80,800	...
45 Constructing a bridge at M. 264/3 of Madras Calicut Road Estimate Rs. 1,35,000 (Salem Division).	32,999	32,999	....
46 Constructing a bridge at M. 70/4 and 67/2 Tiruchirappalli Salem Road Estimate Rs. 1,02,000—(Salem Division).	4,999	4,999	....

ANNEXURE 22—cont.

(i) Review of works costing over Rs. 1 lakh each in progress during the year 1960-61—cont.

Serial number, name of work and estimate cost (classification and division).	Expenditure during the year.	Expenditure to end of the year.	Remarks.
(1)	(2)	(3)	(4)
RS.	RS.	RS.	
A. GOVERNMENT ROADS—cont.			
I- Bridges, Culverts and Causeways—cont.			
47 Widening and strengthening culverts on Coimbatore Sathy Chamarajanagar Road M. 29/3, 33/1, 36/6, 37/2, 38/3, 39/2, 40/1, 40/7, 41/4 and 41/7—Estimate Rs. 1,00,000 (Erode Division).	27,620	56,825	....
48 Constructing a bridge at M. 167/8 of Madras—Bangalore Road—Estimate Rs. 4,56,200—(Krishnagiri Division).	11,960	4,55,208	....
49 Constructing a bridge at M. 174/1 of Madras Bangalore Road—Estimate Rs. 1,56,000.	68,048	1,57,569	....
50 Constructing a bridge at M. 2/4 of Veppanapalli—Theertham Road—Estimate Rs. 1,93,000 (Krishnagiri Division).	32,429	32,429	....
51 Constructing a bridge at M. 219/8 of Benares Cape Comorin Road—Estimate Rs. 1,61,000 (Krishnagiri Division).	5,001	5,001	....
Cement Concrete and Black topping.			
1 Blacktopping Kavarapet—Satyavedu Road. M. 0/0 13/5. Estimate Rs. 2,70,000 (Chingleput Division).	1,78,591	2,52,795	....
2 Upgradina Vedaranyam Kodikarai Road, by metalling and blacktopping Estimate Rs. 7,15,000 (Nagapattinam Division).	1,48,000	1,48,000	....
3 Providing Asphaltic concrete in M. 0/2 to 3/4 of Thanjavur—Nagapattinam Road, Estimate Rs. 3,90,009 (Thanjavur Division).	1,14,946	2,86,295	....
4 Providing asphaltic concrete surface on Thanjavur Lower Anicut Road. M. 168/2 to 170/7—Estimate Rs. 3,00,000 (Thanjavur Division.)	1,72,297	3,00,576	....
5 Cement concreting Thanjavur-Nagapattinam road M. 3/4-9/6—Estimate Rs. 8,40,000 (Thanjavur Division.)	25,890	25,890	....
6 Widening black top surface in 64-150 of Madras—Tiruchirappalli—Dindigul road (N.H. 45)—Estimate Rs. 13,13,200 (South Arcot Division).	4,76,021	4,76,021	....
7 Widening black top surface in 64-150 of Madras—Tiruchirappalli—Dindigul road Formation width (N.H. 45)—Estimate Rs. 1,93,600 (South Arcot Division).	1,04,022	1,04,022	....
8 Widening and Blacktopping to 22' width from 122/0 to 150/0 N.H. 45—Estimate Rs. 8,95,000 (South Arcot Division).	1,51,229	1,51,229	....
9 Black topping Eathankattumadam road M. 0/0 to 7/0—Estimate Rs. 1,46,000, (Nagercoil Division).	75,546	75,546	....
10 B.T. Marthandam Pechipirai road—Estimate Rs. 2,60,000 (Nagercoil Division).	1,09,534	1,09,534	....

ANNEXURE 22—cont.

(i) Review of works costing over Rs. 1 lakh each in progress during the year 1960-61—cont.

Serial number, name of work and estimate cost (classification and division). (1)	Expenditure during the year. (2) RS.	Expenditure to end of the year. (3) RS.	Remarks. (4)
A. GOVERNMENT ROADS—cont.			
II. Cement Concrete and Black Topping—cont.			
11 B.T. Thuckaly Thadikaran Konam road, M. 5/4-10/0—Estimate Rs. 1,06,000, (Nagercoil).	61,551	61,551	....
12 B.T. 22' width in M. 47/6-54/4 of M.S. road—Estimate Rs. 3,10,000—(Nagercoil Division).	1,39,594	1,39,594	....
13 Asphaltic concretion Tirunelveli-Shencottah road in M. 3/3-4/6 and widening the existing cement concrete width with asphaltic concrete Estimate Rs.1,60,000, (Tirunelveli Division).	79,498	79,498	....
14 Black topping in M. 12/0 to 24/3 of Tirunelveli—Pottalpudur road—Estimate Rs. 2,00,000—(Tirunelveli South).	71,770	71,770	....
15 Black topping Madurai—Palamedu road, Estimate—Rs. 1,35,000—(Dindigul Division).	34,579	34,579	....
16 Widening B.T. to 22' width and formation to 38' width at M. 278/4 to 288/0 of B.C.C. Road—Estimate Rs. 2,56,000.	44,925	44,925	....
17 Asphaltic concretion Virudhunagar—Aruppukottai Municipal road—Estimate Rs. 1,50,000—(Tuticorin Division).	64,037	1,18,000	....
18 Providing Black topping in Kulathur District Frontier road (Dindigul Division) Rs. 2,00,000.	1,77,228	2,00,000	....
19 Metalling and Black topping on Bodi Bodi-mettu road—Estimate Rs. 3,50,000 (Bodi Division).	1,56,146	3,16,295	....
20 B. T. Tirumangalam—Usilampatti road—Estimate Rs. 1,30,000—(Madurai Division).	76,121	76,121	....
21 B.T. Bodi-Thevaram road, 0/0 12/0—Estimate Rs. 2,00,000,—(Madurai Division).	71,351	71,351	....
22 B.T. Nellakotta Devala road M. 5/0 to 10/0—Estimate Rs. 1,44,000—(Ooty Division).	23,330	23,330	....
23 Improvements and Black topping Podur—Chettipalayam road—Estimate Rs. 1,09,000—(Coimbatore Division).	39,982	59,782	....

III. New Formation.

1 Forming a road to Yelagiri Hills,—Estimate Rs. 1,64,000—(North Arcot Division).	3,14,519	4,74,911	....
2 Realigning the Ghat Portion of Katpadi Venkatagirikottah road M. 33/1-8—Estimate Rs. 2,00,000,—(North Arcot Division).	1,53,072	2,03,379	....
3 Forming and improvements to Kanur-Tirupunavasal road—Estimate Rs. 3,78,200 (Thanjavur Division).	2,04,413	2,04,413	....
4 Forming Ghat road from Pannaikadu to Mangalacombu—Estimate Rs. 3,65,000 (Dindigul Road).	1,50,952	1,9,845	....

ANNEXURE 22—cont.

(i) Review of works costing over Rs. 1 lakh each in progress during the year 1960-61—cont.

Serial number, name of work and estimate cost (classification and division). (1)	Expenditure during the year. (2) RS.	Expenditure to end of the year. (3) RS.	Remarks. (4)
A. GOVERNMENT ROADS—cont.			
III. New Formation—cont.			
5 Forming and gravelling Sivakasi Erichinatham road.—Estimate Rs. 1,50,000 (Sivaganga Division).	23,555	23,555	....
6 Forming and gravelling the road Amathur to meet Tenkasi Madurai road—Estimate, Rs. 1,50,000 (Sivaganga Division).	4,404	4,404	....
7 Forming a bye-pass road in Tenkasi Madurai road—49/5 to 50/6, (Tuticorin Division).	2,238	2,30,000	....
8 Forming a road from Puliamkulam to 16/5 of Madurai—Aruppukottai and gravelling and construction of culverts from Puliamkulam to Illupaikulam—Estimate Rs. 1,70,000, (Kamuthy Division).	73,345	1,32,232	....
9 Forming and metalling a road from 26/7 of Devakottai Devipattinam road to North Valamanur including construction of culverts—Estimate Rs. 1,84,000.	1,29,383	1,46,132	....
10 Forming and gravelling a road from 67/1 of N. H. 49 to Keelakarai Sikkal road including construction of culverts—Estimate Rs. 1,14,000.	96,696	1,34,499	....
11 Forming and gravelling a road from Fisher-pattinam to connect Madurai Aruppukottai road and including construction of culverts—Estimate Rs. 1,52,000.	75,797	96,212	....
12 Forming and gravelling a road from Meenakshipuram—A. Mukkulam road including construction of culverts—Estimate Rs. 1,10,000.	84,810	1,24,848	....
13 Forming and gravelling a road from Thayakoor to join Thirupuvanam Pulivokarai road—Estimate Rs. 1,93,000.	92,465	1,26,355	....
14 Forming and gravelling a road from M. 47/7 of N. H. 49 to Sikkal Kurandi road (via) Venkotankurichi, etc., Villages including construction culverts—Estimate Rs. 1,99,000 3,37,000	1,63,332	2,25,150	....
15 Forming a road from Vembar Kannirajapuram to Naripayyoor to Sayalgudi including Soil stabilisation providing surface and construction of cross drainage work M. 0/0 to 8/3—Estimate Rs. 4.21,000.	67,059	67,059	....
16 Forming and gravelling a road from 15th mile of Sivaganga Elayangudi road to Manamadurai (via) Pillathai-Naganthamgudi—Estimate Rs. 1,15,000.	23,239	23,239	....
17 Forming and gravelling a road from Mudukulathur to Uthirakosamangai including construction of culverts—Estimate Rs. 2,66,000.	32,307	32,307	....
18 Forming Tiruppacootty Narikudi road—Estimate Rs. 2,00,000 Kamuthy Division.	91,468	91,468	..

ANNEXURE 22—cont.

(i) Review of works costing over Rs. 1 lakh each in progress during the year 1960-61—cont.

Serial number and name of work, estimate cost classification and division. (8)	Expenditure during the year. Rs. (2)	Expenditure to end of the year. Rs. (3)	Remarks. (4)
A. GOVERNMENT ROADS—cont.			
III. New Formation—cont.			
19 Forming and gravelling a road from T. Pudukottai Illayangudi road—Estimate Rs. 1,15,000.	31,647	31,647	....
20 Forming and gravelling a road from Melakkidaram—Kilakkidiram to join Kulaselvanoor and improvements upto Vadinkkam including construction of cross drainage—Estimate Rs. 1,08,000.	1,669	1,669	....
21 Forming and gravelling a road from Kadugusadai Opilam Nadupandi Meen-vadi Valinokkam including construction of cross drainage works—Estimate Rs. 1,98,000.	5,536	5,536	....
22 Forming and gravelling Keelkudi Kamuthi (via) Vagaikulam—Estimate Rs. 1,50,000, (Kamuthi Division).	43,370	43,370	....
23 Forming Ghat road to Kolli Hills—Estimate Rs. 25,00,000—(Salem Division).	6,32,148	28,14,790	....
24 Forming and metalling a road from 12/5-16/1 of Mecheri-Pennagaram road and construction of causeway at M. 16/2 of the same road—Estimate Rs. 1,16,000.	36,975	92,254	....

IV. Special repairs and improvements.

1 Improvements to dips in Uthiramerur Kancheepuram—Acharapakkam—Revised Estimate Rs. 1,21,600—(Chingleput Division).	16,744	1,13,600	....
2 Improvements to Thiruvanniyur to Muthukkadu road—0/5 to 12/0—Estimate Rs. 3,20,300—(Chingleput Division).	396	3,16,127	....
3 Improvements to the road leading to Vedanthangal Birds Sanctuary—Estimate Rs. 3,00,000—(Chingleput Division).	— 286	2,00,894	....
4 Widening and Improvements to Arkonam Thiruvallur Revised—Estimate Rs. 13,71,000—(Chingleput Division).	2,02,261	2,02,261	....
Improvements to Arkonam—Tiruvallur road (via), Thiruvellangadu — Estimate Rs. 1,63,500—(Chingleput Division).	50,411	1,40,425	....
6 Metalling and Improving Gradients in ghat Section of Abdullapuram Pakkam road Estimate—Rs. 1,18,000—North Arcot Division.	60,261	60,261	....
7 Upgrading by new metalling Veeranam tank bund road including improvements—Estimate Rs. 5,04,000—(Villupuram Division).	1,21,915	2,16,665	....
8 Metalling Kumarakachi to Puliangudi road Mile 14/4 to 19/4—Estimate—Rs. 2,15,000 (Villupuram Division).	79,411	1,09,497	....

ANNEXURE 22—cont.

(i) Review of works costing over Rs. 1 lakh each in progress during the year 1960-61—cont.

Serial number, name of work and estimate cost (classification and division). (1)	Expenditure during the year. (2) RS.	Expenditure to end of the year. (3) RS.	Remarks. (4)
A. GOVERNMENT ROADS—cont.			
IV. Special repairs and improvements—cont.			
9 Metalling—Thalainayar—Vedaranyam road 20/2—23/5—Estimate Rs. 1,84,000, Nagapattinam Division.	1,16,999	1,32,627	....
10 Metalling Alathanbady — Alangudi road 10/0-17/1—Estimate Rs. 2,97,000—Nagapattinam Division.	2,56,119	2,81,100	....
11 Granite metalling Mariamman Koil bye-pass road including L.A.—Estimate Rs. 1,09,000 Thanjavur Division.	2,809	43,479	....
12 Metalling Peruvurani—Sethubavachatram road—Mile 0/0-6/5—Estimate Rs. 1,07,000 Thanjavur Division.	12,959	1,78,076	....
13 Metalling Nagore—Nannilam Nachiarkoil road Mile 27/3-31/1—Estimate Rs. 2,76,000—Thanjavur Division.	20,807	82,025	....
14 Metalling Vaiteeswarankoil Theruppanandal road 12/3-14/2—Estimate Rs. 1,21,000 Thanjavur Division.	6,083	1,21,183	....
15 Metalling Kattumavadi—Mimissal road Estimate Rs. 2,50,000—Thanjavur Division.	89,643	1,68,009	....
16 Improvements to the road on the left bank of Grand Anicut Canal—Estimate Rs. 7,90,000—Thanjavur Division.	22,546	22,546	....
17 Upgrading Nedumangad Shorlacode road Estimate Rs. 1,81,000—Nagercoil Division.	1,27,506	1,27,506	....
18 Upgrading Ramnad, Nainarkoil road—Mile 0/0-17/0 by metalling and blacktopping including minor bridges and culverts—Estimate Rs. 6,95,000.	50,051	6,80,878	....
19 Upgrading by Granite metalling, Devakottai Devipattinam road 0/1 to 34/4—Estimate, Rs. 5,50,000.	74,071	74,071	....
20 Upgrading Granite metalling Aruppukkottai Mandapasalai Sayalgudi road—Estimate Rs. 3,24,500.	39,777	39,777	....
21 Providing W.B.M. surfaces 6" width in 19/0 to 28/1 of Madurai—Thiruppathur road—Estimate Rs. 3,06,000.	93,863	1,44,622	....
22 Extending Krishnamangalam branch road to Kakkeerchi—Estimate Rs. 1,10,000—Nagercoil Division.	7,228	7,228	....
23 Improvements to M. M. Pudukkottai road—Estimate Rs. 1,24,000—Nagercoil Division.	29,274	90,697	....
24 Metalling Kamuthy—Sayalgudi road—Mile 59/0 to 63/3—Estimate Rs. 1,75,000 Special Ramanathapuram Division.	39,069	1,37,246	....
25 Widening culverts in Sankarankoil Nallattin-pudur road—Estimate Rs. 1,00,000—Tirunelveli Division.	19,416	19,416	....

ANNEXURE 22—cont.

(i) Review of works costing over Rs. 1 lakh each in progress during the year 1960-61.—cont.

Serial number, name of work and estimate cost (classification and division). (1)	Expenditure during the year. (2) RS.	Expenditure to end of the year. (3) RS.	Remarks. (4)
A. GOVERNMENT ROADS—cont.			
IV. Special repairs and improvements—cont.			
26 Metalling Goshen road—Estimate Rs. 1,10,000—Dindigul Division.	523	523	....
27 Widening the road—crest to two lanes at Mile 276/1 of B.C.C. road—Estimate Rs. 4,96,500.	1,31,818	1,31,818	....
28 Widening and strengthening culverts at Mile 50/0 to 64/1 of Tenkasi Madurai road—Estimate Rs. 1,30,000—Tuticorin Division.	18,952	1,30,000	....
29 Improvements to additional culverts and bridges of Bodi-Bodimetu road—Estimate Rs. 3,40,000—Bodi Division.	1,91,451	1,91,451	....
30 Widening the blacktop surface to 22' width and formation to 33' in—Mile 215/0 to 240/0 of G. S. T. Road—Estimate Rs. 8,28,000—Pudukkottai Division.	57,594	57,494	....
31 Metalling Ariyalur Sendurai road—Estimate Rs. 1,30,000—Tiruchy Division.	20,786	73,144	....
32 Metalling and Construction of culverts in Tirupuranam—Pulivoikarai Road—mile 4/0 to 9/0—Estimate Rs. 1,20,000—Kamuthi Division.	65,478	1,11,962	....
33 Metalling the road—from Narikkudi to Pulivoikarai road—Mile 0/5 to 5/8—Estimate Rs. 1,20,000.	51,885	99,197	....
34 Metalling and Construction of culverts in Narikkudi—Pulivoikarai road—mile 6/0 to 12/3—Estimate Rs. 1,60,000.	1,22,014	1,48,226	....
35 Metalling Peraiyur—Kovilagulam road including Construction of culverts in—mile 0/1-6/1—Estimate Rs. 1,46,000.	93,550	1,38,183	....
36 Improvements to Tiruchuli Kamuthi road—Estimate Rs. 1,37,000.	57,041	1,40,452	....
37 Improvements to Perunali Kovilagulam road—Estimate Rs. 1,75,000.	1,01,709	1,01,709	....
38 Improvements to Narikkudi Tiruchuli road—Estimate Rs. 1,98,000.	35,000	35,000	....
39 Metalling the road from Madurai to Chinthamani from mile 4/8 to 9/0 including formation wherever necessary—Estimate Rs. 1,40,000.—Kamuthi Division.	2,086	2,086	....
40 Granite metalling Dharapuram Pollachi road—Estimate Rs. 1,99,000—Coimbatore Division.	99,621	1,61,890	....
41 Improvements to Erode Karur road mile 12/0,27/0 and providing a byepass road in Kodumudi town limit—Estimate Rs. 1,15,000—Erode Division.	70,626	76,941	....

ANNEXURE 22—cont.

(i) Review of works costing over Rupees one lakh each in progress during the year 1959-60.

Serial number, name of work and estimate cost (classification and division). (1)	Expenditure during the year. (2) RS.	Expenditure to end of the year. (3) RS.	Remarks. (4)
B. DISTRICT BOARD WORKS.			
I. Bridges, culverts and Causeways.			
1 Constructing a bridge at M. 8/4 of Minjur Kattur Thirupulavanam Road—Estimate Rs. 1,00,000 Chingleput Division.	665	76,180	....
2 Constructing culverts in Vridhachalam Palakkottai road—Estimate Rs. 2,00,000.—Villupuram Division.	19,899	42,223	....
3 Constructing a bridge across Aranalai at M. 4/2 of Tirunelveli to Kadalangudi road. Estimate Rs. 2,40,000—Nagapattinam Division.	64,280	1,15,541	....
4 Constructing a bridge across Adyar at M. 19/4 of Velanganni Vedaranyam road. Estimate Rs. 6,90,000—Nagapattinam Division.	33,293	46,524	....
5 Constructing four bridges across four rivers on Papanasam Kabisthalam road. Estimate Rs. 9,93,000—Thanjavur Division.	2,37,144	9,14,379	....
6 Constructing a bridge across Vennar at Kammandangudi limit. Estimate Rs. 5,80,000—Thanjavur division.	1,13,061	4,18,271	....
7 Constructing a bridge across Cauvery at M. 1/2 of Ayyampet Ganapathy Agraharam road. Estimate Rs. 4,00,000—Thanjavur Division.	232	2,72,146	....
8 Constructing a causeway across Maharajasamudram and Agniar at M. 1/7-8 and 4/1-2 of Pattukottai Sethubavachatram road. Estimate Rs. 10,00,000—Thanjavur Division.	69,100	69,100	....
9 Constructing a causeway at M. 12/7 of Vilathikulam Vanbar road. Estimate Rs. 2,00,000.	57,388	57,388	....
10 Constructing a causeway across Nambiar Hanumanadhi in Anjuranam Overi road Estimate Rs. 5,22,800—Thirunelveli Division.	14,594	14,594	....
11 Constructing a high level causeway across river Vaigai at Sholavandan. Estimate Rs. 5,56,000—Dindigul division.	76,820	4,84,258	....
12 Constructing a bridge at M. 3/5 of Kallidai-kurichi Sivasailam road. Estimate Rs. 1,94,000—Tirunelveli Division.	27,710	1,96,000	....
13 Constructing a causeway at M. 7/5-6 of Vilathikulam Perunali road. Estimate Rs. 1,00,000—Tuticorin Division.	24,441	1,00,000	....
14 Constructing a bridge across Vellar at M. 9/4 of Porumanad Keruniar road. Estimate Rs. 3,80,000—Pudukkottai Division.	2,01,204	2,01,204	....
15 Reconstructing the bridge at M. 12/2 of Ooty Mysore road (via) Sighur Estimate Rs. 2,07,000—The Nilgiris Division.	41,670	55,571	....
16 Constructing a bridge across Aliyur at M. 2/2 of Kottur Thevagarai road. Estimate Rs. 2,50,000—Coimbatore Division.	94,236	94,236	....

ANNEXURE 22—cont.

(i) Review of works costing over Rupees one lakh each in progress during the year 1959-60—cont.

Serial number, name of work and estimate cost (Classification and division). (1)	Expenditure during the year. (2) RS.	Expenditure to end of year (3) RS.	Remarks. (4)
B. DISTRICT BOARD ROADS—cont.			
I. Bridges, Culverts and Causeways—cont.			
17 Constructing a bridge at M. 4/5 of Dhara-puram Alangiam road. Estimate Rs. 3,47,000—Erode Division.	652,17	65,217	....
18 Constructing a bridge across Amaravathy river at the junction of Erode and Oddan-chattram Village at M. 6/5-6 of Vellakkoil Mulanur road (via) Puduppai. Estimate Rs. 5,50,000—Erode Division.	2,71,709	2,71,709	....
19 Constructing a bridge at M. 9/2 of Kuppichi-parai to meet Veppanapalli Theertham road. Estimate Rs. 2,12,000.	25,985	78,837	....
20 Constructing a bridge at M. 9/3-4 and 20/3 of Hanumarthéertham Kottapatti road. —Estimate Rs. 1,41,700.	24,953	99,235	....
21 Constructing a bridges at M. 2/5 and 6/3 of Mettur Kolathur road. Estimate Rs. 1,66,000.	58,090	1,73,369	....

II. Cement Concrete and Black topping.
Nil.**III. New formation.**

1 Forming a road from Karivalamvandanallur to Royagiri road. Estimate Rs. 1,50,000—Tirunelveli division.	17,858	17,858	....
2 Forming Tharuvaikulam Soorangudi and on to District limits including construction of culverts and soil stabilisation etc., Estimate Rs. 7,00,000—Tirunelveli South.	40,040	40,040	....
3 Forming a Road from Kottar to Kurukku-chabi Estimate Rs. 3,00,000.—Tuticorin Division.	5,560	3,00,000	....

IV. Improvements and Special Repairs.

1 Metalling Pakkam to M. P. Agaram Road M. 0/1 to 4/4—Estimate Rs. 1,88,000—Villupuram Division.	2,583	1,77,177	....
2 Metalling Melpattambakkam—Narimedu Road M. 0/1 to 3/0—Estimate Rs. 1,86,000—Villupuram Division.	78,567	1,39,764	....
3 Metalling Kappur Venkatesapuram Road M. 0/0 to 3/0—Estimate Rs. 1,12,000—Villupuram Division.	53,958	61,215	....
4 Metalling Mambalapattu Mugayur Road M. 36/1 to 39/1—Estimate Rs. 1,02,000—Villupuram Division.	44,123	62,103	....
5 Metalling Sikkil to Palakuruchi Road M. 0/0 to 11/6—Estimate Rs. 1,45,000—Nagapattinam road.	9,27	1,32,671	....

ANNEXURE 22—cont.

(i) Review of works costing over Rupees one lakh each in progress during the year 1959-60—cont.

Serial number and name of work and estimate cost (classification and division). (1)	Expenditure during the year. (2) RS.	Expenditure to the end of the year. (3) RS.	Remarks. (4)
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B. DISTRICT BOARD ROADS—cont.**IV. Improvements and Special Repairs—cont.**

6 Metalling Gopalesamudram to Voimedu Road 1/0 to 10/6—Estimate Rs. 1,45,000—Nagapattinam Division.	9,960	1,45,451	
7 Metalling Velanganni-Vedaranyam Road M. 6/7 to 24/0—Estimate Rs. 3,10,000—Nagapattinam Division.	23,956	2,41,842	....
8 Metalling Sankaranarkoil to Nalladi road Estimate Rs. 1,12,000 Nagapattinam Division.	5,860	5,860	....
9 Metalling Manakkal Achuthamangalam Vagalur road—Estimate Rs. 2,20,000—Nagapattinam Division.	1,37,862	1,37,862	....
10 Metalling Muthupatti Mumisal road M. 2/2-27/8—Estimate Rs. 3,72,000—Thanjavur Division.	1,36,137	3,22,939	....
11 Widening Pudukkottai Yambal road M. 14/0 to 29/6—Estimate Rs. 1,50,000—Pudukkottai division.	13,389	1,15,298	....
12 Metalling Ariyalur Sendurai Road—Estimate Rs. 1,30,000—Tiruchirappalli Division.	20,786	73,144	....
13 Improvements to roads leading to beauty spots Catherin Falls—Estimate Rs. 1,48,500—The Nilgiris Division.	17,212	48,794	....
14 Improvements to Dopkins Nose roads Estimate Rs. 2,10,000.	82,312	1,22,241	....

(ii) Review of works costing over Rupees one lakh each completed during the year 1960-61.

A. GOVERNMENT ROADS.**I. Bridges, Culverts and Causeways.**

1 Constructing a bridge at mile 12/4 of Arkonam Kancheepuram Road—Estimate Rs. 1,00,000 (Chingleput Division).	19,735	1,03,038	....
2 Reconstructing bridge at mile 18/1 of Tirumushi, Satyavedu Road—Estimate Rs. 1,00,000—Chingleput Division.	..	1,03,739	....
3 Constructing at mile 32/2-4 of Tirumushi Satyavedu Road—Estimate Rs. 6,65,400—(Chingleput Division).	(— 3,318	6,29,570	....
4 Constructing a bridge across Ponnai at mile 104/2-5 of Melakkal Trunk Road—Estimate—Rs. 33,32,000 (South Arcot Division).	60,875	42,98,272	....
5 Constructing a bridge at mile 15/3 of Cuddalore Vridhachalam Road—Estimate Rs. 3,00,000 (South Arcot Division).	141	2,71,719	....
6 Construction of culverts and bridges on Bodi Bodimettu Road—Estimate Rs. 1,67,000 (Bodi Division).	58,289	1,69,665	....
7 Reconstructing the bridge at mile 1/2 of Meycode—Kulasekanam Road—Estimate Rs. 1,20,000 (Nagercoil Division).	33,170	1,04,257	....

ANNEXURE 22—cont.

(ii) Review of works costing over Rupees one lakh each completed during the year 1960-61—cont.

Serial number and name of work and estimate cost classification and division.	Expenditure during the year.	Expenditure to the end of the year.	Remarks.
(1)	(2)	(3)	(4)
	RS.	RS.	

A. GOVERNMENT ROADS—cont.

I. Bridges Culverts and Causeways—cont.

8 Construction of the causeway at mile 7/1 of Ettayapuram—Aruppkottai Road—Estimate Rs. 9,12,000—(Tirunelveli Division).	1,009	2,79,941	....
9 Construction of bridge at mile 16/5 of Mottur Palakkanthi Road—Estimate Rs. 1,15,000—(Dindigul Division).	6,460	1,09,243	....
10 Reconstructing the Molakkal causeway at mile 11/7-8 of Thirumangalam Palapatti Road—Estimate Rs. 4,00,000—(Dindigul Division).	5,668	4,59,866	*....
11 Constructing a bridge across Vaigai on the the byepass to N.H. 7 near Madurai—Estimate Rs. 7,38,000—(Madurai Division).	14,945	9,99,653	....
12 Constructing a bridge at mile 33/1 of Madurai Theni Road—Estimate Rs. 1,85,000—(Madurai Division).	37,542	1,04,009	....
13 Constructing and widening the culverts in 11/0 to 47/0 of Periakulam Kummli Road—Estimate Rs. 1,52,000—(Madurai Division).	27,929	1,13,353	....
14 Constructing a bridge at mile 23/1 of Madurai Natham Road—Estimate Rs. 1,15,000—(Madurai Division).	59,207	1,09,447	....
15 Constructing of bridge across cauvery between Erode and Pallipalayam—Estimate Rs. 11,90,000—(Erode Division).	2,58,912	12,71,512	....
16 Constructing a bridge at mile 174/1 of Madras Bangalore Road—Estimate Rs. 1,56,000—(Erode Division).	68,048	1,57,669	....
17 Constructing a bridge at mile 18/3 of Doulatabad Cuddalore Road—Estimate Rs. 1,91,000.	(—) 5,102	86,155	....

*Main causeway completed and the formation and metalling the approach road yet to be done.

II. Cement Concrete and Black-topping.

1 Blacktopping B.T. Kovalam Mahabalipuram Road—Estimate Rs. 1,00,000—(Chingleput Division).	(—) 1,182	1,16,993	....
2 Blacktopping Meekanam Tindivanam Gingee Tiruvannamalai Road—Estimate Rs. 2,90,000—(South Arcot Division).	12,505	2,90,660	....
3 Blacktopping Kuzhithurai Thangapattinam Road—Estimate Rs. 1,12,000—(Nagercoil Division).	4,335	1,16,567	....
4 Blacktopping Madurai Natham Road—Estimate Rs. 1,53,000—Madurai Division.	25,987	1,33,774	....
5 Cement concretng mile 112/0-120/0 of Tiruchirappalli Coimbatore Road—Estimate Rs. 7,72,000 (Coimbatore Division).	69,311	9,36,573	....

ANNEXURE 22—cont.

(ii) Review of works costing over one lakh each completed during the year 1960-61—cont.

Serial number and name of work and estimate cost classification and division.	Expenditure during the year.	Expenditure to the end of the year.	Remarks.
(1)	(2)	(3)	(4)
	RS.	RS.	

A. GOVERNMENT ROADS—cont.

III. New formation.

1 Forming a ghat road to Kolli Hills Salem Division—Estimate Rs. 25,00,000.	6,32,148	28,14,730	....
2 Formation and metalling a road from 12/5-16/1 of Mecheri-Pennagaram Road and constructing causeway at mile 16/2 of the same road—Estimate Rs. 1,16,000 (Krishnagiri Division).	26,975	92,254	....

IV. Improvements and special repairs.

1 Metalling Kumbakonam—Sirkali Road—Estimate Rs. 1,72,000 (Nagapattinam Division).	Nil.	1,60,564	....
2 Improvements to dip in Uthiramerur Acharapakkam Road (Chingleput Division).	16,744	1,13,600	....
3 Improvements in Tiruvanniyur to Muthukadu Road, mile 0/0-12/0—Estimate Rs. 3,20,300 (Chingleput Division).	396	2,35,390	....
4 Improvements to Marmalong bridge Irumbuliyur Road—Estimate Rs. 1,18,000 (Chingleput Division).	902	1,15,726	....
5 Upgrading B.T. crust in 16/0 to 36/2 of Great Western Trunk Road—Estimate Rs. 7,20,000 (Chingleput Division).	41,264	2,82,992	....
6 Widening Thanjavur-Nagapattinam Road—19/8-20-4—Estimate Rs.	4,552	4,552	....
7 Upgrading Manapparai—Thuvrankurichi Road, mile 0/0 to 17/0—Estimate Rs. 1,32,000 Pudukottai.	70,625	1,12,071	....
8 Improve the unpaved dips in Dindigul-Aravakurichi Road—Estimate Rs. 2,56,000 (Dindigul Division).	13,761	2,76,506	....
9 Widening Thandigudi, ghat road—Estimate Rs. 2,62,500.	(—) 10	1,40,291	....
10 Improvements to unpaved dips in Dindigul-Aravakurichi Road—Estimate Rs. 1,72,400 (Dindigul Division).	1,79,922	1,79,922	....
11 Improvements to dips in Dindigul-Kavur Road—Estimate Rs. 1,20,000	13,846	89,698	....
12 Metalling and construction of culverts in Iruppavanam-Pulivoikarai Road, 4/0 to 9/3—Estimate Rs. 1,28,000 (Kamuthy Division).	1,11,962	1,11,962	....
13 Improvements to Palladam, Cochin Frontier Road, mile 0/0-20/0—Estimate Rs. 4,84,000 (Coimbatore Division).	11,017	1,60,891	....
14 Improvements to Anamalai ghat Road, mile 0/0 to 26/1—Estimate Rs. 4,12,800 (Coimbatore Division).	1,15,258	4,14,045	....

ANNEXURE 22—cont.

(ii) Review of works costing over Rupees one lakheach completed during the year 1960-61—cont.

Serial number, name of work and estimate cost (classification and division). (1)	Expenditure during the year. (2) RS.	Expenditure to end of the year. (3) RS.	Remarks. (4)
A. GOVERNMENT ROADS—cont.			
IV. Improvements and special repairs—cont.			
15 Widening the bridge at mile 11/7 of Udumalpet—Palladam Road.—Estimate Rs. 1,30,000 (Coimbatore Division).	12,704	1,08,815	....
16 Granite metalling Dharapuram—Pollachi Road mile 12/0-33/0 — Estimate Rs. 1,99,000 (Coimbatore Division).	90,621	1,61,890	....
17 Realigning and reconstructing the bridge at mile 304/1 of Madras—Calicut Road—Estimate Rs. 1,05,000 (Coimbatore Division).	70,236	1,10,901	....

B. DISTRICT BOARD ROADS.**I. Bridges, Culverts and Causeways.**

1 Constructing a causeway across Ki'iyar at M. 7/5 of Padalam-Cheyyur Road Estimate Rs. 2,92,600/3,75,000—(Chingleput Division).	4,431	3,60,583	....
2 Constructing a causeway across Thambara-parani between Melanatham Karuppan-theerai—Estimate Rs. 1,82,000—(Tirunelveli Division).	65,844	1,05,584	....
3 Constructing a bridge at M. 4/2-3 of Sattur Namini Road—Estimate Rs. 3,73,000.	2,08,903	3,44,700	....
4 Constructing bridge at M. 2/5 and 6/1 of Mettur—Kolathur Road—Estimate Rs. 1,66,000—Krishnagiri Division.	58,090	1,73,309	....

II. Cement Concreting and Black-topping.

1 Black-topping Novoy-Tirukalikundram Road —Mile 0/0—20/0, Estimate Rs. 3,50,000 Chingleput Division.	4,140	3,16,608	
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III. New formation.

1 Forming and metalling the road from 6/1 Ramanathapuram Devipattanam road Athangarai (via) Chittarkottai Dhubodi Athiyuthur Panaikulam and Alangamgulum—Estimate Rs. 4,27,990—Special Ramanathapuram.	38,499	3,97,028	A works completed except payment of land cost Landa equisition proposals pending with the Revenue department.
2 Forming and metalling the road from Valudeer to Periapattinam (via) Regunathapuram and Muthupet—Estimate Rs. 1,12,3000—Special Ramanathapuram.	37,781	1,72,638	....

ANNEXURE 22—cont.

(ii) Review of works costing over Rupees one lakh each completed during the year 1960-61—cont.

Serial number and name of work and estimate cost (classification and division). (1)	Expenditure during the year. (2) RS.	Expenditure to the end of the year. (3) RS.	Remarks. (4)
B. DISTRICT BOARD ROADS—cont.			
IV. Improvements and special repairs.			
Metalling Grand Anicut—Kavripattinam Road, mile 56/1-61/2 and 65/5-78/2—Estimate Rs. 2,55,000—Nagapattinam division.	..	2,45,651	....
Metalling Pattukottai-Aranthangi Road (via) Peravuri mile 14/0 28/0—Estimate Rs. 1,30,000 Thanjavur Division.	18,970	1,21,578	....

ANNEXURE 23.

(i) Review of works costing less than Rupees one lakh each in progress during 1960-61.

Serial number, name of circle and division.	Government Works.				District Board Works.			
	Total number of works.	Total cost.	Total expenditure.	Remarks.	Total number of works.	Total cost.	Total expenditure.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. Bridges, culverts and causeways.								
I. Madras Circle—								
1 Chingleput	14	4,10,350	2,06,442	..	..	..	..	..
2 South Arcot	5	3,46,600	1,62,536	..	..	..	..	..
3 Thanjavur	12	44,300	31,288	..	7	1,02,150	54,347	..
4 Nagapattinam	1	90,000	27,812	..	8	3,38,240	2,49,574	..
5 North Arcot	3	1,10,000	49,275	..	1	56,000	57,297	..
6 Tiruvettipuram Special ..	..	..	..	..	..	..	..	..
7 Villupuram Special ..	4	2,06,800	14,188	..	..	..	..	..
Total ..	39	12,08,650	4,72,301	..	16	4,96,330	3,61,218	..
II. Investigation Circle—								
8 Weak bridges, Madras	..	..	..	..	..	..	..	..
9 Investigation, Madras	..	..	..	..	..	..	..	..
10 Do. Coimbatore	..	..	..	..	..	..	..	..
11 Do. Tiruchirappalli	..	..	..	..	..	..	..	..
III. Director, Research Station (Highways), Madras—								
12 Designs Division	..	..	..	..	..	..	..	..
13 Transport and Mechanical Division ..	..	..	..	..	..	..	..	..
IV. Superintending Engineer Rural Housing Cell, Madras—								
14 Cauvery Bridges Special ..	..	..	..	..	..	..	..	..
15 Tenkasi Special	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..
V. Tiruchirappalli Circle—								
16 Tiruchirappalli	2	1,17,000	28,410	..	11	2,94,000	1,92,277	..
17 Pudukkottai	2	44,500	18,467	..	1	47,000	26,582	..
18 Dindigul	1	94,000	61,002	..	3	1,25,000	9,794	..
19 Madurai	2	93,000	1,07,845	..	..	..	..	..
20 Bodinayakanur	..	..	..	..	..	..	..	..
21 Ramanathapuram	3	74,300	33,994	..	8	2,18,400	85,136	..
22 Ramanathapuram Special ..	1	72,000	47,834	..	..	..	..	..
23 Tirunelveli	3	1,74,900	33,007	..	9	4,53,900	1,16,500	..
24 Nagercoil	..	..	..	..	..	..	..	..
25 Kamuthy Special	..	..	..	..	..	..	..	..
Total ..	14	6,66,700	3,39,619	..	32	10,48,300	3,40,289	..
VI. Coimbatore Circle—								
26 Krishnagiri	3	1,21,800	30,819	..	12	2,96,300	69,348	..
27 Salem	5	1,63,700	92,074	..	2	1,14,400	91,369	..
28 Erode	1	62,000	56,827	..	..	..	..	..
29 Erode Special	..	..	..	..	..	..	..	..
30 Coimbatore	..	..	..	..	3	1,74,500	1,21,190	..
31 The Nilgiris	1	89,000	10,536	..	7	1,50,600	54,265	..
Total ..	10	4,36,500	1,90,286	..	24	7,35,800	3,36,172	..
Grand Total ..	63	24,01,850	9,93,206	..	72	22,80,490	10,37,679	..

ANNEXURE 23 (i)

(i) Review of works costing less than Rs. 1 lakh each in progress during 1960-61—cont.

Serial number, name of circle and division.	Government Works.				District Board Works.			
	Total number of works.	Total cost.	Total expenditure.	Remarks.	Total number of works.	Total cost.	Total expenditure.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
II. Cement, concrete and black-topping.								
I. Madras Circle—								
1 Chingleput	2	72,000	67,778	..	..	..	..	..
2 South Arcot	..	..	..	..	..	..	..	..
3 Thanjavur	..	..	..	..	..	..	..	..
4 Nagapattinam	..	..	..	..	..	..	..	..
5 North Arcot	..	..	..	..	..	..	..	..
6 Tiruvettipuram Special ..	..	..	..	..	..	..	..	..
7 Villupuram Special	..	..	..	..	..	..	..	..
Total ..	2	72,000	67,778	..	..	..	..	..
II. Investigation Circle—								
8 Weak bridges, Madras	..	..	..	..	..	..	..	..
9 Investigation, Madras	..	..	..	..	..	..	..	..
10 Do. Tiruchirappalli	..	..	..	..	..	..	..	..
11 Do. Coimbatore	..	..	..	..	..	..	..	..
III. Director, Research (Highways), Madras—								
12 Designs Division	..	..	..	..	..	..	..	..
13 Transport and Machinery Division ..	..	..	..	..	..	..	..	..
IV. Superintending Engineer, Rural Housing Cell, Madras—								
14 Cauvery Bridge Special ..	..	..	..	..	..	..	..	..
15 Tenkasi Special	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..
V. Tiruchirappalli Circle—								
16 Tiruchirappalli	..	..	..	..	..	..	..	..
17 Pudukkottai	..	..	..	..	..	..	..	..
18 Dindigul	..	..	..	..	..	..	..	..
19 Madurai	1	70,000	61,346	..	..	..	..	..
20 Bodinayakanur	..	..	..	..	..	..	..	..
21 Ramanathapuram	..	..	..	..	..	..	..	..
22 Ramanathapuram Special ..	..	..	..	..	..	..	..	..
23 Tirunelveli	2	1,48,500	12,520	..	4	1,55,000	57,626	..
24 Nagercoil	4	2,94,000	1,36,860	..	..	..	..	..
25 Kamuthi Special	..	..	..	..	..	..	..	..
Total ..	7	5,12,500	2,10,726	..	4	1,55,000	57,626	..
VI. Coimbatore Circle—								
26 Krishnagiri	..	..	..	..	..	..	..	..
27 Salem	1	84,000	29,602	..	..	..	..	..
28 Erode	..	..	..	..	..	..	..	..
29 Erode Special	..	..	..	..	..	..	..	..
30 Coimbatore	..	..	..	..	..	..	..	..
31 The Nilgiris	4	1,14,000	49,571	..	6	1,64,500	49,729	..
Total ..	5	1,48,000	79,173	..	6	1,64,500	49,729	..
Grand total ..	14	7,32,500	3,57,677	..	10	3,19,500	1,07,355	..

A.R.H.—10

ANNEXURE 23 (i)—cont.

(i) Review of works costing less than Rs. 1 lakh each in progress during 1960-61—cont.

Serial number, Name of circle and division.	Government Works.				District Board Works.			
	Total number of works.	Total cost.	Total expenditure.	Remarks.	Total number of works.	Total cost.	Total expenditure.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
III. New Formation.								
I. Madras Circle—								
1 Chingleput	..	..	..	..	62	9,16,600	3,32,704	..
2 South Arcot	..	..	..	..	..	..	..	..
3 Thanjavur	..	..	..	..	..	..	..	..
4 Nagapattinam	..	..	..	..	2	10,960	6,910	..
5 North Arcot	..	..	..	..	1	60,000	19,622	..
6 Tiruvallur Special	..	..	..	..	..	..	..	..
7 Villupuram Special	..	..	..	..	..	..	..	..
Total	..	..	..	..	66	9,87,560	3,60,236	..
II. Investigation Circle—								
8 Weak bridges, Madras	..	..	..	..	..	..	..	..
9 Investigation, Madras	..	..	..	..	..	..	..	..
10 Investigation, Tiruchirappalli	..	..	..	..	..	..	..	..
11 Investigation, Coimbatore	..	..	..	..	..	..	..	..
III. Director, Research Station (Highways) Madras—								
12 Design Division	..	..	..	..	..	..	..	..
13 Transport and Machinery Division	..	..	..	..	..	..	..	..
IV. Superintending Engineer, Rural Housing Cell, Madras—								
14 Cauvery Bridge Special	..	..	..	..	..	..	..	..
15 Tenkasi Special	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..
V. Tiruchirappalli Circle—								
16 Tiruchirappalli	1	60,000	25,178	..	48	3,20,467	84,425	..
17 Pudukkottai	..	..	..	..	97	4,10,825	1,48,342	..
18 Dindigul	..	..	..	..	6	1,34,000	87,541	..
19 Madurai	1	33,500	5,412	..	..	..	..	..
20 Ramanayakanur	..	..	..	..	..	..	..	..
21 Ramanathapuram	..	..	..	..	24	4,90,800	2,88,798	..
22 Ramanathapuram Special	..	..	..	..	..	..	..	..
23 Tirunelveli	1	44,000	10,946	..	10	6,72,200	77,367	..
24 Nagercoil	4	1,50,850	24,402	..	..	..	..	..
25 Kamuthi Special	15	7,47,200	5,44,974	..	..	..	..	..
Total	24	10,44,550	6,29,912	..	191	18,45,192	6,58,688	..
VI. Coimbatore Circle—								
26 Krishnagiri	..	..	..	..	6	52,000	19,648	..
27 Salem	..	..	..	..	30	2,40,100	45,864	..
28 Erode	..	..	..	..	2	48,500	6,544	..
29 Erode Special	..	..	..	..	..	..	..	..
30 Coimbatore	..	..	..	..	2	42,000	27,071	..
31 The Nilgiris	..	..	..	..	1	10,000	883	..
Total	..	..	..	..	31	9,92,600	1,01,102	..
Grand total	21	10,44,550	6,29,912	..	227	28,38,192	11,15,026	..

ANNEXURE 23 (i)—cont.

(i) Review of works costing less than Rs. 1 lakh each in progress during 1960-61—cont.

Serial number and name of circle and division.	Government Works.				District Board Works.			
	Total number of works.	Total cost.	Total expenditure.	Remarks.	Total number of works.	Total cost.	Total expenditure.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
IV. Improvements and Special Repairs.								
I. Madras Circle—								
1 Chingleput	18	2,00,300	80,480	..	16	5,73,400	66,868	..
2 South Arcot	..	..	..	..	..	..	..	..
3 Thanjavur	19	4,17,500	63,842	..	14	98,600	21,886	..
4 Nagapattinam	3	1,88,500	94,040	..	4	2,84,000	1,80,385	..
5 North Arcot	8	1,79,560	1,14,020	..	4	8,20,000	2,80,517	..
6 Tiruvallur Special	..	..	..	..	..	..	..	..
7 Villupuram Special	..	..	..	..	..	..	..	..
Total	62	10,99,750	3,60,102	..	38	12,49,900	4,99,101	..
II. Investigation Circle—								
8 Weak bridges, Madras	..	..	..	..	..	..	..	..
9 Investigation, Madras	..	..	..	..	..	..	..	..
10 Investigation, Tiruchirappalli	..	..	..	..	..	..	..	..
11 Investigation, Coimbatore	..	..	..	..	..	..	..	..
III. Director, Research Station (Highways) Madras—								
12 Design Division	..	..	..	..	..	..	..	..
13 Transport and Machinery Division	..	..	..	..	..	..	..	..
IV. Superintending Engineer, Rural Housing Cell, Madras—								
14 Cauvery Bridge Special	..	..	..	..	..	..	..	..
15 Tenkasi Special	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..
V. Tiruchirappalli Circle—								
16 Tiruchirappalli	4	2,40,800	1,26,597	..	13	1,79,840	80,904	..
17 Pudukkottai	5	2,24,000	1,81,219	..	6	2,99,500	68,782	..
18 Dindigul	3	1,77,000	64,999	..	2	88,000	11,063	..
19 Madurai	3	1,65,000	2,03,618	..	..	..	..	..
20 Ramanayakanur	..	..	..	..	..	..	..	..
21 Ramanathapuram	6	67,100	51,043	..	13	6,45,200	1,24,043	..
22 Ramanathapuram Special	..	..	..	..	..	..	..	..
23 Tirunelveli	5	94,900	22,442	..	4	2,95,900	47,886	..
24 Nagercoil	2	21,200	2,374	..	..	..	..	..
25 Kamuthi Special	..	..	..	..	..	..	..	..
Total	28	9,92,000	7,19,334	..	38	14,04,640	3,51,192	..
VI. Coimbatore Circle—								
26 Krishnagiri	4	2,67,000	96,403	..	1	24,400	12,008	..
27 Salem	3	1,20,900	92,480	..	16	1,81,000	63,594	..
28 Erode	..	..	..	..	1	28,800	6,544	..
29 Erode Special	..	..	..	..	..	..	..	..
30 Coimbatore	..	..	..	..	..	..	..	..
31 The Nilgiris	14	1,74,200	1,00,086	..	12	1,84,000	55,645	..
Total	21	5,75,900	1,99,126	..	36	3,87,900	1,96,790	..
Grand total	91	26,07,750	12,66,884	..	108	26,42,640	9,56,893	..

ANNEXURE 23 (ii).

(ii) Review of works costing less than Rs. 1 lakh each completed during 1960-61.

Serial number, name of circle and division.	Government Works.				District Board Works.				Remarks.
	Total number of works.	Total cost.	Total expenditure.	Remarks.	Total number of works.	Total cost.	Total expenditure.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
I. Bridges, Culverts and causeways.									
I. Madras Circle—									
1 Chingleput	..	..	..	..	..	..	..	..	
2 South Arcot	7	4,35,600	1,51,877	..	4	2,74,100	1,49,635	..	
3 Thanjavur	..	..	..	..	..	..	..	..	
4 Nagapattinam	..	..	..	..	..	..	..	..	
5 North Arcot	..	..	..	..	..	..	..	..	
6 Tiruvettipuram Special ..	..	..	..	..	..	..	..	..	
7 Villupuram Special ..	..	..	..	..	..	..	..	..	
Total	7	4,35,600	1,51,877	..	4	2,74,100	1,49,635	..	
II. Investigation Circle—									
8 Weak Bridges, Madras ..	..	..	..	..	..	..	..	..	
9 Investigation, Madras ..	2	..	..	..	..	..	..	..	
10 Investigation, Tiruchirappalli ..	..	..	..	..	..	..	..	..	
11 Investigation, Coimbatore ..	..	..	..	..	..	..	..	..	
III. Director, Research Station (Highways) Madras—									
12 Designs Division	..	..	..	..	..	..	..	..	
13 Transport and Machinery Division.	..	..	..	..	..	..	..	..	
IV. Superintending Engineer, Rural Housing Cell, Madras—									
14 Cauvery Bridge Special ..	..	..	..	..	..	..	..	..	
15 Tenkasi Special	..	..	..	..	..	..	..	..	
Total	..	..	..	..	..	..	..	..	
V. Tiruchirappalli Circle—									
16 Tiruchirappalli	..	..	..	..	5	1,06,470	95,041	..	
17 Pudukottai	..	..	..	..	1	15,000	6,359	..	
18 Dindigul	3	1,52,500	1,84,889	..	..	..	..	..	
19 Madurai	1	67,000	71,688	..	..	..	..	..	
20 Bodinayakanur	..	..	..	..	..	..	..	..	
21 Ramanathapuram	5	2,11,800	2,17,841	..	2	54,800	56,287	..	
22 Ramanathapuram Special.	2	1,16,000	82,848	..	..	..	..	..	
23 Tirunelveli	1	..	(—) 38	..	..	..	..	..	
24 Nagercoil	1	20,000	16,089	..	..	..	..	..	
25 Kamuthi Special	..	..	..	..	..	..	..	..	
Total	13	5,67,300	5,73,317	..	8	1,76,270	1,57,687	..	
VI. Coimbatore Circle—									
26 Krishnagiri	1	31,800	9,960	..	1	52,500	33,738	..	
27 Salem	4	73,500	58,428	..	17	1,59,000	43,322	..	
28 Erode	7	2,87,300	2,86,856	..	9	1,07,900	1,24,908	..	
29 Erode special	..	..	..	..	..	..	..	..	
30 Coimbatore	1	90,600	1,05,841	..	1	98,000	97,154	..	
31 The Nilgiris	10	79,750	34,494	..	10	80,900	50,823	..	
Total	23	5,62,950	4,95,079	..	38	4,93,300	3,49,950	..	
Grand total	43	15,65,850	12,20,273	..	50	9,48,670	6,57,272	..	

ANNEXURE 23 (ii)—cont.

(ii) Review of works costing less than Rs. 1 lakh each completed during 1960-61—cont.

Serial number, name of circle and division.	Government Works.				District Board Works.				Remarks.
	Total number of works.	Total cost.	Total expenditure.		Total number of works.	Total cost.	Total expenditure.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
II. Cement concreting and black top.									
I. Madras Circle—									
1 Chingleput	..	..	..	..	..	..	..	..	
2 South Arcot	..	..	..	..	..	..	..	..	
3 Thanjavur	..	..	..	..	..	..	..	..	
4 Nagapattinam	..	..	..	..	..	..	..	..	
5 North Arcot	..	..	..	..	..	..	..	..	
6 Tiruvettipuram Special ..	..	..	..	..	..	..	..	..	
7 Villupuram Special ..	..	..	..	..	..	..	..	..	
Total ..	..	..	..	..	..	..	..	..	
II. Investigation Circle—									
8 Weak Bridges, Madras ..	..	..	..	..	..	..	..	..	
9 Investigation, Madras ..	..	..	..	..	..	..	..	..	
10 Investigation, Tiruchirappalli.	..	..	..	..	..	..	..	..	
11 Investigation, Coimbatore.	..	..	..	..	..	..	..	..	
III. Director, Research Station (High ways) Madras—									
12 Designs Division	..	..	..	..	..	..	..	..	
13 Transport and Machinery Division.	..	..	..	..	..	..	..	..	
IV. Superintending Engineer, Rural Housing Cell, Madras—									
14 Cauvery Bridge Special ..	..	..	..	..	..	..	..	..	
15 Tenkasi Special	..	..	..	..	..	..	..	..	
Total ..	..	..	..	..	..	..	..	..	
V. Tiruchirappalli Circle—									
16 Tiruchirappalli	..	..	..	..	..	..	..	..	
17 Pudukottai	1	38,000	36,565	..	..	..	..	..	
18 Dindigul	..	..	..	..	..	..	..	..	
19 Madurai	..	..	..	..	..	..	..	..	
20 Bodinayakanur	..	..	..	..	..	..	..	..	
21 Ramanathapuram	..	..	..	..	..	..	..	..	
22 Ramanathapuram Special.	..	..	..	..	..	..	..	..	
23 Tirunelveli	3	99,600	62,719	..	..	..	..	..	
24 Nagercoil	..	..	..	..	..	..	..	..	
25 Kamuthi Special	..	..	..	..	..	..	..	..	
Total ..	4	1,37,600	99,284	..	..	..	..	..	
VI. Coimbatore Circle—									
26 Krishnagiri	..	..	..	..	..	..	..	..	
27 Salem	..	..	..	..	..	..	..	..	
28 Erode	..	..	..	..	..	..	..	..	
29 Erode Special	..	..	..	..	..	..	..	..	
30 Coimbatore	..	..	..	..	..	..	..	..	
31 The Nilgiris	5	25,500	9,867	..	8	1,27,500	28,889	..	
Total ..	5	25,500	9,867	..	8	1,27,500	28,889	..	
Grand total ..	9	1,63,100	1,09,151	..	8	1,27,500	28,889	..	

ANNEXURE 23 (ii)—cont.

(ii) Review of works costing less than Rs. 1 lakh each completed during 1960-61—cont.

Serial number and name of circle and division.	Government Works.				District Board Works.			
	Total number of works.	Total cost.	Total expenditure.	Remarks.	Total number of works.	Total cost.	Total expenditure.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
III. New formation.								
I. Madras Circle—								
1 Chingleput	..	..	..	..	12	1,81,600	1,68,648	..
2 South Arcot	..	..	..	..	..	..	..	..
3 Thanjavur	..	..	..	..	..	..	..	..
4 Nagapattinam	..	..	..	..	1	6,500	3,653	..
5 North Arcot	..	..	..	..	..	..	..	..
6 Tiruvettipuram Special ..	..	..	..	..	..	..	..	..
7 Villupuram Special ..	..	..	..	..	..	..	..	..
Total	..	..	..	..	18	1,88,100	1,70,301	..
II. Investigation Circle—								
8 Weak Bridges, Madras ..	..	..	..	..	..	..	..	..
9 Investigation, Madras ..	..	..	..	..	..	..	..	..
10 Investigation, Tiruchirappalli.	..	..	..	..	..	..	..	..
11 Investigation, Coimbatore.	..	..	..	..	..	..	..	..
III. Director Research Station (Highways) Madras—								
12 Designs Division	..	..	..	..	..	..	..	..
13 Transport and Machinery Division.	..	..	..	..	..	..	..	..
IV. Superintending Engineer, Rural Housing Cell.								
14 Cauvery Bridge Special ..	..	..	..	..	..	..	..	..
15 Tenkasi Special	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..
V. Tiruchirappalli Circle—								
16 Tiruchirappalli	..	..	..	..	23	99,740	41,630	..
17 Pudukottai	..	..	..	..	14	68,940	81,924	..
18 Dindigul	..	..	..	..	3	56,900	52,218	..
19 Madurai	..	..	..	..	..	..	..	..
20 Bodinayakanur	..	..	..	..	..	..	..	..
21 Ramanathapuram	..	..	..	..	8	1,49,700	1,61,900	..
22 Ramanathapuram Special ..	..	..	..	..	..	..	..	..
23 Tirunelveli	1	21,400	20,922	..	3	67,900	20,449	..
24 Nagercoil	..	..	..	..	..	..	..	..
25 Kamuthi Special	4	2,58,500	2,38,731	..	..	..	..	..
Total	5	2,77,900	2,59,653	..	51	4,43,180	3,58,181	..
VI. Coimbatore Circle—								
26 Krishnagiri	..	..	..	..	1	25,000	5,026	..
27 Salem	..	..	..	..	8	1,05,200	24,100	..
28 Erode	..	..	..	..	1	3,000	1,229	..
29 Erode Special	..	..	..	..	..	..	..	..
30 Coimbatore	..	..	..	..	3	1,20,000	86,589	..
31 The Nilgiris	..	..	..	..	1	25,000	2,888	..
Total	..	..	..	..	14	2,78,200	1,19,832	..
Grand total ..	5	2,77,900	2,59,653	..	78	9,09,480	6,47,754	..

ANNEXURE 23 (ii)—cont.

(ii) Review of works costing less than Rs. 1 lakh each completed during 1960-61—cont.

Serial number and name of circle and division.	Government Works.				District Board Works.			
	Total number of works.	Total cost.	Total expenditure.	Remarks.	Total number of works.	Total cost.	Total expenditure.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		RS.	RS.			RS.	RS.	
IV. Improvements and Special repairs.								
I. Madras Circle—								
1 Chingleput	..	..	..	..	10	2,93,600	1,72,578	..
2 South Arcot	2	1,38,600	27,528	..	2	28,800	8,576	..
3 Thanjavur	..	..	..	..	..	..	..	..
4 Nagapattinam	..	..	..	..	2	1,15,000	1,07,837	..
5 North Arcot	4	12,300	12,554	..	4	2,44,400	2,19,237	..
6 Tiruvettipuram Special ..	..	..	..	..	..	..	..	..
7 Villupuram Special ..	..	..	..	..	..	..	..	..
Total	6	1,50,800	40,080	..	18	6,81,800	5,08,223	..
II. Investigation Circle—								
8 Weak Bridges, Madras ..	..	..	..	..	..	..	..	..
9 Investigation, Madras ..	..	..	..	..	..	..	..	..
10 Investigation, Tiruchirappalli.	..	..	..	..	..	..	..	..
11 Investigation, Coimbatore.	..	..	..	..	..	..	..	..
III. Director, Research Station (Highways) Madras.								
12 Designs Division	..	..	..	..	..	..	..	..
13 Transport and Machinery Division.	..	..	..	..	..	..	..	..
IV. Superintending Engineer, Rural Housing Cell, Madras—								
14 Cauvery Bridge Special ..	..	..	..	..	..	..	..	..
15 Tenkasi Special	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..
V. Tiruchirappalli Circle—								
16 Tiruchirappalli	1	38,500	30,908	..	10	1,26,870	75,345	..
17 Pudukottai	2	1,17,000	1,07,519	..	..	..	..	..
18 Dindigul	1	7,000	4,362	..	1	20,000	14,296	..
19 Madurai	1	71,400	48,972	..	2	1,90,950	1,74,824	..
20 Bodinayakanur	..	..	..	..	..	..	..	..
21 Ramanathapuram	2	34,500	28,512	..	1	24,950	23,882	..
22 Ramanathapuram Special ..	..	..	..	..	..	..	..	..
23 Tirunelveli	1	49,500	(—) 920	..	14	2,26,400	63,470	..
24 Nagercoil	1	15,000	1,747	..	..	..	..	..
25 Kamuthi Special	..	..	..	..	..	..	..	..
Total	9	8,32,900	2,21,100	..	28	5,89,170	3,51,817	..
VI. Coimbatore Circle—								
26 Krishnagiri	1	93,000	18,786	..	3	81,700	26,852	..
27 Salem	1	78,000	82,840	..	7	83,800	44,900	..
28 Erode	6	1,20,000	1,00,750	..	6	1,20,250	1,00,750	..
29 Erode Special	..	..	..	..	..	..	..	..
30 Coimbatore	25	4,25,500	61,526	..	20	3,04,000	73,929	..
31 The Nilgiris	..	..	..	..	..	..	..	..
Total	35	7,16,500	2,63,402	..	36	5,89,750	2,46,481	..
Grand total ..	50	19,00,200	5,24,582	..	82	18,60,720	11,01,471	..

ANNEXURE 24.

Statement showing the quantities of materials used, etc.

Serial number and materials. (1)	Brought forward from the previous year.		Purchased during the year.		Utilised on works during the year.		Balance on hand.	
	Quantity. (2)	Cost. (3) RUPEES IN LAKHS.	Quantity. (4)	Cost. (5) RUPEES IN LAKHS.	Quantity. (6)	Cost. (7) RUPEES IN LAKHS.	Quantity. (8)	Cost. (9) RUPEES IN LAKHS.
(i) GOVERNMENT WORKS.								
1 Steel (in tons) ..	3,088.016	19.735	1,468.594	11.293	1,245.284	9.418	3,311.326	21.610
2 Cement (in tons) ..	9,348.841	20.641	9,578.649	12.411	12,222.680	15.219	6,704.810	17.833
3 Bitumen (in tons) ..	11,870.138	36.598	23,653.210	73.092	24,406.440	73.787	11,116.908	35.903
4 Oil (in Gallons) ..	11,571.000	0.318	56,976.672	2.564	56,997.198	2.667	11,550.474	0.215
5 Fuel oils (in gallons) ..	6,100.620	0.562	83,166.608	2.412	84,995.304	2.559	4,271.924	0.415
6 Coal (in tons) ..	429.680	0.538	709.537	0.599	816.831	0.639	322.386	0.498
7 Timber (in r. ft.) ..	402.960	0.092	25.000	0.015	15.000	0.0079	412.960	0.096
8 Hume Pipes (in r. ft.) ..	74,99.062	2.383	12,731.020	2.220	7,087.110	1.556	13,142.972	3.047
9 Paints (in lb.) ..	141.500	0.028	571.750	0.149	633.000	0.167	80.250	0.010
10 Other materials (in cost) ..	—	8.359	..	2.868	..	3.311	..	7.916
(ii) DISTRICT BOARD WORKS.								
1 Steel (in tons) ..	677.983	5.263	370.640	3.454	503.472	3.629	545.151	5.088
2 Cement (in tons) ..	3,158.347	4.775	4,139.771	5.570	5,251.500	7.429	2,046.618	2.916
3 Bitumen (in tons) ..	310.299	0.109	636.510	1.903	706.140	1.927	240.669	0.085
4 Oil (in gallons) ..	—	..	..	..	..	..	..	..
5 Fuel oils (in gallons) ..	0.001	..	0.016	0.030	0.016	0.030	0.001	..
6 Coal (in tons) ..	—	..	..	..	..	..	..	..
7 Timber (in r. ft.) ..	87.120	0.014	..	..	86.000	0.010	1.120	0.004
8 Hume Pipes (in r. ft.) ..	11,735.420	2.570	21,374.000	2.687	17,278.020	2.616	15,831.600	2.741
9 Paints (in lb.) ..	9	0.004	..	..	..	..	9	0.004
10 Other materials (in cost) ..	—	0.180	..	11.178	..	11.193	..	0.165

ANNEXURE 25.

Inventory of plant and machinery as on 31st March 1961.

Serial number and name of plant and machinery. (1)	Number available. (2)	Serial number and name of plant and machinery. (1)	Number available. (2)
MADRAS CIRCLE.		MADRAS CIRCLE—cont.	
Chingleput Division.		North Arcot Division—cont.	
1 Lorries ..	4	5 Concrete mixer ..	1
2 Tractors ..	5	6 Hot mix plant ..	1
3 Rollers ..	26	7 Cold mix plant ..	1
4 Cold Mixure ..	1	8 Hand boring set ..	1
5 Hot mix plant ..	2	9 Barrow mixer ..	12
6 Air compressor ..	1	10 Heat master ..	38
7 Welding sets ..	1	11 Hand drum mixer ..	136
8 Concrete mixer ..	2	12 Screed vibrator ..	1
9 Vibrators ..	2	Tiruvattipuram Division.	
10 Pump sets ..	2	1 Air compressor ..	4
11 Jeeps ..	2	2 Vibrator ..	3
South Arcot Division.		3 Pump set ..	4
1 Rollers ..	19	4 G.A.P. Pump ..	2
2 Jeeps ..	2	5 Concrete mixer ..	1
3 Stone crusher ..	2	6 Tractors ..	1
4 Lorries ..	1	7 Welding transformers ..	1
5 Vibrator (screed) ..	2	8 Desal Roller ..	1
6 Hand operated drum mixers ..	108	9 Helmets ..	6
7 Tar Boilers ..	39	Villupuram Special Division.	
8 Heat Master ..	1	1 Jeeps ..	2
9 Concrete mixer ..	3	2 Roller ..	1
10 Tractor with trailer ..	4	Rural Housing Cell.	
11 Air compressor ..	1	Cauvery Bridge Division.	
Thanjavur Division.		1 Boat ..	1
1 Rollers ..	21	2 Telephone sets ..	2
2 Lorries ..	3	3 Air compressor ..	3
3 Concrete mixers ..	5	4 Concrete mixer ..	2
4 Tar boilers ..	24	5 Water pump ..	2
5 Heat master and heat sprayer ..	2	6 Vibrator ..	3
6 Stone Crusher ..	1	7 Sump pump ..	1
7 Vibrator ..	1	8 Table vibrator ..	1
8 Air compressor ..	2	9 Clay diggers ..	4
9 Grader ..	1	Tenkasi Special Division.	
10 Cum flow Mixer ..	1	1 Rollers ..	1
11 Vibrating table ..	1	2 Jeep ..	1
12 Trench roller ..	1	3 Pump sets ..	13
13 Soil compactor ..	1	4 Vibrators ..	5
14 Tractor ..	2	5 Concrete mixer ..	1
Nagapattinam Division.		6 Compressors ..	6
1 Jeep ..	1	7 Hot mix plant ..	1
2 Tractors ..	3	8 Welding plant ..	1
3 Concrete mixers ..	3	9 Hand boring set ..	2
4 Tar Boilers ..	23	TIRUCHIRAPPALLI CIRCLE.	
5 Water pump ..	3	Tiruchirappalli Division.	
6 Wheel barrows ..	40	1 Rollers ..	12
7 Trailer carts ..	5	2 Lorries ..	3
8 Rotary drums ..	58	3 Jeep ..	1
9 Rollers ..	14	4 Graders ..	1
10 Welding plant ..	2	5 Heat master ..	12
11 Air compressor ..	1	6 Vibrators ..	2
12 Pin vibrator ..	1	7 Compressors ..	1
13 Helmet ..	2	8 Hot mix plant ..	1
North Arcot Division.		9 Welding Plant ..	1
1 Rollers ..	24		
2 Tractor with trailers ..	3		
3 Jeep ..	1		
4 Air compressor ..	1		

ANNEXURE 25—cont.

Inventory of plant and machinery as on 31st March 1961—cont.

Serial number and name of plant and machinery. (1)	Number available. (2)	Serial number and name of plant and machinery. (1)	Number available. (2)
TIRUCHIRAPPALLI CIRCLE—cont.		TIRUCHIRAPPALLI CIRCLE—cont.	
<i>Pudukkottai Division.</i>		<i>Tirunelveli Division.</i>	
1 Rollers	17	1 Rollers	19
2 Lorries	3	2 Lorries	3
3 Pump sets	15	3 Jeeps	2
4 Tar boilers	13	4 Grader	1
5 Concrete mixers	2	5 Pumpsets	4
6 Asphalt mixers	2	6 Vibrators	1
7 Hot mix plant	2	7 Concrete Mixers	3
8 Calyx core drill	1	8 Compressors	2
9 Break down lorry	1	9 Welding plant	1
10 Tractors	2	10 Drum mixers	103
		11 Hand boring set	1
		12 Bitumen boilers	23
<i>Madurai Division.</i>		<i>Ramanathapuram Special Division.</i>	
1 Rollers	13	1 Jeep	1
2 Lorries	8	2 Vibrator	1
3 Jeeps	1		
4 Graders	1	<i>Kamuthi Division.</i>	
5 Tar boilers	18	1 Rollers	3
6 Concrete mixers	1	2 Lorry	1
7 Compressors	1	3 Jeeps	3
8 Hot mix plant	1	4 Graders	3
9 Drum mixer	1	5 Tractors	8
<i>Dindigul Division.</i>		<i>Bodinayakanur Special Division.</i>	
1 Rollers	14	1 Rollers	3
2 Lorries	3	2 Lorries	4
3 Jeeps	2	3 Pump set	1
4 Graders	1	4 Compressor	1
5 Tar boilers	14	5 Tractors	3
6 Vibrators	1		
7 Concrete mixer	1	COIMBATORE CIRCLE.	
8 Hot mix plant	1	<i>The Nilgiris Division.</i>	
9 Tractor	1	1 Lorries	2
10 Drum mixers	78	2 Rollers	9
<i>Ramanathapuram Division.</i>		3 Jeeps	2
1 Rollers	21	4 Concrete mixer	1
2 Lorries	2	5 Tractor Trailer	1
3 Jeeps	1	6 Miller Hot mix plant	1
4 Pump sets	5	7 Tractor	1
5 Tar boilers	2	8 Pump set	1
6 Vibrators	2	9 Heat Master and Tar boiler	14
7 Concrete mixer	1	10 Drum mixers	50
8 Tractor	1	11 Air compressor	1
9 Battery charge	1	12 Welding set	1
10 L.S. Type pump with motor	1	13 Vibrating table	1
11 Drum mixers	116		
12 Gang water carts	4	<i>Coimbatore Division.</i>	
13 2 men hand pumps	5	1 Lorries	8
14 Hand boring set	1	2 Rollers	22
<i>Nagercoil Division.</i>		3 Jeeps	3
1 Rollers	13	4 Concrete mixers	3
2 Jeep	1	5 Tractor Trailers	3
3 Heat Master	7	6 Miller Hot mix plant	3
4 Tar Boilers	2	7 Tractors	3
5 Concrete mixers	3	8 Pumpsets	3
6 Compressor	1	9 Heat Masters and Tar boilers	13
7 Miller mixer	1	10 Drum mixers	35
8 Drum mixers	41		

ANNEXURE 25—cont.

Inventory of plant and machinery as on 31st March 1961—cont.

Serial number and name of plant and machinery. (1)	Number available. (2)	Serial number and name of plant and machinery. (1)	Number available. (2)
COIMBATORE CIRCLE—cont.		COIMBATORE CIRCLE—cont.	
<i>Coimbatore Division—cont.</i>		<i>Krishnagiri Division—cont.</i>	
11 Water carts	11	4 Jeeps	1
12 Motor Grader	1	5 Concrete mixers	4
13 Liner-cum-flow mixer	1	6 Tractor Trailer	2
14 Vans	2	7 Miltor Hot mix plant	3
15 Sheet foot roller	1	8 Tractor	2
		9 Pumpset	4
<i>Erode Division.</i>		10 Heat Master and tar boiler	22
1 Rollers	21	11 Barrow mixer	6
2 Vibrator Screed Pin Immersion	2	12 Drum mixer	92
3 Jeeps	1	13 Hand boring set	1
4 Concrete mixers	2	14 Air compressor	1
5 Tractor trailer	3	15 Trench Roller	1
6 Miltor Hot mix plant	2	16 Welding set	2
7 Tractors	3		
8 Heat Master and tar boiler	32	INVESTIGATION CIRCLE.	
9 Drum mixers	107	<i>Investigation Division.</i>	
10 Air compressor	1	<i>Tiruchirappalli.</i>	
11 Calyx cone drill	1	1 Hand winches	11
12 Water carts	6	2 Hand boring set	12
13 Liner cum flow mixer	1		
14 Sheep foot roller	1	<i>Investigation Division, Madras.</i>	
15 Welding set	1	1 Hand Winches	2
		2 Hand boring set	12
<i>Erode Special Division.</i>		3 Calyx core drill	1
1 Jeep	1	4 Hydraulic Jacks	2
2 Concrete mixer	1		
3 Pump sets	2	<i>Investigation Division, Coimbatore.</i>	
		1 Hand boring set	8
<i>Salem Division.</i>			
1 Lorries	5	<i>Highways Research Station</i>	
2 Rollers	17	<i>T & M Division.</i>	
3 Vibrators Screed Pin Immersion	2	1 M.M. Roiler	1
4 Jeeps	1	2 A.B.D. Roller	1
5 Concrete mixer	3	3 E.M.A. Roller Crane	1
6 Tractor trailer	5	4 Roller crane	1
7 Drum mixer	62	5 G.M. Tractor	2
8 Miltor Hot mix plant	2	6 C.P. Bull Dozer	2
9 Heat master and tar boiler	15	7 Ford Lorry	1
10 Tractor	5	8 Ford Tractor	1
11 Water Carts	22	9 Bed Ford van	1
12 Pump sets	2	10 Ford workshop van	1
13 Air Compressor	1	11 A.C. Bull Dozer	2
		12 Mack lorry	1
<i>Krishnagiri Division.</i>		13 Towing tractor	1
1 Lorries	2	14 Seaman Pulvi mixer	1
2 Roller	17	15 Field Marshall tractor	1
3 Vibration Screed Pin Immersion	2		

ANNEXURE 26.

Statement of avenues.

Serial number and name of circle and division.	Government Roads.					District Board Roads.							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		Total mileage.	Number of avenues.	Number planted during the year.	Number of new plants survived.	Expenditure.	Income.	Total mileage.	Number of avenues.	Number planted during the year.	Number of new plants survived.	Expenditure.	Income.
						RS.	RS.					RS.	RS.
I. Madras Circle.													
1 Chingleput	..	778	80,670	12,239	10,620	1,28,601	16,232	957	19,138	1,289	1,004	7,622	3,006
2 South Arcot	..	869	1,07,281	5,839	4,104	85,529	80,970	1,213	54,070	1,979	1,480	24,688	16,035
3 Thanjavur	..	670	49,462	3,438	1,622	27,634	28,787	584	33,857	859	515	1,573	2,067
4 Nagapattinam	..	411	29,457	1,764	813	35,810	25,386	667	15,418	506	248	3,508	9,631
5 North Arcot	..	815	1,20,788	7,601	4,501	86,208	1,42,527	906	70,493	3,669	2,011	17,121	70,117
6 Tiruvettipuram Special	..	..	..	..	..	..	..	..	..	..	..	..	..
7 Villupuram Special	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	3,543	3,87,659	30,881	21,660	3,63,782	2,93,902	4,327	1,92,976	8,302	5,258	54,512	1,00,866

II. Investigation Circle.

8 Weak Bridge, Madras	..	..	..	..	..	..	..	..	..	..	..	..
9 Investigation, Madras	..	..	..	..	..	..	..	..	..	..	..	..
10 Investigation, Tiruchirappalli	..	..	..	..	..	..	..	..	..	..	..	..
11 Investigation, Coimbatore	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..	..	..	..	..

III. Superintending Engineer (Rural Housing Cell), Madras.

12 Cauvery Bridge Special	..	..	200	..	..	800	..	..	..	..	..	..
13 Tenkasi Special	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	200	..	..	800	..	..	..	..	..	..

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IV. Director, Research Station (Highways and Rural Works), Madras.

14 Design Division	..	..	..	..	..	..	..	..	..	..	..	..
15 Transport and Machinery Division	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..	..	..	..	..

V. Tiruchirappalli Circle.

16 Tiruchirappalli	622	62,018	3,592	3,592	28,075	..	767	18,410	787	787	5,854	..
17 Pudukottai	537	7,816	21,721	21,431	76,687	49,785	841	8,611	5,149	5,149	16,280	8,755
18 Dindigul	499	2,667	735	445	1,929	24,831	632	50	..	..	..	..
19 B. dinayakanur	13	..	..	..	2,500	..	..	..	..	..	..	..
20 Madurai	546	21,673	3,420	2,670	27,492	10,185	333	7,691	120	97	300	3,103
21 Ramanathapuram	871	1,00,441	3,299	3,299	31,357	27,833	550	44,744	774	774	5,825	1,340
22 Ramanathapuram Special	17	..	6,000	5,000	30	..	58	..	4,040	2,500	3	..
23 Tirunelveli	1,042	40,032	9,583	5,389	37,660	24,775	1,006	21,245	42	23	261	2,805
24 Nagercoil	840	..	1,319	1,169	6,037	..	..	..	..	..	..	..
25 Kamuthy Special	..	..	..	..	..	..	267	..	..	..	..	..
Total	4,987	2,27,670	49,669	43,015	2,11,817	1,37,409	4,151	1,00,751	10,912	9,330	28,523	16,003

Statement of avenues—cont.

(6)—Statement showing the particulars of encroachment detected and disposed off during 1980-81— (Government Roads).

Serial number and name of division.	Number of encroachments pending disposal at the commencement of the year.		Number of encroachments disposed during the year.		Number of encroachments pending disposal at the end of the year.	
	Municipal area.	Non-municipal area.	Municipal area.	Non-municipal area.	Municipal area.	Non-municipal area.
1 Chingleput	6,119	424	1,889	1,450	941	4
2 South Arcot	267	342	104	..	73	..
3 Thenjavur	141	242	619	862	78	673
4 Tiruchirappalli	483	2,460	1,774	12,809	..	355
5 Madurai	7,370	2,805	380	1,150	95	318
6 Ramanathapuram	657	605	86	1	..	..
7 Tirunelveli	32	1,126	19	686	13	185
8 Kanyakumari	31	164	..	59	..	24
9 North Arcot	3,577	1,188	756	6	1,289	..
10 Salem	2,046	3,547	88	827	..	..
11 Coimbatore	462	1,322	701	405	84	49
12 The Nilgiris	65	53	19	117	26	23
Total	21,250	13,668	6,456	18,402	2,119	1,621

ANNEXURE 27.

i) Statement showing the particulars of encroachments detected and disposed off during 1960-61—(District Board Roads.)

Serial number and name of district.	Number of encroachments detected during the year.		Number of encroachments disposed off during the year.		Number of encroachments pending disposal at the end of the year.		Number of objectionable encroachments evicted during the year.		Number of encroachments pending disposal at the end of the year.	
	Municipal area.		Municipal area.		Non-municipal area.		Municipal area.		Non-municipal area.	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1 Chingleput ..	..	21	28	..	..	..	..	..	..	21
2 South Arcot ..	..	4	61	..	93	..	..	4	99	..
3 Thanjavur ..	..	..	202	..	124	..	..	..	104	..
4 North Arcot ..	..	..	55	..	35	..	..	..	59	..
5 Tiruchirappalli ..	..	9	151	..	137	..	..	..	88	..
6 Madurai ..	..	..	173	..	27	..	14	..	7	..
7 Ramanathapuram ..	..	12	128	..	678	..	..	..	11	..
8 Tirunelveli ..	..	12	161	..	23	..	..	12	..	..
9 Kanyakumari ..	..	..	..	..	..	..	..	..	..	..
10 Coimbatore ..	..	..	316	..	30	..	11	..	35	166
11 Salem ..	..	..	144	..	73	..	8	..	74	98
12 The Nilgiris ..	..	..	45	..	6	..	..	..	4	..
Total ..	..	53	1,464	..	1,226	..	33	16	481	30
										425
										12
										1,751

ANNEXURE 28.

Statement of ferries maintained by this Department during the year 1960-61.

Name of the division.	Serial number and name of the ferry.	Number and size of boats available.	Revenue.
(1)	(2)	(3)	(4)
South Arcot ..	1 Eyyalur ferry ..	1 boat 30' x 6' x 3'	130-00
	2 Natarajapuram Upper ferry.	1 " 30' x 6' x 3'	300-00
	3 Kilmoongiladvellar ferry.	1 " 30' x 6' x 3'	102-00
	4 C. Muthur ferry ..	1 " 30' x 6' x 3'	1,725-00
	5 Oampuliyur Coleroon ferry.	1 " 30' x 6' x 3'	201 00
	6 Vellore ferry ..	1 " 30' x 6' x 3'	20-00
	7 C. Arasanur Coleroon ferry.	1 " 30' x 6' x 3'	80 00
	8 Kunjamadu Papangudi ..	1 " 30' x 6' x 3'	1,050-00
	9 Odaiyur Seetherimathi ..	1 " 30' x 6' x 3'	290-00
	10 Porto Novo-vellar ferry ..	1 " 30' x 6' x 3'	8,205-00
	11 Nochikkadu ferry ..	1 " 30' x 6' x 3'	18-00
	12 Poondiyankuppam ..	1 " 30' x 6' x 3'	15-00
	13 Thiruchopuram Thyagavilli ferry.	1 " 30' x 6' x 3'	67-00
Thanjavur ..	14 Thenpakkam ..	1 " 30' x 6' x 3'	67-00
	15 Sundaraperumal koil ..	1 " 10' x 3'	108-00
	16 Parithikudi ..	1 " 12' x 4' x 3'	120-00
Nagapattinam ..	17 Engan ferry across Vettar.	1 " 20' x 8'	175-00
	18 Thirukarugavoor ferry ..	1 " 25' x 8'	23-00
	19 Radanallur ferry ..	1 " 25' x 8'	21-00
	20 Thirumalaivasal ferry ..	1 " 25' x 8'	2,200-00
	21 Alakudy Kothivaikal ..	1 " 25' x 8'	235-00
	22 Sembodai ferry ..	1 " 20' x 5'	570-00
	23 Elandaiyady ferry ..	1 " 20' x 5'	270-00
	24 Kallimody ferry ..	1 " 20' x 5'	905-00
	25 Vandancheri ferry ..	1 " 20' x 5'	280 00
	26 Vellayar ferry ..	1 " 20' x 5'	1,000-00
	27 Thulasisingapattinam ferry.	1 " 20' x 5'	10-00
Krishnagiri Division.	28 Irunathur ferry ..	1 " 10' x 8'	1-00
Pudukkottai ..	29 Ferry across Cauvery near Kattalai.	16 " 10' x 3'	26,000-00
Tiruchirappalli ..	30 Kanna Naickampalayam ferry.	4 " 12' x 2 1/2'	7 010-00
	31 Thirumalavadi ferry ..	2 " 12' x 12 1/2'	2,010-00
	32 Thirumanur ferry ..	4 " 11' x 3'	13,000 00
Sivaganga Division	33 Kottagudy ferry ..	1 " 16' x 2' x 2'-3"	366-00
Nagercoil ..	34 Themanoor crossing ..	1 " 33'-5" x 3'-8"-2"	* †
	35 Thickerichi crossing ..	1 " 33' x 3" x 4" x 1'-9"	
	36 Marthandam crossing ..	1 " 29'-9" x 3'-3" x 1'-8"	
	37 Paruthikadavu crossing ..	1 " 37'-6" x 4'-5" x 2'	
	38 Ganapathiamkadavu crossing.	1 " 33'-9" x 4' x 1'-10"	
	39 Moovathumugam crossing.	1 " 30'-0" x 2'-6" x 1'-6"	
	40 Manur ferry ..	1 " 7' x 5' x 6'	
Dindigul Division	41 Narikkalpatty ferry ..	Do.	
	42 Perichpalayam ferry ..	Do.	
Total ..			66,593-00

* Ferries are run free of charge and hence no amount realised.

† Managed by District Board direct and hence no particulars of revenue is furnished.

ANNEXURE 29.

(i) Statement showing the names of inspection bungalows taken over during the year 1960-61.

Nil.

(ii) Statement showing the number of inspection bungalows maintained during the year 1960-61.

Serial number and name of division. (1)	Class I. (2)	Class II. (3)	Class III. (4)	Rest House. (5)	Revenue realised. (6)	Cost of maintenance. (7)
1 Chingleput	..	..	..	..	RS.	RS.
2 Tiruvettipuram ..	..	..	..	..	..	..
3 North Arcot	..	..	..	..	..	..
4 Villupuram Special ..	..	..	..	..	..	..
5 South Arcot	..	..	..	..	..	..
6 Nagapattinam	..	..	..	..	..	..
7 Thanjavur	..	..	..	..	..	..
8 Tiruchirappalli ..	1	..	..	..	137	619
9 Pudukkottai	2	2	..	..	995	3,850
10 Dindigul	1	3	..	..	35	1,614
11 Madurai	..	3	..	..	1,479	2,231
12 Bodinayakanur Special.	..	..	..	..	..	..
13 Ramanathapuram ..	3	..	..	..	..	783
14 Ramanathapuram Special.	..	..	..	..	..	..
15 Tirunelveli	..	2	..	1	..	..
16 Nagercoil	..	..	..	..	..	..
17 Kamuthy	..	..	..	..	..	..
18 Krishnagiri	..	..	..	..	..	..
19 Salem	..	2	..	..	434	3,685
20 Erode	..	..	..	..	2..	..
21 Erode Special. ..	..	..	..	..	..	..
22 Coimbatore	..	3	..	..	597	2,227
23 The Nilgiris	..	3	..	..	370	2,036
24 Tenkasi	..	..	..	..	..	..
Total ..	6	17	..	1	4,047	17,265

(iii) Statement showing the names of travellers bungalows taken over during the year 1960-61.

Serial number, name of circle and division. (1)	Name of travellers bungalow. (2)	Remarks. (3)
1 Chingleput	One.	Taken over from Andhra and maintained by District Board.

ANNEXURE 29—cont.

(iii) Statement showing the names of travellers bungalows taken over during the year 1960-61—cont.

Serial number, name of circle division. (1)	Name of travellers bungalow. (2)	Remarks. (3)
2 Tiruvettipuram Special.	....	....
3 North Arcot .. ..	....	....
4 Villupuram .. ..	....	....
5 South Arcot	3 at (Kallakurichi, Gingee and Panruti).	Transferred from South Arcot District Board to Highways with effect from 2nd October 1960 vide. G.O. No. 4781, R.D.L.A. dated 14th March 1960.
6 Nagapattinam	Two	Do.
7 Thanjavur	4 at (Pattukottai, Kumbakonam, Tiruvidamarudur and Valangiman).	Do.
8 Tiruchirappalli ..	....	....
9 Pudukkottai .. ..	....	....
10 Dindigul	4 at Kodaikanal, Kodai Road 2 Nos and Palani.	G.O. No. 478, R.D.L.A., dated, 14th March 1960.
11 Madurai	3 at Tirumanagalam, Kallupatti and Usilampatti.	Do.
12 Bodinayakanur ..	....	....
13 Ramanathapuram ..	3 at Kariapatti, Paramakudi and Ramnad.	G.O. No. 478, R.D.L.A., dated, 14th March 1960.
14 Ramanathapuram (special).	....	....
15 Tirunelveli	2 at Sankarankoil, Koilpatti, and 1 Rest House at Vagailkulam.	G.O. No. 478, R.D.L.A., dated, 14th March 1960.
16 Nagercoil .. ..	....	....
17 Kamuthy .. ..	....	....
18 Krishnagiri	4 (Class II) Krishnagiri, Kaveripattinam, Dharma-puram and Hosur.	Taken over from District Board on the formation of Panchayat Union.
19 Salem .. ..	....	....
20 Erode	2 (Class II) Perundurai and Sathyamanagalam.	Taken over from District Board on the formation of Panchayat Union.
21 Erode Special .. ..	....	....
22 Coimbatore .. ..	....	....
23 The Nilgiris .. ..	....	....
24 Tenkasi .. ..	....	....

(iv) Statement showing the number of Travelling bungalows maintained during the year 1960-61.

Serial number and name of division. (1)	Class I. (2)	Class II. (3)	Class III. (4)	Rest house. (5)	Revenue realised. (6)	Cost of maintenance. (7)
1 Chingleput	..	5	..	2	RS. 895	RS. 5,230
2 North Arcot	..	3	..	..	RS. 537	RS. 2,778

ANNEXURE 29—cont.

(iv) Statement showing the number of travelling bungalows maintained during the year 19.0-61—cont.

Serial number name of division.	Class I.	Class II.	Class III.	Rest house.	Revenue realised.	Cost of maintenance.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
					Rs.	Rs.
3 South Arcot ..	3	5	..	7	2,424	3,459
4 N. gapattinam ..	..	3	2	..	2,254	2,775
5 Thanjavur ..	..	2	..	10	1,465	12,917
6 Tiruchirappalli ..	..	2	..	6	1,701	21,335
7 Pudukkottai ..	2	4	..	..	431	7,709
8 Dindigul ..	2	6	..	..	3,122	15,341
9 Madurai ..	..	5	..	..	1,479	2,231
10 Ramanathapuram ..	7	7	..	2	637	13,492
11 Tirunelveli ..	..	9	..	6	4,998	17,447
12 Krishnagiri ..	..	12	5	1	1,005	21,181
13 Salem ..	..	10	..	3	6,312	9,867
14 Erode ..	..	5	3	3	5,621	10,214
15 Coimbatore ..	4	..	1	5	968	8,607
16 The Nilgiris ..	..	4	..	..	790	8,778
Total ..	18	82	11	45	34,697	1,63,858

ANNEXURE 30.

Intensity Statistics.

Serial number and name of district.	Area (square miles).	Miles of roads.	Area per mile of road.	Population as per 1961 Census.	Population per mile of road.	Number of vehicles.	Number of vehicles per mile of road.	Expenditure on roads.	Expenditure per mile of road.	Land revenue and cesses.	Revenue per mile of road.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1 Chingleput ..	3,061	1,818 + 614	1.3	32,69,675	1,344	1,861	..	83,84,955	3,447	65,80,338	2,705
2 South Arcot ..	4,204	2,989	1.8	27,76,767	1,213	2,053	..	47,03,396	1,880	77,49,937	3,385
3 Thanjavur ..	5,220	3,009	1.7	29,82,670	991	1,17,600	39	80,52,617	2,676	1,58,89,835	5,280
4 North Arcot ..	4,674	1,928	2.4	28,59,165	1,493	48,532	25	44,38,957	2,302	60,29,976	3,127
5 Madurai ..	4,910	2,332 + 13	2.1	28,91,817	1,234	57,757	24	78,81,693	3,363	64,93,400	2,770
6 Tiruchirappalli ..	5,514	3,060	1.8	29,43,882	962	1,88,667	61	82,95,528	2,710	72,20,007	2,369
7 Ramanathapuram ..	4,849	1,664 + 75 + 257	2.4	20,80,519	1,036	42,000	20	1,08,89,986	5,429	65,38,144	3,259
8 Tirunelveli ..	4,343	2,239	1.9	24,45,967	1,092	2,590	1	64,81,201	2,896	59,39,425	2,653
9 Salem ..	7,051	2,797	2.5	33,71,769	1,205	1,24,372	44	62,87,211	2,244	68,14,619	2,436
10 Coimbatore ..	7,090	3,682	1.9	32,93,204	894	88,251	23	97,22,568	2,640	1,11,41,672	3,025
11 Kanakumari ..	646	1,056	1.6	8,29,930	786	735	..	37,07,862	3,711	8,96,685	849
12 The Nilgiris ..	284	509	1.9	3,11,729	612	4,289	8	12,03,446	2,368	3,01,130	591
Total ..	52,546	27,352	1.9	3,00,57,094	1,099	6,78,637	24	7,96,56,470	2,912	8,15,95,028	2,883

ANNEXURE 32. Districtwise Cost Index.

Serial number and name of division.	Government					District Board.			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Number of works let on contract.	Total estimate cost.	Total contract value.	Percentage or (-).	Number of works let on contract.	Total estimate cost.	Total contract value.	Percentage or (-).
			Rs.	Rs.			Rs.	Rs.	
<i>Madras Circle.</i>									
1 Chingleput ..	..	403	62,50,895	40,01,815	+ 35.8	363	18,88,573	13,03,338	+ 30.9
2 South Arcot ..	..	552	54,00,390	23,27,169	+ 56.9	522	22,18,700	16,24,753	+ 26.8
3 Thanjavur ..	..	644	23,82,407	18,37,171	+ 22.9	178	17,20,382	8,05,700	+ 53.2
4 Naga at i am ..	..	385	20,62,190	15,23,832	+ 26.1	298	14,34,593	13,48,969	+ 5.9
5 North Arcot ..	..	350	10,90,700	10,62,635	+ 3.5	170	3,83,600	3,70,800	+ 3.3
6 Villupuram Special ..	..	..	..	..	..	..	..	..	..
7 Tiruvettipuram Special ..	..	..	..	..	..	..	..	..	..
Total ..	..	2,334	1,71,95,582	1,07,52,922	+ 37.5	1,513	76,45,848	54,53,960	+ 28.7
<i>Superintending Engineer Investigation Circle.</i>									
8 Weak Bridges, Madras ..	..	..	..	..	..	..	..	..	..
9 Investigation, Madras ..	..	..	..	..	..	..	..	..	..
10 Do. Tiruchirappalli ..	..	..	..	..	..	..	..	..	..
11 Do. Coimbatore ..	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..	..
<i>Superintending Engineer, Rural Housing Cell, Madras.</i>									
12 Cauvery Bridge Special ..	..	..	..	..	..	..	..	..	..
13 Tenkasi Special ..	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..	..

Director, Research Station (Highways), Madras.

14 Design Division ..	..	..	..	..	..	..	..	..	..
15 Transport and Machinery Division.	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..	..
<i>Tiruchirappalli Circle.</i>									
16 Tiruchirappalli ..	..	309	18,17,492	16,82,516	+ 7.43	218	5,85,012	5,36,680	+ 8.23
17 Pudukkottai ..	..	80	9,34,706	8,81,697	+ 5.6	153	34,817	35,241	- 1.2
18 Dindigul ..	..	87	7,93,780	7,45,799	+ 6.04	71	3,78,953	3,69,190	+ 2.57
19 Madurai ..	..	68	6,84,250	6,02,210	+ 12.00	69	2,39,000	2,22,470	+ 6.92
20 Bodinayakanur ..	..	26	23,700	25,988	+ 12.5	..	..	..	..
21 Ramanathapuram ..	..	128	28,58,125	15,82,679	+ 44.6	248	4,69,732	4,32,762	+ 7.87
22 Ramnathapuram special	..	3	27,116	27,092	+ 0.09	9	13,732	13,937	- 1.49
23 Tirunelveli ..	..	396	36,57,900	30,91,550	+ 15.48	560	8,42,200	7,57,960	+ 10.00
24 Nagercoil ..	..	208	14,30,179	10,05,088	+ 29.72	..	..	..	..
25 Kamahy ..	..	..	..	..	..	..	..	..	..
Total ..	..	1,305	1,22,33,248	96,44,619	+ 21.10	1,328	25,63,446	23,68,240	+ 7.6
<i>Coimbatore Circle.</i>									
26 Krishnagiri ..	..	132	15,71,615	14,91,096	+ 5.1	52	1,86,970	1,73,764	+ 7.06
27 Salem ..	..	208	16,02,170	14,94,510	+ 6.7	156	5,25,152	4,98,650	+ 5.00
28 Erode ..	..	112	17,19,220	13,69,466	+ 20.3	43	2,07,800	1,73,500	+ 16.50
29 Erode Special ..	..	..	..	..	..	..	..	..	..
30 Coimbatore ..	..	227	31,39,400	16,20,000	+ 48.3	89	10,67,898	8,24,050	+ 22.8
31 The Nilgiris ..	..	131	13,54,670	7,72,152	+ 43.00	102	1,37,752	86,934	+ 36.8
Total ..	..	810	93,87,075	67,47,224	+ 28.12	442	21,25,578	17,56,898	+ 17.34
Grand total ..	..	4,449	3,88,15,905	2,71,44,765	+ 30.07	3,303	1,23,34,866	95,79,098	+ 22.34

ANNEXURE 32—cont.

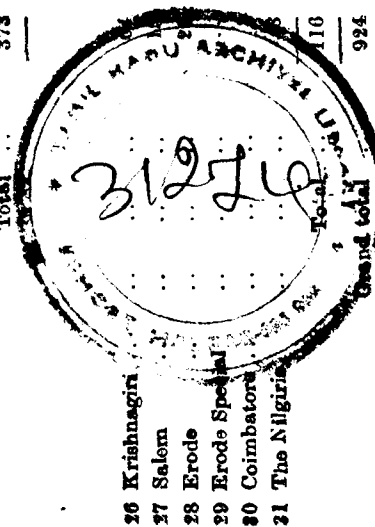
Districtwise Cost Index—cont.

Original Works

Serial number and name of divn. or.	Government.				District Board.			
	Number works let on contract. (10)	Total estimate cost. (11)	Total contract value. (12)	Percentage or (-). (13)	Number works let on contract. (14)	Total estimate cost. (15)	Total contract value. (16)	Percentage or (-). (17)
Madras Circle—cont.								
	RS.	RS.				RS.	RS.	
1 Chingleput ..	45	32,00,150	10,08,588	+69.2	59	8,41,400	4,59,398	+45.4
2 South Arcot ..	16	5,90,118	4,85,436	+17.7	33	2,65,200	1,86,509	+29.7
3 Thanjavur ..	64	21,34,403	16,09,341	+24.6	25	12,63,850	11,50,463	+8.9
4 Nagapattinam ..	1	7,25,000	5,99,300	+17.3	..	..	..	..
5 North Arcot ..	242	24,79,800	24,42,600	+1.5	78	5,71,400	5,68,500	+0.5
6 Villupuram Special ..	67	1,39,350	1,18,764	+14.8	70	4,93,079	3,07,708	+37.5
7 Tiruvattipuram Special ..	..	..	..	..	..	..	..	..
Total ..	435	93,38,826	62,64,032	+32.9	265	34,34,929	26,72,378	+22.2
Superintending Engineer, Investigation Circle—cont.								
8 Weak Bridges, Madras ..	..	..	..	..	..	..	..	..
9 Investment, Madras ..	..	..	..	..	..	..	..	..
10 Do. Tiruchirappalli ..	..	..	..	..	..	..	..	..
11 Do. Coimbatore ..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..
Superintending Engineer, Rural Housing Cell, Madras—cont.								
12 Cauvery Bridge Special ..	..	..	..	..	..	..	..	..
13 Tenkasi Special ..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..

Director, Research Station (Highways), Madras—cont.

14 Designs Division ..	..	..	..	..	..	..	..	..
15 Transport and Machinery Division.	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	..
<i>Tiruchirappalli Circle—cont.</i>								
16 Tiruchirappalli ..	10	3,97,276	3,67,860	+7.4	22	1,03,712	1,08,330	-0.58
17 Pudukkottai ..	32	7,27,637	6,63,034	+8.87	68	5,13,000	5,19,629	-1.2
18 Dindigul ..	12	4,52,550	3,41,712	+2.39	6	70,900	56,670	+20.00
19 Madurai ..	12	2,36,440	2,10,070	+11.00	15	2,64,700	2,45,545	+7.6
20 Bodinayakanur ..	3	1,44,600	1,26,525	+12.5	..	..	..	..
21 Ramanathapuram ..	72	33,84,189	29,89,643	+11.36	44	1,87,490	1,72,812	+7.82
22 Ramanathapuram Special ..	39	13,59,961	11,84,578	+12.8	5	2,40,831	2,55,989	-6.29
23 Tirunelveli ..	17	6,52,000	4,04,600	+37.09	30	10,39,500	7,87,690	+24.22
24 Nagercoil ..	32	14,25,400	10,44,107	+28.75	..	..	..	..
25 Kamuthy ..	94	20,75,900	15,82,619	+23.71	..	..	..	..
Total ..	373	1,08,55,953	89,14,748	+17.88	190	24,23,183	21,44,666	+11.53
<i>Coimbatore Circle—cont.</i>								
26 Krishnagiri ..	15	2,90,888	2,81,626	+2.2	15	2,28,612	2,21,035	+3.3
27 Salem ..	17	2,03,080	2,05,118	+1.00	17	1,53,720	1,46,142	+4.9
28 Erode ..	9	5,67,560	4,92,100	+15.00	9	4,18,200	4,07,442	+2.57
29 Erode Special ..	..	..	..	..	..	..	..	..
30 Coimbatore ..	20	4,55,000	3,36,220	+26.00	20	3,60,600	3,26,937	+6.6
31 The Nilgiris ..	13	4,37,850	3,86,463	+11.07	13	6,58,900	2,30,243	+65.06
Total ..	74	19,51,378	17,04,527	+12.27	74	18,20,032	13,41,869	+26.27
Grand total ..	924	2,21,49,157	1,68,83,307	+23.77	629	76,78,144	61,8,902	+19.78





PUBLIC WORKS DEPARTMENT
(Highways)

G.O. No. 1806, 10th July 1962

Administration Report—Highways Department—1960-61—Recorded
with remarks.

READ—the following papers:—

- Letter from the Chief Engineer (Highways and Rural Works),
dated 5th January 1962, No. 33913/H4/61-83.
- Letter from the Chief Engineer (Highways and Rural Works),
dated 19th January 1962, No. 33913/H3/61-84.
- Letter from the Chief Engineer (Highways and Rural Works),
dated 17th February 1962, No. 33913/H3/61-85.
- Letter from the Chief Engineer (Highways and Rural Works),
dated 22nd March 1962, No. 33913/H3/61-86.
- Letter from the Chief Engineer (Highways and Rural Works),
dated 6th April 1962, No. 33913/H3/61-87.
- Letter from the Chief Engineer (Highways and Rural Works),
dated 26th April 1962, No. 33913/H3/61-89.

Order—No. 1806, P.W. (Highways), dated 10th July 1962.

Recorded.

2. During the year under report 11,150 miles of Government roads were maintained by the Highways Department at the beginning of the year, but this has been increased to 11,439 miles at the end of the year, which includes 289 miles of roads taken over from the District Boards. The Highways Department has been reorganized and designated as Highways and Rural Works Department to suit the new pattern of Panchayat administration. The department continued to attend to roads of local importance which were under the administrative control of the local bodies. In accordance with the accepted policy that the District Boards should be relieved of their responsibility for the maintenance of Major District roads in order to enable them to allot more funds for the maintenance of roads of local importance and also roads newly formed

under the various development schemes, the department took over 289 miles of Major District roads during the year under report from the control of the District Boards.

3. During the year under review, five miles of Government roads and eight miles of District Board roads were cement concreted; 368 miles of Government roads and 30 miles of District Board roads were blacktopped; 119 miles of Government roads and 172 miles of District Board roads were metalled and 25 miles of new Government roads and 250 miles of new District Board roads were formed. Besides 60 bridges, culverts and causeways on Government roads and 54 bridges, culverts and causeways on District Board roads were constructed.

4. The year under review was the fifth year of the Second Five-Year Plan period. The Highways and Rural Works Department played an important role in respect of the activities of the Community Development and National Extension Schemes. All Engineering personnel required under the scheme were lent from the Department and all steps were lent from the department and all steps were taken to ensure the fullest co-operation and participation with the Block staff for the successful implementation of the programme.

5. Against the budget allotment of Rs. 41.63 lakhs inclusive of agency charges for the maintenance and repairs including special repairs on National Highways in the State made by the Government of India during 1960-61, a sum of Rs. 42.43 lakhs was actually spent on this account.

6. An expenditure of Rs. 343.00 lakhs was incurred on the maintenance of Government roads as against a sum of Rs. 80.50 lakhs spent on District Board roads during the year under report. The standard of maintenance of various categories of District Board roads continued to be generally satisfactory. But the Chief Engineer (Highways and Rural Works) has pointed out that paucity of funds and the inability to place in time, even the available funds, at the credit of officers of the Department were telling upon the maintenance of these roads. As the State is now covered by the Panchayat Union, there will be no room for the recurrence of the difficulty pointed out by the Chief Engineer. Under section 131 of the Madras Panchayat Act, 1958, each Panchayat Union is given every year 'Local Roads Grants' calculated at the rate of 40 paise per head of the population for maintenance of its roads. This grant is earmarked for maintenance of roads. If any Panchayat Union does not place sufficient funds at the disposal of the Union Engineer, the Chief Engineer (Highways and Rural Works) should bring it to the notice of the Government in the Rural Development and Local Administration Department for necessary action.

7. The trees newly planted on Government roads and District Board roads numbered 93,937 and 24,750 out of which 73,180 and 17,418 respectively survived. The total expenditure incurred on the maintenance of avenues on Government roads was Rs. 7,77,000 and that on District Boards was Rs. 97,358. The income derived from the avenues amounted to Rs. 8,12,232 and Rs. 1,63,717 respectively.

8. As many as 1,940 audit objections to the value of Rs. 95,78,122 were pending settlement at the end of the year 1960-61 as against 2,073 items for Rs. 1,09,58,466 at the beginning of the year. The instructions issued last year to settle the objections do not seem to have had appreciable effect. The necessity for speedy clearance of Audit objections has already been impressed on the Chief Engineer (Highways and Rural Works) and he has been instructed to submit to Government a fortnightly progress report. He is directed to look personally into the fortnightly progress reports and take speedy and effective action then and there.

9. *Encroachments*.—On Government roads 19,542 objectionable and 20,497 unobjectionable encroachments were pending disposal at the end of the year. In the case of District Board roads 455 objectionable and 1,763 unobjectionable encroachments were pending disposal at the end of the year. The Chief Engineer (Highways and Rural Works) is requested to take up the matter with the concerned Collectors for speedy disposal of the pending cases.

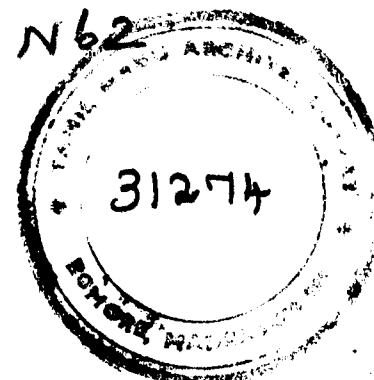
10. The administration of the Highways and Rural Works Department during 1960-61 was satisfactory.

(By order of the Governor)

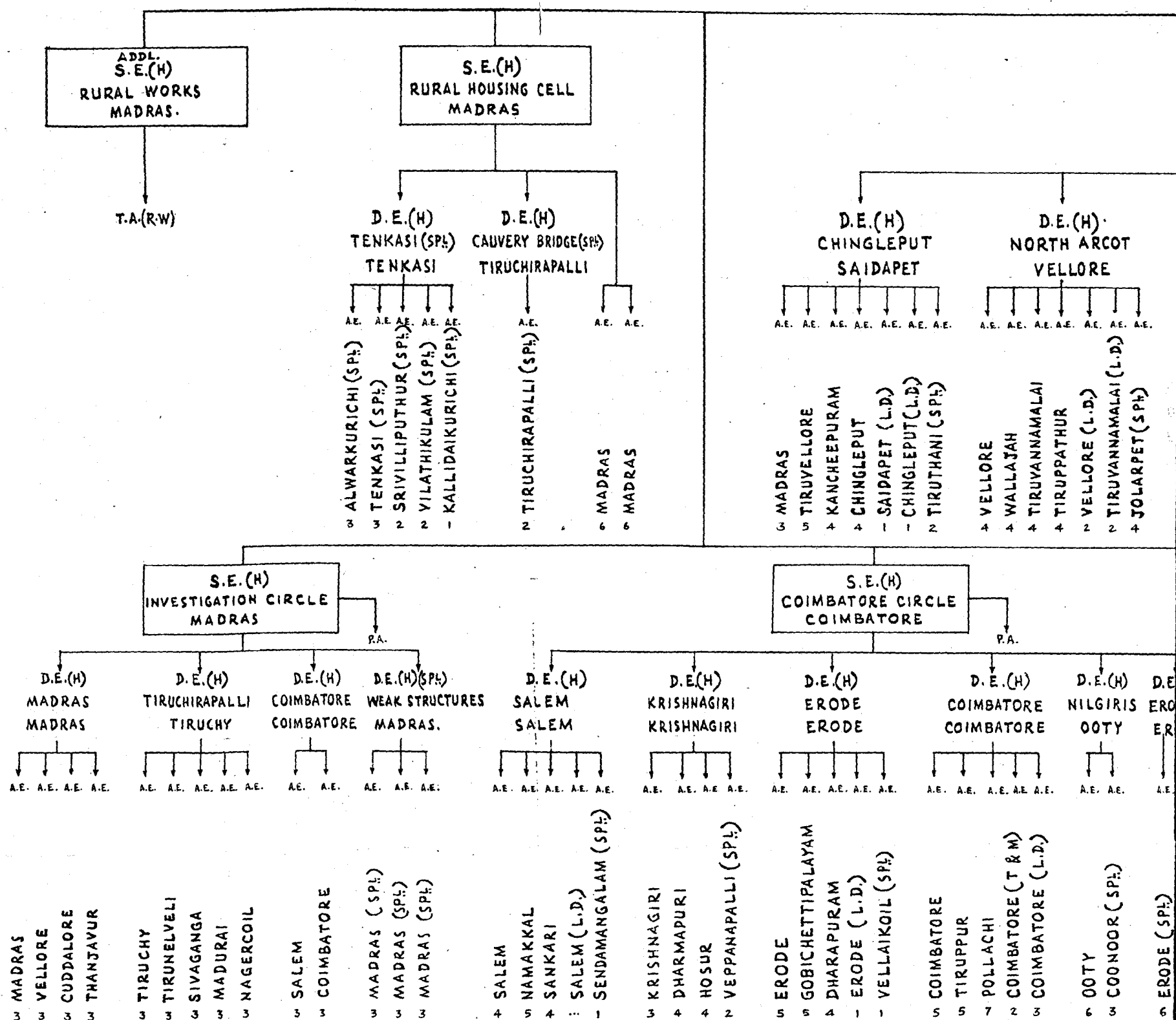
E. P. ROYAPPA,
Secretary to Government.

To the Chief Engineer (Highways and Rural Works), Madras.
.. the Controller of Stationery and Printing, Madras.
.. all the Collectors except Madras.
.. the Rural Development and Local Administration Department (P-3).
.. the Public (Information and Publicity) Department.

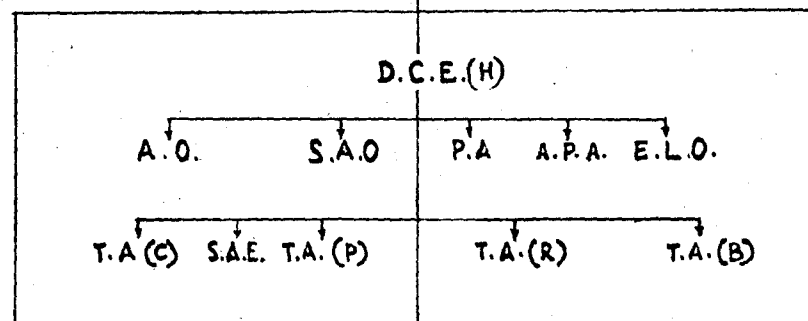
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CHA SHOWING
THE DISTRIBUTION OF OFFICERS
IN HIGHWAYS AND RURAL WORKS DEPARTMENT
AS ON 31-3-61.



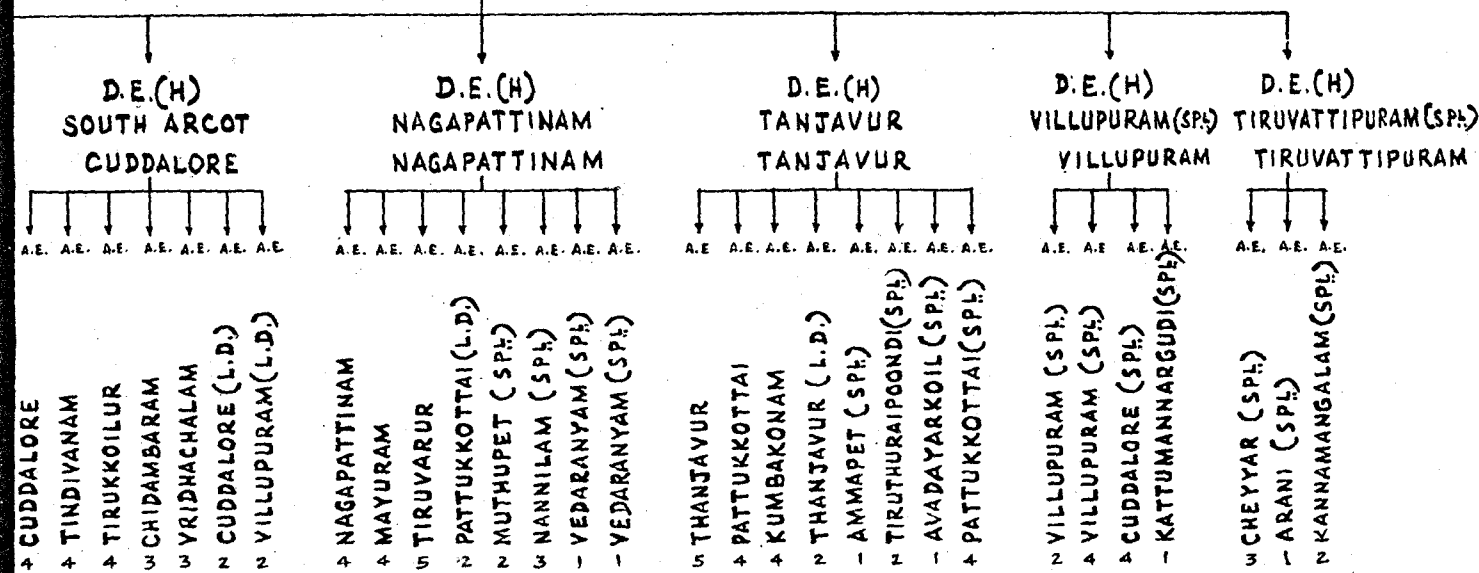
CHIEF ENGINEER (HIGHWAYS) MADRAS.



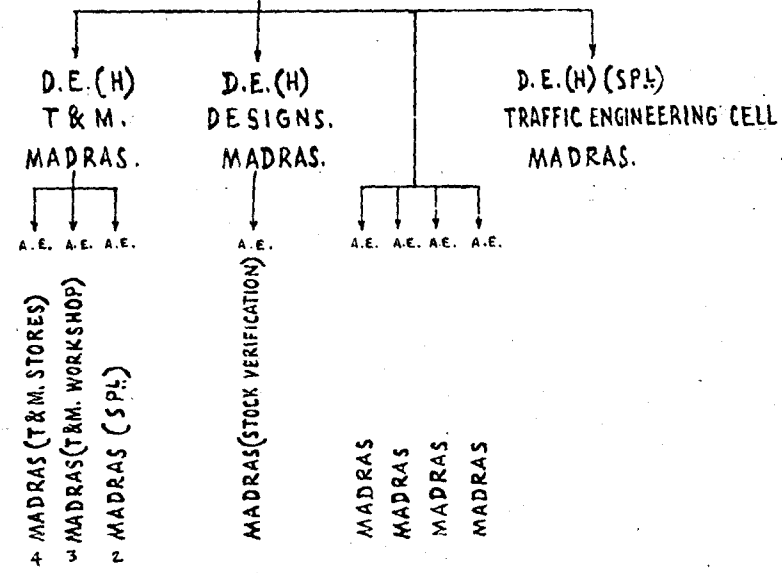
REFERENCE	
D.C.E.(H)	DEPUTY CHIEF ENGINEER (HIGHWAYS)
E.L.O.	ENGINEER LIAISON OFFICER
A.O.	ACCOUNTS OFFICER
S.A.O.	SPECIAL ACCOUNTS OFFICER
P.A.	PERSONAL ASSISTANT
A.P.A.	ADDITIONAL PERSONAL ASSISTANT
T.A.(P)	TECHNICAL ASSISTANT (PLANNING)
T.A.(C)	TECHNICAL ASSISTANT (CONTRACTS)
T.A.(R)	TECHNICAL ASSISTANT (ROADS)
D.R.S.	DIRECTOR RESEARCH STATION
S.E.	SUPERINTENDING ENGINEER
ADL.S.E.	ADDITIONAL SUPERINTENDING ENGINEER
D.E.	DIVISIONAL ENGINEER
A.E.	ASSISTANT ENGINEER
T.A.(R.W.)	TECHNICAL ASSISTANT (RURAL WORKS)
T & M	TOOLS AND MACHINERY
L.D.	LOCAL DEVELOPEMENT
S.A.E.	SPECIAL ASSISTANT ENGINEER FOR CLEARANCE OF AUDIT OBJECTIONS

S.E.(H) MADRAS CIRCLE MADRAS.

P.A.

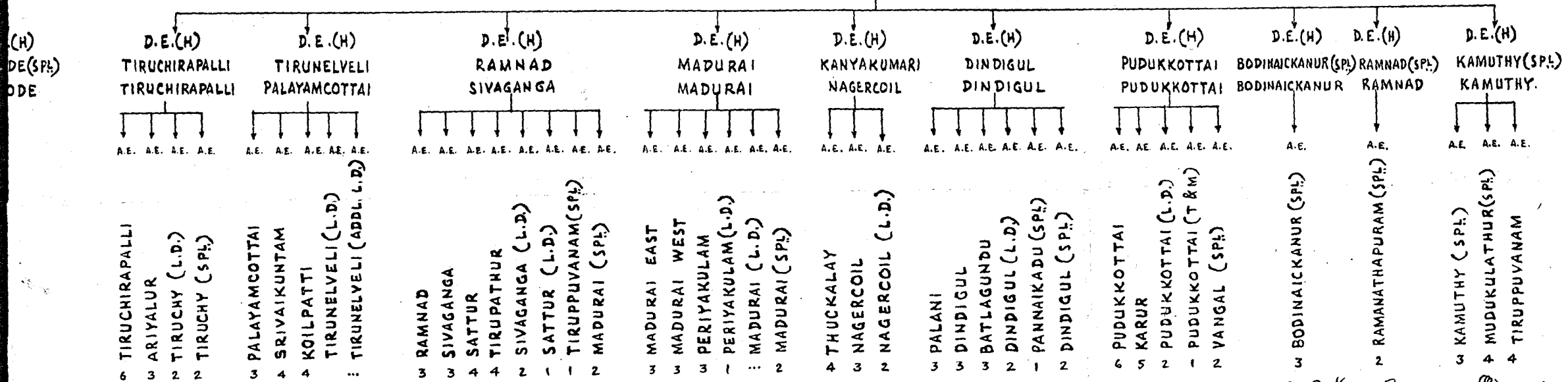


DIRECTOR HIGHWAYS RESEARCH STATION MADRAS.



S.E.(H) TIRUCHIRAPPALLI CIRCLE TIRUCHIRAPPALLI

P.A.



S. P. Krishnamoorthy 7/4/62
FOR CHIEF ENGINEER (H & R.W.)