E. B. No. 35248

REPORT
ON
THE MADRAS PUBLIC WORKS
ESTABLISHMENT COMMITTEE
1932-33

REPORT

OF

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MADRAS

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS

1933

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REPORT OF THE PUBLIC WORKS ESTABLISHMENT COMMITTEE.

CHAPTER I—INTRODUCTORY.

This Committee was appointed by the Government of Madras in G.O. No. 1254 (18-S) W., dated 8th/11th June 1932—paragraphs 1 and 2 of which are extracted below :—

"The Government accept the recommendation of the Retrenchment Committee that a committee should be appointed to investigate the feasibility of reductions in the establishments of the Public Works Department. They are pleased to appoint the following gentlemen as members of the Committee :—

(1) Mr. C. A. Souter, I.C.S., First Member, Board of Revenue (*Chairman*).

(2) Mr. L. H. Greg, Chief Engineer (General, Buildings and Roads).

(3) M.R.Ry. Diwan Bahadur N. Swaminatha Ayyar, B.A., B.E., Chief Engineer for Irrigation.

(4) Sri Ravu Swetachallapathi Ramakrishna Ranga Rao, Raja of Bobbili, M.L.C.

(5) Mr. F. E. James, M.L.C.

(6) M.R.Ry. Diwan Bahadur N. Gopalaswami Ayyangar, Secretary to Government, Public Works and Labour Department (*Secretary*).

2. The terms of reference to the Committee will be:

To examine—

(i) the extent of the permanent charges (circles, divisions, subdivisions and sections) and the volume of work in each,

(ii) the amount of money spent on the average in each permanent charge;

(*a*) on maintenance and repairs of all kinds, and

(*b*) on original works of all kinds,

(iii) the amount of work connected with the preparation and scrutiny of estimates done in the various offices,

(iv) the amount of work in each charge which does not express itself in expenditure,

(v) the strength and distribution of the present permanent charges in the Public Works Department from the Chief Engineers downwards, and

(vi) the employment of temporary staff;

II. To enquire into the causes of the high cost—when compared to outlay on works—of establishment charges in the Public Works Department which has risen from about Rs. 39 to Rs. 48 lakhs in the last eight years;

III. To make proposals for the reduction of permanent establishments including superior charges in the Public Works Department to the minimum consistent with the efficient performance of the work of the department or to recommend the lines on which such reduction may be made;

IV. To make recommendations as to the principles to be applied in determining the strength and tenure of temporary establishments: and

V. Generally to suggest economies in the overhead charges in the Public Works Department."

2. Major H. G. Howard, Chief Engineer for Electricity, was added to the Committee before it commenced its labours. On his appointment as Chief Minister in November last, the Hon. the Raja of Bobbili resigned his place on the Committee and Diwan Bahadur C. S. Ratnasabhapati Mudaliyar, M.L.C., was appointed instead. Out of the five sittings held by the Committee since his appointment, Mr. Ratnasabhapati Mudaliyar has, however, been able to attend only two.

3. The Committee held its first sitting at Ootacamund on the 24th June 1932 and settled the details of the information that should be collected for its examination with due regard to its terms of reference. At the second sitting held in Madras on the 12th August 1932, a general discussion of some of the points arising for decision took place and the further information required indicated. In the order appointing us the Government had expressed the hope that we would find it possible to submit our report not later than the end of September. We regret we found it impossible to do so. The material that had to be collected for examination was enormous, and to be obtained from offices all over the Province; it had to be tabulated and sifted before we could consider the ... that we were to investigate. We were obliged therefore to inform the Government soon after our second sitting that the report could not be submitted before the end of September but that every endeavour would be made to submit it as early as possible. The Committee has held eight sittings since and concluded its labours on the 6th March 1933 with the adoption of this report.

4. The collection of the mass of information that we required and its preparation in a form suitable for our examination have thrown on the Chief Engineer and his officers as well as on the Public Works Secretariat a large volume of additional work which had to be done at high pressure in minimum time. We desire to express our thanks to all the officers concerned for the assistance we have received from them in this connexion.

5. Except for the two memoranda which we received from Rao Bahadur P. K. Subba Ayyar (Retired Assistant Secretary, Public Works and Labour Department), we have not considered

any written suggestions from outside, nor have we examined any witnesses. We express our acknowledgments to Mr. Subba Ayyar for the trouble he took in being helpful to us and have given the suggestions made by him the consideration which, coming as they did from a retired officer who had had a long and intimate connection with the work of the Public Works Department, they were entitled to. Our conclusions are based however mostly on the examination of the material collected for us under our own instructions.

6. The Retrenchment Committee visualized the possibilities of economy in Public Works establishments as being two-fold. In paragraph 137 of their report, they dealt with the first of these, viz., an investigation of the question whether the existing system of work in the Public Works Department was as economical as it might be. The proceedings of their 26th meeting on 23rd November 1931 indicate that in their opinion considerable economy in establishments could be secured, e.g., by encouraging private enterprise, by reducing Public Works Department schedule rates, by simplifying the methods of work and possibly by overhauling the working of the Public Works Workshops and making use of alternative materials. These being technical matters, they recommended the appointment of an expert committee for investigating them consisting of a representative of the Public Works Department, a representative of a private engineering firm and an independent chairman. The absence of a previous investigation by an expert committee of this kind, we felt very early in our examination, operated as a great handicap on our work but we were informed that the Government had held already that an expert committee was not necessary for considering the question of encouraging private enterprise, that the Public Works Stores organization was being overhauled by a special officer and that the Government had examined in detail the other suggestions and had passed final orders.

7. The work of this committee was thus in effect narrowed down to exploring the second only of the possibilities of economy as visualized by the Retrenchment Committee, viz., that of effecting a reduction of existing establishments with reference to the amount of work that has to be done and the amount of expenditure incurred on works. We felt however that even in investigating this limited field, we were at a great disadvantage owing to the fact that the expert committee had not been appointed. The nature and amount of work to be done in the department depend very largely on the systems and methods of work adopted and these could be properly investigated only by an expert committee such as the one recommended by the Retrenchment Committee.

8. For investigating the matters indicated in our terms of reference the Retrenchment Committee suggested the appointment of an independent officer or committee and we are of opinion that the independent officer should have preceded us. In the course of our inquiry we frequently found that a detailed investigation of the

system and methods of work, the extents of charges, etc., by an independent officer of experience with liberty to travel over the Presidency and to examine locally methods and conditions of work should have been made before we were appointed and that we should have done better justice to the task set for us if we had had the benefit of considering the report of such an officer.

9. In addition to these unfortunate handicaps on our work, we would like to draw attention at this early stage in our report to two or three matters which deserve to be taken note of. No committee which has been set up to inquire into Public Works establishments has escaped an invitation to consider such radical changes in organization as the transfer of Government buildings to local authorities or the separation of irrigation from civil works. We have not escaped it either. If we have declined to recommend a change in the existing organization in these respects, it is due as much to our disinclination to suggest wholesale changes in a well-tried organization on the eve of the arrival of provincial autonomy as to the merits of the now familiar arguments in favour of and against such proposals. The cost of establishments is dependent on two factors—numbers and scales of remuneration. The scales of pay for future entrants to the various ranks of the Public Works services are under separate examination and from what is already known should, if the tentative decisions of Government on the subject are made final, effect an increasing economy in the cost of Public Works establishments for the next 15 or 20 years. These scales are outside the purview of this committee. Its labours have therefore to be confined to the possibilities of retrenchment in numbers. And even in this restricted field, the scope for its activities has been very largely curtailed by the fact that by the time it was appointed retrenchments in the numbers of existing establishments had been actually effected on a considerable scale. If the concrete recommendations which in the succeeding pages we are able to make are not spectacular or fall short of anticipations, we would only ask that the considerations to which we have drawn attention above be borne in mind.

CHAPTER II—COST OF ESTABLISHMENT AND WORKS OUTLAY.

10. The second of our terms of reference requires us "to inquire into the causes of the high cost—when compared to outlay on works—of establishment charges in the Public Works Department which has risen from Rs. 39 to Rs. 48 lakhs in the last eight years." Forty-eight lakhs is apparently the budget figure for 1931–32 exclusive of the cost of tools and plant and of District Board Engineers. It is also the actual figure for that year. The corresponding figures according to the accounts of 1923–24 is 36 and not 39 lakhs. The real difference between the two years compared is therefore Rs. 12 and not Rs. 9 lakhs. We have first to find out the causes of the increase between the two years and then to enquire why the cost of establishments is so high compared to works outlay.

11. The causes of the increase of Rs. 12 lakhs between the two years are not far to seek. A small but by no means inappreciable part of it has to be attributed to the effect of the incremental scales of salaries for all ranks of the Public Works services. We have not found it possible to ascertain how much exactly of the increase is due to that cause. Another small part (about Rs. 1·30 lakhs) is due to the transfer of a large number of conservancy subordinates from the work-charged to the regular establishment. The bulk of the increase is however undoubtedly due to additional establishments. 1923–24 was the year in which the 1922 retrenchments took full effect. No appreciable additions to establishments were made again until 1926–27 but after that year several of the charges abolished during the 1922 retrenchment campaign were revived and new charges were created for coping with the increased work. There was an increase of about Rs. 1½ lakhs under circles due mainly to the creation of the Tanjore (permanent) and Dowlaishweram (temporary) Circles. The increase under other executive establishment exceeded Rs. 9 lakhs. We consider it unnecessary to go into the details of these additions. We are however satisfied that generally speaking there were good reasons for the additions sanctioned and we deem it our duty to say that we are unable to agree with the Retrenchment Committee that there are reasons to believe that divisions have been formed unnecessarily for works that might well have been carried out under the superintendence of an assistant instead of an Executive Engineer or that there has been a tendency to make temporary staff permanent merely because they hav ebeen employed for a number of years and not because any permanent addition to the establishment was really necessary.

12. The following table exhibits the outlay on works, the cost of establishment (excluding tools and plant and District Board

Engineers) and the percentage of the latter to the former in each of the eight years referred to in the Retrenchment Committee's Report :—

Year.			Works outlay (in lakhs).	Cost of establishment (in lakhs).	Per cent.
			RS.	RS.	
1923–24	..	..	99·39	36·25	36
1924–25	..	..	102·34	34·68	34
1925–26	..	..	120·42	37·35	31
1926–27	..	..	142·45	37·55	26
1927–28	..	..	162·36	39·37	24
1928–29	..	..	162·93	42·59	24
1929–30	..	..	168·53	46·53	28
1930–31	..	..	181·70	49·57	27
1931–32	..	..	161·45	47·59	29

While the increase in works outlay between 1923–24 and 1931–32 was 62 per cent the increase in cost of establishments was only 31 per cent. The cost of establishment when compared to outlay was therefore less in 1931–32 than in 1923–24.

The cost of establishments during 1932–33 (revised estimate) has however gone down to Rs. 40·51 lakhs as the combined effect of the retrenchments in numbers that have been ordered during the present retrenchment campaign and the 10 per cent cut in pay but on account principally of the restoration of the cut from 1st April next it is expected to rise to Rs. 14·01 lakhs during 1933–34 (budget). The ratio of cost of establishments to outlay works out to 30 per cent in 1932–33 and 31 per cent in 1933–34. Thus though there has been a substantial diminution in the total cost of establishments in 1932–33 and 1933–34 the ratio it bears to works outlay has gone up and this is directly due to the curtailment of grants.

13. We have examined also the criticism that "there has been a tendency to provide establishments on a most liberal scale based upon the budget provision for works and without sufficient reference to the fact which has been proved by experience, that actual expenditure has almost invariably fallen far short of the budget provision." The following table gives the relevant figures :—

Year.		Budget. Outlay (in lakhs).	Budget. Percentage of establishment to outlay.	Actuals. Outlay (in lakhs).	Actuals. Percentage of establishment to outlay.
			PER CENT.		PER CENT.
1923–24	..	111·25	38·9	99·38	36·4
1924–25	..	114·82	33·1	102·34	33·8
1925–26	..	133·63	29·4	120·42	31·0
1926–27	..	175·54	25·0	142·44	26·3
1927–28	..	196·51	21·3	162·36	24·2
1928–29	..	236·28	19·1	162·93	26·1
1929–30	..	218·32	20·6	168·53	27·6
1930–31	..	199·98	23·4	181·69	27·2
1931–32	..	180·53	26·4	161·44	29·4

The discrepancy between budget and actuals is striking in the later years particularly between 1928–29 and 1930–31. We recognize that it is not always possible to reduce in the course of a year

the cost of establishments in the same proportion as the reduction or surrender of grants for works. The figures in the table on the previous page however indicate that the ratio under actuals has since 1924–25 always been higher than in the budget and that in three of those years it was higher by four per cent of the total outlay and more. This would seem *prima facie* to indicate either that the principles on which temporary establishments are entertained and continued do not possess the elasticity necessary for responding readily and adequately to reductions or surrenders of grants made in the course of a year, or that the minimum staff below which the normal establishments required for the ordinary work of the department cannot, consistently with efficiency, be reduced is capable of spending much more than the grants actually placed at their disposal, and that therefore when there is a drastic reduction—as in the years 1927–28 to 1930–31—in the course of a year of the grants entered in the budget, it is difficult to prevent a heavy rise in the ratio of cost of establishments to works outlay.

14. The question remains whether the ratio of the cost of establishments to works outlay in this province can in itself be considered high or extravagant.

The following figures are taken from the Finance and Revenue Accounts of the Government of India :—

	Madras.			Bombay.			United Provinces.			Punjab.		
	Outlay.	Establishment.	Per cent.	Outlay.	Establishment.	Per cent.	Outlay.	Establishment.	Per cent.	Outlay.	Establishment.	Per cent.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	RS.	RS.		RS.	RS.		RS.	RS.		RS.	RS.	
1921-22 ..	1,10,78,298	48,08,905	43·41	2,51,22,414†	63,18,994	25·13	1,31,85,221‡	61,95,557	46·99	2,12,04,172§	1,16,88,119	55·12
1922-23 ..	94,09,476	42,36,684	45·02	2,26,44,961†	62,74,207	27·70	1,32,98,485‡	64,23,832	48·30	2,08,11,440§	1,17,05,965	56·24
1923-24 ..	1,00,56,184	39,19,792	38·98	2,57,35,042†	65,26,811	25·36	1,60,96,282‡	68,61,068	42·62	2,17,82,824§	1,30,15,967	59·75
1924-25 ..	1,04,67,574	38,01,540	36·32	3,27,00,647†	82,10,115	25·11	1,86,05,767‡	66,34,467	35·66	2,64,88,048§	1,19,17,334	44·99
1925-26 ..	1,30,30,220*	42,29,737	32·46	4,02,19,846†	87,36,589	21·72	2,19,65,734‡	70,07,884	31·90	3,29,60,798§	1,21,64,253	36·91
1926-27 ..	1,84,82,056*	47,00,529	25·43	3,28,21,847†	1,00,91,447	30·75	2,32,99,890‡	80,03,307	34·35	4,07,67,840§	1,45,31,339	35·64
1927-28 ..	2,35,02,356*	52,55,580	22·36	3,57,76,625†	1,02,03,734	28·52	2,48,53,931‡	78,07,484	31·41	4,35,85,396§	1,41,75,104	32·52
1928-29 ..	2,33,48,452*	55,66,572	23·84	3,77,50,561†	1,07,15,865	28·39	2,87,12,531‡	81,59,307	30·54	4,42,01,327§	1,51,17,717	34·20
1929-30 ..	2,34,18,797*	61,98,455	21·79	4,16,86,666†	1,10,63,065	26·54	2,28,87,303‡	87,72,451	38·33	3,68,30,699§	1,55,91,645	42·33
1930-31 ..	2,69,18,868*	63,11,851	23·45	3,98,18,135†	1,05,64,511	26·53	1,74,29,202‡	86,73,291	49·78	3,06,08,315§	1,58,61,186	51·17

	1921-22	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
* The outlay includes expenditure on Cauvery-Mettur Project, viz. ..	..	..	..	..	8,43,639	52,30,823	83,73,470	1,03,81,989	90,09,018	92,71,617
† The outlay includes expenditure on Nira Right Bank Canal and Sukkur Barrage projects, viz.	35,22,218	41,90,055	77,51,798	1,43,80,028	2,33,61,545	2,64,85,193	2,59,30,033	2,98,23,538	2,90,05,218	3,49,27,130
‡ The outlay includes expenditure on big projects as Sarda Kichcha feeder, Sarda Oudh canal, etc., viz. ..	40,76,504	[illegible]	1,01,36,225	1,01,15,969	1,01,88,878	1,24,06,793	1,44,39,907	1,61,56,341	1,35,50,177	73,26,1[illegible]8
§ The outlay includes expenditure on Sutlej Valley Project	1,71,126	71,56,414	1,37,87,030	78,67,707	1,47,91,130	1,38,91,699	98,87,128	1,14,07,604	66,56,924	35,90,779

We have not the details necessary for instituting a proper comparison with other provinces. The conditions vary enormously; the items of expenditure which are included under works outlay and establishment charges are not exactly the same in all provinces; and the inclusion of the figures relating to large construction works in individual years (not always the same years in all the provinces) makes a very large difference in the percentage. But, even after making a liberal allowance for these disturbing factors, we think we are justified in saying that the Madras ratio compares favourably with that in Bombay, the United Provinces and the Punjab.

15. The Retrenchment Committee assumed that there should be a more or less fixed ratio between works outlay and establishment charges but after hearing the Chief Engineers recognized that this was "a somewhat rough and ready method" and that there might be legitimate differences of opinion as regards the ratio and recommended that while they were not wedded to the basis they had assumed the whole matter required very careful investigation. We have discussed this problem at very great length. The arguments for and against judging the cost of establishment with reference to the ratio it bears to works outlay were set out at length before the Retrenchment Committee and we consider it unnecessary to refer to them in detail here. The normal Public Works staff is a branch of the public service and has, in addition to estimating for and executing works involving outlay of money, to attend to a growing volume of administrative, supervising and advisory duties which unfortunately do not express themselves in expenditure. It is claimed that the latter category of their functions occupies more of the time of the officers in charge of permanent posts than the former and that therefore it is wrong to judge their cost with reference to works outlay alone.

16. As early as 1881, the Secretary of State raised this issue and drew attention to the excessive cost of establishment as compared with the outlay on works. The Madras Government then pointed out "that it was not possible to arrive at any conclusion as to the real ratio the cost of establishment bore to the total outlay merely by comparing the total outlay with the total cost of establishment and calculating how many annas it cost to spend a rupee. Owing to the peculiar circumstances of the Presidency any proportion arrived at by the mere comparison of figures was fallacious and misleading." An attempt was however made in 1922 to assess the percentage of time spent by Public Works officers on work not resulting in expenditure and it was proposed to ask Superintending Engineers to have registers maintained in all offices to show the cost of establishment engaged on such work. This was reported to be impracticable and instead three Superintending Engineers were asked to furnish figures for typical divisions on the following assumptions of normal rates based upon expenditure, viz.—

(a) One per cent of the capital value of buildings inspected and repaired to cover cost of inspection and preparation of estimates for repairs, placing of contracts and taking of agreements.

(b) Half per cent on the capital value of buildings for inspections and general work connected with maintenance alone.

(c) Three per cent of expenditure for execution of works including preparation of plans and estimates.

(d) Two annas per acre of irrigation for supervision and maintenance.

On an examination of the figures received it was reported—

(i) that 10 per cent of the total cost of establishment should be taken as the value of the time spent on work connected with the maintenance of our building and irrigation assets which does not result in expenditure;

(ii) that 20 per cent of such cost represents the time spent on other work which does not result in expenditure, such as, inspection of local funds work, the scrutiny of estimates for them and for grant-in-aid works and other duties of a miscellaneous character; and

(iii) that the remaining 40 per cent alone represents the time spent on preparation of plans and estimates, execution, etc., of works which result in expenditure.

17. On a construction project of combined irrigation and building work, such as the Cauvery-Mettur Project, the ratio of the cost of establishment which is solely engaged on work resulting in expenditure to the outlay on works has averaged about 10 per cent. If this ratio be taken to represent (iii) in paragraph 16 in respect of the regular Public Works Department, the ratio for (i) and (ii) should be 15 per cent and for the total 25 per cent. We notice that the Retrenchment Committee provisionally suggested 25 per cent for the normal ratio of establishment charges to works outlay though it did not reach this percentage in the manner indicated above. Our attention was, however, drawn to the arbitrary character of the assumptions on which the percentage calculations in paragraph 16 are based. A big project is executed in scheduled time by staff specially selected and organized for the purpose. The works are concentrated in the minimum number of places. There are no difficulties as to the obtaining of funds and the attention of the staff is not distracted by work of an unconnected character. Actual works outlay under such conditions conforms very nearly to the maximum capacity for expenditure of the staff employed. In regular Public Works Department charges, however, the conditions are altogether different. The works involving expenditure may be a number of small ones scattered over a considerable area. The staff responsible for their execution has to attend to a number of duties which are unconnected with, and occupy more of their time than, such works. Actual expenditure on such works has to be limited to the funds provided even though the staff is capable of spending more. Works outlay in such circumstances has, therefore, no relation to the maximum capacity of the staff for expenditure even after making allowance for the other calls on its time.

18. The assumptions on which the 1922 conclusions were based being in the opinion of the Chief Engineers who are members of this Committee open to criticism, we directed that information

should be collected from five typical divisions as to the kinds of administrative and other work not connected with works outlay (i.e., outlay on maintenance, repairs and original works) which are actually attended to in those divisions. Each of the Executive Engineers selected was instructed to give a picture of such work, list the items included in it and estimate as nearly as he possibly could the percentage of time spent on such items. Reports have been received under these instructions from the Executive Engineers in charge of the Coimbatore, Kistna Eastern, Chingleput, South Presidency and West Coast divisions. The Executive Engineer, Coimbatore, has given a list of 71 such items and reported that it is impossible to estimate the amount of time spent on them. Though his list is the longest, it is significant that the average annual outlay on works in his division is the heaviest in the Presidency. The Executive Engineer, Kistna Eastern division, estimates the percentage of his time spent on work not resulting in expenditure at 64. The Executive Engineer, Chingleput division, puts it at 70 and the Executive Engineer, South Presidency division, at 60. The report of the Executive Engineer, West Coast division, has gone into very elaborate calculations. He has arrived at the following figures for himself and the different grades of staff under him:—

		Per cent of time spent on work not resulting in expenditure.
Executive Engineer	..	56
Subdivisional Officer, Calicut	..	63·1
Do.	Mangalore ..	46
Do.	Malappuram ..	26·2
Section officers (generally)	..	43·9
Clerical establishment	..	48
Accountant	..	50

Some of the items included in the lists are either trivial or being incidental to the work of an officer in charge of works expenditure cannot be treated as foreign to outlay on work. We consider it unnecessary to burden this report with the results of the examination we made of the estimates given by the five Executive Engineers. We are satisfied that a substantial portion of the time of the Public Works Department officers holding territorial administrative charges and not solely engaged on works is actually devoted to work which cannot express itself in works outlay. The volume of it and the amount of time spent on it vary with the different classes of officers and with different territorial charges. We confess in the circumstances we are unable to make any definite recommendation as to the exact percentage of their time which Public Works officers of different ranks may be estimated as spending in the average on work unconnected with outlay. We have no hesitation, however, in saying that that amount of time is considerable. As this circumstance has to be allowed for in full when judging the adequacy of Public Works esatablishments for permanent charges in the Presidency, we are of opinion that the attempt to relate the cost of such establishments to works outlay alone should be given up.

CHAPTER III—SOME ITEMS OF WORK NOT EXPRESSED IN WORKS OUTLAY.

19. The considerable volume of work which does not express itself in expenditure inevitably curtails the time that Public Works officers can find for their legitimate duties which therefore suffer in efficiency. An appreciable portion of such work is, we also find, unconnected with the Public Works Department altogether; and an attempt is not always made to recover the value of such work, where possible, from other departments, local bodies or private persons for whose benefit it is done. We consider that all items of work not resulting in expenditure should be reviewed with a view to see whether they could not be taken away altogether or their volume so limited as to make the maximum amount of the time of officers available for what may be considered to be their legitimate work; and whether, in respect of such items unconnected with the Public Works Department as they have necessarily to retain, recoveries of the value of their services could not be made—where they are not made already. We think also that such recoveries when made should invariably be credited to the Public Works Department and that full allowance should be made for them before the net cost of Public Works establishment is arrived at.

We examine some of these items below.

20. *Inspection of temple cars and rafts.*—The practice of requisitioning the services of Public Works Department officers to report on the stability of temple cars before they are allowed to be dragged during festivals is a long standing one. In 1881 the Government had occasion to observe in connexion with a specific case brought to their notice that the stability of structures of the nature of temple cars was a matter which the police could properly take cognizance of and that in order to assist the police and the magistracy in discharging their duty in this respect the opinion of experts like engineers of the Public Works Department must, when sought for by responsible authorities, be unhesitatingly given. In 1898 the Government laid down that all Magistrates empowered to act under section 144 of the Criminal Procedure Code must be allowed to call upon Public Works Department officers to examine and report on the stability of cars whenever necessary. In 1925 it was ordered that the examination of cars should be conducted by the nearest Public Works Department officer not lower in rank than a Subdivisional Officer and that the Magistrate's requisition to him should be sent at least two weeks before the date of the festival at which the car was to be dragged. The instructions in regard to the examination of temple cars were also extended to temple rafts used in Teppum festivals. In 1928 the Chief Engineer suggested that a fee might be levied for the examination of temple cars and rafts, but the suggestion was not accepted by Government. Evidently the duty was originally imposed on the Public Works Department officers for the reason that the structural stability of cars and rafts could be judged only by engineers. It has now become one of the numerous miscellaneous duties which Public Works Department officers are invariably called upon to do. As engineers outside the Public Works Department may also be available nowadays to do the work we are of opinion that it should not be necessary *always* to require officers of the Public Works Department alone to do it. But if it is held that the police and magistracy should, in the interests of public safety and of reaching an impartial decision between contending local factions, look only to Public Works Department officers for reliable advice in this matter, we recommend that a fee sufficient to cover the time taken in making the inspection and giving the certificate and the travelling allowance of the officers concerned should be recovered from the temple authorities or other interested parties—the amount of fee to be levied being fixed by Government.

21. *Inspection of ancient monuments.*—Under paragraph 263 of the Madras Public Works Department Code it is the duty of Executive Engineers to arrange for a systematic inspection of all buildings and ancient monuments of historical or archæological interest. The care of ancient monuments as defined in section 2 (i) of the Ancient Monuments Preservation Act of 1904 which are for the time being declared to be protected monuments under section 3 (i) of that Act devolves on the Central Government. The cost of such monuments is met by the Central Government. Under Devolution Rule 46, the Governor-General in Council employs the agency of the Governor in Council in the administration of the subject. As the work has necessarily to be done by Public Works Department officers whether such buildings are maintained from Central or Provincial Revenues, we consider that the existing arrangement should continue.

22. *Valuation of State-aided buildings.*—The only class of buildings for which State aid is given to a large extent is that coming under the category of buildings for educational institutions, hostels, boarding houses for students and the like for which grants are made by Government under the Grant-in-aid Code. In cases where private professional advice is available, the Public Works Department is not called in except in the matter of pronouncing an opinion on the reasonableness or otherwise of the estimates. Where private professional advice is not available detailed plans and estimates have to be scrutinized by the Public Works Department which has also to supervise the construction of such buildings. The intervention of the Public Works Department appears to us to be necessary in order to see that Government money is properly spent. But we consider that there should be some recognition of the work done by the Public Works Department and that in all cases of grants-in-aid to private bodies, a certain percentage of the total estimate should be levied for the technical advice given and inspection made by the Public Works Department.

23. *Valuation of buildings constructed out of loans given by Government to co-operative societies.*—In rule 7 of the rules for the grant of State loans to co-operative building societies it is laid down that before the second and subsequent instalments of a loan

are granted, the society shall, if required, arrange to get a certificate from a qualified engineer of a rank not lower than that of an upper subordinate of the Public Works Department to the effect that the instalment or instalments already drawn have been properly utilized. When this certificate is obtained from an officer of the Public Works Department a fee of $1\frac{1}{4}$ per cent of the estimated cost of the work done up to the date of inspection is levied from the society—two-fifths of which is allowed to be retained by the inspecting officer and the remaining three-fifths credited to Government.

Rule 12 of the rules also prescribes inspection and valuation of such buildings by a Government engineer of rank not lower than that of an upper subordinate. The rule as it stood before 1927 prescribed annual inspection and valuation. It was amended in 1927 so as to do away with annual inspection but providing for inspection and valuation during construction. It was anticipated that the amended rule would lessen the work of the Public Works Department officers. But in 1929 the Chief Engineer applied for the employment of additional staff for the inspection of such buildings in the South Presidency division and Salem division. The Government declined the request and ordered that the work should be attended to by the ordinary staff of the Public Works Department in the course of their regular work. The question of relieving Public Works Department officers of this work was again considered by Government in 1930. As the intention of rule 12 was not that the work should always be done by the staff of the Public Works Department the Registrar of Co-operative Societies was asked whether the work could not be distributed among the officers of the Industries and Agricultural departments also. He reported that this was not possible. It was then suggested to the Registrar whether the inspection by the Public Works Department might altogether be dispensed with and the duty of inspection entrusted to Co-operative Inspectors. As he reported that the suggestion would not work the Government passed the following orders, G.O. No. 1946, Development, dated 24th October 1930 :—

"The Government have carefully examined the question and consider that the procedure now in force as regards inspection and valuation by the Public Works Department should continue. Plans in duplicate should in future be submitted before starting work so that one copy may be sent to the Public Works Department. The Government recognize that in the circumstances of the case the degree of responsibility attached to the inspection by officers of the Public Works Department is limited and direct that—

(i) the valuation by the Public Works Department officers may be made roughly and not in detail; and

(ii) it will be sufficient if the certificate to be issued by the officers of the Public Works Department mentions the parts of the buildings inspected by them and the stage during construction at which the inspection was made and states that as far as they can judge the value of the building is equivalent to the amount of the loan advanced.

The Government hold the officers of the Co-operative department responsible for ensuring that the house built is a sufficient security for the loan advanced by Government."

We consider however that where other professional opinion is available it should be utilized, Public Works Department officers being indented on only when such opinion is not available; and that when the services of Public Works Department are so requisitioned the principles as to the levy of a fee recommended by us in the case of inspections of temple cars and rafts and valuation of State-aided buildings should apply.

24. *Valuation of Government and railway buildings in municipalities and panchayats for purposes of assessment—(i) Valuation of Government buildings in municipalities.*—In G.O. No. 1692 W, dated 1st November 1920, the following procedure was prescribed for the valuation of Government buildings and lands in municipal towns for purposes of municipal assessment with reference to the provisions of the Madras District Municipalities Act :—

(a) The value of all buildings should be worked out by the Executive Engineer by estimating the present cost of erecting them and allowing in each case a reasonable amount on account of depreciation.

(b) The present value of sites covered by or appertaining to the buildings should be fixed by a committee consisting of the Executive Engineer, the Collector of the district and the chairman of the municipal council concerned.

(c) The chairman should then fix the tax for each building in accordance with the provisions of the Madras District Municipalities Act.

(d) The Superintending Engineers concerned should thereafter submit for the approval of Government a complete list of all taxable lands and buildings in their circles with their correct valuation worked out and with the assessment fixed thereon by the chairman.

In 1924, the Government directed that the above procedure should apply only to non-residential buildings and lands and that, in the case of residential buildings and the lands attached thereto, the standard rent fixed by Government under rule 45 (b) of the Fundamental Rules for twelve months should be taken as the gross annual rental value for purposes of assessment. In regard to periodical revisions of assessment it was ordered that, so far as the lands appurtenant to non-residential buildings and vacant lands were concerned, a committee consisting of the Collector, the Executive Engineer and the chairman, municipal council, should meet once in five years to consider and decide only what alterations were necessary in the valuations already fixed with reference to G.O. No. 1692 W., dated 1st November 1920, to suit the rise or fall in the market value of sites in different localities since the last valuation. Similarly in regard to revaluation of buildings (non-residential), the Executive Engineers concerned have only to keep the values already fixed as the basis, deduct therefrom the amount to be allowed for depreciation and add thereto or subtract therefrom the amount necessary to provide for the rise or fall in the market value of materials and labour since last valuation and for any additional structure or dismantlement.

In 1928, the Chief Engineer proposed that Executive Engineers of the Public Works Department should be relieved of the work connected with the assessment of Government buildings and lands which are not borne on the books of the Public Works Department, e.g., Forest Department buildings, Excise Department buildings, petty buildings valued at Rs. 5,000 and less constructed by other departments and buildings, such as, police lines which are handed over to the departments concerned for maintenance. In G.O. No. 1901, L. & M., dated 10th December 1928, the Government ordered that the valuation of non-residential buildings and lands vested in the Forest Department should be done by the Forest Engineers, but the Chief Engineer's proposals to relieve the Executive Engineers of the work of valuation of other Government buildings was not accepted.

Under proviso (a) to section 82 (2) of the District Municipalities Act, as amended by Act X of 1930, the procedure for the valuation of all Government buildings is the same whether residential or non-residential. The procedure prescribed for non-residential buildings has therefore been made applicable now to all classes of buildings, whether residential or non-residential.

(ii) *Railway buildings in municipalities.*—As regards the valuation of railway buildings in municipalities the Local Government have, with the concurrence of the Government of India, issued similar instructions. Under these—

(1) The 'annual value' of buildings of a class not ordinarily let should be taken to be 6 per cent of their book value for a period of five years after their first construction.

(2) In the case of other buildings and lands and after a period of five years after construction in the case of buildings mentioned in (1) above, the 'annual value' should be fixed once in every five years in accordance with the law by a committee consisting of—

(a) the chairman of the municipal council in the case of mufassal municipalities and the Commissioner of the Corporation in the case of Madras City;

(b) the Executive Engineer of the division; and

(c) one representative of the railway administration concerned to be chosen by its Agent.

(iii) *Valuation of Government buildings in panchayat areas.*—The capital value of all Government buildings (including those used as residences) in panchayat areas has to be worked out by the Executive Engineer by estimating the present cost of erecting them and allowing in each case a reasonable amount on account of depreciation, if any. The Executive Engineer should then communicate the figures to the presidents of the panchayat boards for adoption. If the president of the board differs from the Executive Engineer he should communicate to the latter what he considers to be a reasonable valuation. If an agreement is not arrived at between the president and the Executive Engineer the latter should appeal to the panchayat board against the president's assessment under the Madras Local Boards Act, 1920.

In 1927 the Chief Engineer represented that the above orders considerably increased the work of the Public Works Department staff and recommended that the scope of the orders might be restricted to Government buildings borne on the Public Works Department registers. Accordingly in G.O. No. 1541, L. & M., dated 30th April 1927, the Government ordered that the duty of valuation by Executive Engineers should be restricted to Government buildings borne on the Public Works Department registers and that the duty in respect of other Government buildings in panchayat areas should be discharged by the officers of the department concerned.

The valuation of Government and railway buildings and sites for purposes of municipal and local board taxation involves elaborate calculations requiring both information and technical knowledge. We recognize that, if Public Works Department officers who possess this information and knowledge are not directed, as they have been, to participate in working out such valuations, assessments of Government and railway buildings might prove erratic and that therefore they should continue to attend to this work. We are of opinion however that a considerable amount of time and labour has to be spent in making these valuations. On the one hand, it would lead to misleading conclusions if work of this magnitude is left out of account in judging the return on the cost incurred on Public Works Department establishments. On the other, to assess the value of the time spent on this work in the shape of a fee at so much per cent of the value of the buildings valued might mean so large an amount that no local authority could in reason be asked to pay it. After all, the buildings valued are mostly the property of Government and it is in the interest of Government that their property is correctly valued for purposes of local taxation. Public Works Department officers could not therefore be relieved of this work but full account should be taken of it in judging the alleged extravagance or inadequacy of Public Works Department establishments.

25. *Inspection and testing of lightning conductors.*—Under paragraph 122 of the Madras Public Works Code, powder magazines should be provided with lightning conductors, and the conductors and their connexions with earth should be inspected and tested periodically by Public Works Department officers. The rule is a long standing one and we think that the work should continue to be done by Public Works Department officers.

26. *Licencing of motor vehicles on the West Coast.*—In consequence of the transfer of the Tellicherry-Coorg road and the Calicut-Mysore road, from the Malabar District Board to the Public Works Department the Executive Engineer, West Coast Division,

has been empowered, under the rules, to issue licences for motor vehicles plying for hire on certain roads on the West Coast. We understand that difficulty is experienced in the collection of fees by the Executive Engineer and that the question of relieving him of this duty is under the consideration of Government. We recommend that this work should be taken away from the Public Works Department officers as early as possible.

27. *Assistance rendered by Public Works Department officers in carrying out petty repairs done by other departments.*—Paragraph 91 of the Madras Public Works Department Code prescribes the procedure for petty construction and repairs to be done by other departments. Rule (3) in this paragraph allows civil officers to seek the assistance of the Public Works Department whenever they consider that the works undertaken by them require professional supervision. We are informed that advantage is taken of this provision and that Public Works Department officers are called upon to spend a considerable amount of time in attending to the work of repairs to buildings of the Education, Medical and other departments. As petty construction and repairs do not require much technical skill we recommend that without the intervention of the Public Works Department all departments should carry out their own petty repairs and petty construction. Petty repairs should include all work which comes within the powers of sanction of the officers of the departments concerned and so long as those powers are not exceeded and no structural alterations or additions are involved the requisitioning of the services of the officers of the Public Works Department by other departments should be prohibited.

28. *Collection of rent.*—The work thrown on Public Works Department officers in connexion with the collection of rents on Government buildings is, we are satisfied, heavy. The preparation and maintenance of registers showing in detail the names of officers of all departments occupying buildings, their check with the occupation statements received from the departments concerned, the watching of the realization in time of the rent due on each building, the application of the meticulous rules and orders bearing on the liability of occupants and their claims for concessions or exemptions involve a volume of correspondence work which encroaches appreciably—and in several divisions and subdivisions very materially—on the time of Public Works Department officers which should be available for their legitimate work of estimating for and executing works. In 1931, the Government recognizing that Public Works officers required relief in this connexion issued orders that, in the case of buildings occupied by the Forest Department and its officers, the Public Works Department should do no more than prepare the data statements and debit the Forest Department with the total amount of rent recoverable from it; and that the Forest Department should thereafter be responsible for the actual recovery of rent from its officers and for accounting duly to audit for such collection. We do not see why the principle of these orders should not be extended to every department which has,

or whose officers have, to pay rent for occupation of Government buildings. We would urge very strongly that it should be so extended and that, except in regard to buildings in the occupation of Public Works Department officers the collection of rent on which has necessarily to be attended to by them, their function in this matter should cease with the preparation of data statements and the fixing of the amount of standard rent. It should be for the department concerned to determine the amount leviable from each occupant and to collect it from him with reference to the rules on the subject. We would also urge that the transfer of this large volume of work from the shoulders of the Public Works Department to those of other departments should be real and that the procedure prescribed for the satisfaction of audit after the transfer is not such as to render the relief to Public Works Department officers nominal. We have found it necessary to sound this note of warning as our attention has been drawn to the terms of the Accountant-General's circular prescribing the procedure to be followed by Public Works and Forest Officers in giving effect to the orders of Government transferring the work of collection of rents to the Forest Department. We think there is foundation for the complaint that, as a result of the instructions in this circular, the amount of relief which Public Works officers obtain from this transfer is substantially less than what they had hoped for. We have no doubt—and we recommend very strongly—that, in consultation with the Accountant-General, Government will be able to ensure that the relief given in this respect is the maximum consistent with efficient administration of the Government's building estate.

29. *Scrutiny of proposals for bridges, culverts, etc., from local boards.*—Under rule 4 of the rules relating to contribution works, the design and location of each work in the case of bridges, culverts, bathing-ghats or ramps required by municipalities, local boards or village panchayats require the approval of the officer of the Public Works Department authorized to accord technical sanction to an estimate for a Government work of a similar nature and estimated cost and the agency by which the work should be executed is the Public Works Department or Engineering staff of the local body concerned according as the Superintending Engineer or, in cases beyond the Superintending Engineer's powers, the Chief Engineer may decide. If the local body bears the entire cost of construction, it should also bear the full cost of maintenance. The local boards costruct bridges and culverts on all channels and drains including those that belong to Government. In order to safeguard Government channels it is laid down that the proposals in this regard should be scrutinized by the Public Works Department officers before the construction of the bridges and culverts is begun. Moreover under the Local Boards Manual a District Board Engineer has no power of technical sanction and estimates and tenders have to be submitted to Public Works Department officers for technical sanction or approval. A large amount of work of this description is thus thrown on the Public Works Department and it is necessary that relief should be given to the department.

We recommend that a District Board Engineer should have the same powers as an Executive Engineer in the matter of according technical sanction and that the Public Works Department should charge a fee for all work in connexion with the preparation and scrutiny of estimates and tenders received from local boards.

30. *Grant of certificates of safety of petrol tanks and pumps.*—The production of certificates of safety for petroleum installations is prescribed in rule 11 of Chapter IV of the Madras Petroleum Rules reproduced below :—

"Before petroleum is stored in any major or minor installation for which a licence has been granted for the first time, a certificate shall be furnished to the licensing authority to the effect that all enclosure walls and embankments required to be constructed under the conditions of the licence are sufficient to ensure safety. The certificate shall be signed by any Engineer accepted as qualified for the purpose by the licensing authority. When the licence is not granted for the first time but is granted for an increased quantity of petroleum, a certificate shall similarly be furnished to the licensing authority before any quantity of petroleum exceeding the amount which was admissible under the former licence is stored in the installation."

We are informed that the licensing authorities generally ask for the certificate of engineers of the Public Works Department. In 1924 a proposal was made for the grant of a fee to Public Works officers for their inspection of petroleum installations; the Government negatived the proposal. But they have ordered that when petroleum installations are inspected by Government engineers for the purpose of granting certificates of safety, a fee of Rs. 25 for each inspection of a minor installation and of Rs. 50 for each inspection of a major installation should be levied from applicants and that the amounts should be credited to Government. We have no objection to the work continuing to be done by the Public Works Department officers when called upon to do so, but we recommend that the fees realized should be credited to the Public Works Department.

31. *Inspection of treasury rooms.*—The duty of inspecting treasury strong rooms and certifying to their safety is a very important one and must remain with the officers of the Public Works Department.

32. *Inspection of duplicate keys of cash chests.*—The inspection of duplicate keys of cash chests is prescribed in paragraph 288 of the Madras Public Works Department Code which reads as follows :—

"Public money in the custody of the department should be kept in strong treasure chests and secured by two locks of different patterns. The duplicate keys of divisional and subdivisional cash chests should be placed, under the seal of the Executive Engineer, in the custody of the Treasury Officer in the jurisdiction of the division concerned. A duplicate key register should be maintained

and once a year, in the month of April, the keys should be sent for, examined and returned under fresh seal, a note being made in the register that they have been found correct."

We think that the work involved in the inspection should be negligible and that, as it is a necessary duty to be performed, the existing procedure should continue.

33. *Certificate of non-availability of Government buildings and reasonableness of rent in respect of rented private buildings.*—Generally rent for private buildings has to be fixed with reference to the prevailing market rate. The officers of the Public Works Department have no special knowledge as regards market rates and we think therefore that all inquiries regarding the reasonableness of the rent to be paid for private buildings taken on lease for Government purposes should be conducted locally by the departments concerned. The Public Works Department should, however, continue to certify the non-availability of Government buildings in the locality before a private building is fixed on.

34. *Accounts and audit work.*—Of all the items of work done by the Public Works Department for which no money value can be shown, the most important and absorbing is perhaps the work they do in connexion with accounts and audit. The systems of accounts and audit are in our opinion unduly elaborate and deserve to be simplified on radical lines. Too many trivialities are given the dignity of audit objections and the monthly volumes of these objections which flow into every divisional office entail a great deal of correspondence in many offices and of unnecessary calls for explanation about ignorable matters and their disposal in accordance with statutory rules regarding the taking of disciplinary action against Government servants. From the figures specially obtained for us (Appendix D) showing the number of the clerks in Public Works Department offices engaged on accounts and audit work, we find that about 50 per cent of the total strength of clerical establishments in circle, division and subdivision offices is engaged on such work. It is obvious that if this enormous amount of work could be reduced or simplified a saving in staff and therefore in expenditure should be possible. We consider, for instance, that it should be prescribed that vouchers for expenditure below a fixed limit need not be audited by the Accountant-General and that ordinarily the divisional accountant's audit of such vouchers should be final. It seems to us that the system of audit should be greatly simplified otherwise too. At present there is a monthly concurrent audit in addition to a yearly test-audit by an officer deputed by the Accountant-General, besides the scrutiny of accounts work, done during annual inspections by the superior officers of the department of the offices of those subordinate to them. These multiple checks are made in spite of the fact that in each division office, the principal accountant is an officer appointed not by the Chief Engineer but by the Accountant-General and is subject to the disciplinary jurisdiction only of the Accountant-General. We consider that this over-elaboration involves avoidable waste of time and

labour and that while it is not worth the cost incurred it impairs the efficiency of the real work for which Public Works officers should be held accountable. We however do not feel competent to examine the technique of accounts and audit and therefore recommend that a specially selected accountant having an all round experience and not obsessed with the merits of the existing system of Government accounts and audit should be appointed on the recommendation, e.g., of the Institute of Chartered Accountants, London, and should be entrusted with the duty of simplifying the system of accounts and audit in the Public Works Department. He should be instructed specially that in devising a simpler system he should have reference to our considered and deliberate opinion, (1) that the portion of the clerical establishment of division and subdivision offices now engaged on audit and accounts work of the offices which is nearly 50 per cent of the total staff is unduly large and should be reduced, (2) that it is sufficient to have only a half-yearly outside audit instead of the present system of monthly audit, (3) that divisional accountants should be made the final authority on vouchers below a certain amount, and (4) that the provisions of the Public Works Account Code and the Public Works Department Code which are the foundation for the existing over-elaboration should be thoroughly and radically overhauled and simplified so as to eliminate all unnecessary work.

35. *Miscellaneous duties in connexion with the work of local authorities.*—The work that Public Works Department officers do in this connexion does not express itself in expenditure but is nevertheless an important item of their duties and takes up a material amount of their time. Some of these like according technical sanction to estimates and advising on tenders have already been adverted to in paragraph 29 above. Besides, the Superintending Engineers of the Public Works Department have to carry out detailed annual inspections of trunk roads in order to see that the grants made by Government for their maintenance have been properly utilized and to make quarterly inspections of bridges under construction costing over Rs. 50,000. This work of inspection entails a large amount of time and labour but no credit is allowed for it in assessing the cost of the Public Works Department establishments. We have a recommendation to make in respect of this work in Chapter VIII.

CHAPTER IV—DELEGATION OF POWERS.

36. The volume of business—especially office work—which an officer has to transact bears a direct relation to the limits of his powers to pass final orders. If those limits are circumscribed, the range of matters in respect of which he has to submit reports or make recommendations to officers higher up for disposal is wide. And as the submission of a report or the making of a recommendation to another with a view to persuading him to accept one's own view involves the expenditure of substantially more time and labour than passing orders one-self the quantity of work is largely increased. There is a great deal of unnecessary centralization of powers in the Public Works Department and officers entrusted with the expenditure of large sums of public money are not permitted to exercise powers commensurate with their status and responsibilities. The retention in the hands of the higher officers of powers which ought to be delegated to those below not only clogs and delays work but means an avoidable waste of time and labour and leads not infrequently to a diminution in the feeling of self-confidence and the sense of responsibility of the officers who are obliged to report even trivial cases for orders. We consider that there is considerable scope for decentralization both of work and of powers in the department. We examine this question at some length in this chapter. The acceptance of our recommendations will mean a considerable saving, in the various grades of offices of the time now spent in correspondence and should make it possible to effect some retrenchment in the staff employed. We find it difficult, however, to indicate to what extent such retrenchment would be possible. The possibility is one for separate investigation after Government have passed orders on the recommendations for decentralization which we make below.

37. The powers now exercised by the officers of the Public Works Department may for convenience be considered under the following heads:—

(1) Powers in respect of appointments, postings, grant of leave and exercise of discipline over officers and subordinate establishments;

(2) Powers under the Fundamental Rules and Travelling Allowance Rules; and

(3) Powers under the Public Works Department Code.

38. Appointments, postings and transfers in these days are governed by statutory rules. The Civil Services (Classification, Control and Appeal) Rules regulate the punishment and control of officers of the Indian Service of Engineers and of the Madras Engineering Service. As regards the decentralization of such powers in respect of the subordinate services in the department, we find that in G.O. No. 2386 W., dated

21st September 1931, powers were delegated to Executive Engineers, Assistant Engineers and other officers of similar status. Delegation to a limited extent of powers in the matter of appointments and leave also were made to these officers in respect of certain subordinate and menial establishments under them in G.O. No. 1000 W., dated 3rd May 1932. We consider that these delegations were in the right direction and have no further recommendations to make in respect of the establishments covered by them.

39. We are of opinion, however that the powers to grant leave possessed by the Chief Engineer and Superintending Engineers deserve to be enhanced.

Under subsidiary rule 2 under Fundamental Rule 66 the Chief Engineer as head of the department may grant leave to gazetted officers whether of the Indian Service of Engineers or of the Madras Engineering Service only when no extra expense is involved thereby. The condition subject to which alone this power can now be exercised prevents the Chief Engineer from exercising it at all and every case of grant of leave to gazetted officers has to be submitted to Government. In the case of the Madras Engineering Service there is the additional anomaly that while leave has to be sanctioned by Government the posting of substitutes is within the Chief Engineer's powers. The question of delegating powers to the Chief Engineer to grant leave to gazetted officers without being subject to the condition that no extra expense is involved thereby was raised in 1925, and again in a modified form in 1931 and negatived on the ground that such a delegation could not be made in isolation in the case of the Public Works Department but if made should apply to all departments. It appears also to have been considered that as a general rule it is desirable to retain the power to grant leave to gazetted officers in the hands of Government. For the same reasons the proposal to vest in Superindenting Engineers the power to grant leave up to one month to gazetted officers under them was also rejected. We are unable to appreciate this hesitation. There are now in the department nearly 250 gazetted officers of all ranks and the occasion for the exercise of the power to grant leave is frequent. Government, we find, almost invariably accept the Chief Engineer's recommendation on a leave application as a matter of course. We think therefore that the Chief Engineer should be given the power to grant leave to Executive Engineers and Assistant Executive Engineers of the Indian Service of Engineers and to Assistant Engineers of the Madras Engineering Service without any limit or condition. Only when it is proposed to refuse leave to a gazetted officer need the case be referred to Government.

40. The Chief Engineer has at present no powers in the matter of grant of leave to officers belonging to the Madras Engineering Workshop Service or to the Assistant Superintendent, Divi Pumping station, or the Assistant Superintendent, Public Works Stores. We understand that it is proposed to include them in the Madras Engineering Service. There are only five officers in class II of the

Madras Boiler Service in respect of whom also the Chief Engineer has no powers for granting leave. We consider that the Chief Engineer should be given full powers in the matter of grant of leave to all the officers mentioned above.

41. For supervisors in the Madras Engineering Subordinate Service, as the Chief Engineer is the appointing authority, he alone can grant leave to them. Superintending Engineers have no powers in the matter. In 1931, the Chief Engineer recommended that Superintending Engineers might be empowered to grant leave to supervisors up to a limit of six weeks provided no substitute was necessary. The recommendation was not accepted. There are over 450 supervisors and the cadre also provides for a leave reserve (in the temporary establishment) which is distributed to the various circles by the Chief Engineer. The establishment is a large one scattered over seven circles and an appreciable volume of correspondence between Superintending Engineers and the Chief Engineer should be saved if applications for short leave not exceeding one month are allowed to be disposed of by Superintending Engineers provided no substitute from outside the circle is necessary. We recommended accordingly. In respect of overseers in the Madras Engineering Subordinate Service, the Chief Engineer recommended delegation of powers to Executive Engineers to grant leave to overseers but stated that unless Executive Engineers were also empowered to appoint overseers to additional charges under Fundamental Rule 49, the delegation of power to Executive Engineers to grant leave would be of little value. The proposal to invest Executive Engineers with powers to make dual appointments was dropped and with it the proposal to invest them with powers to grant leave also. We consider that Executive Engineers should be empowered to grant leave to overseers up to a limit of one month provided that no substitute from outside the division is necessary.

42. As regards the other members of the Madras Engineering Subordinate Service like draftsmen and tracers and the members of the ministerial and petty establishments we do not consider it necessary to recommend any change in the powers now obtained in respect of grant of leave.

43. The Fundamental Rules confer on the Chief Engineer certain powers to be exercised by him as the head of a department. We have examined all of them. Some of them like powers to suspend the lien of an officer (Fundamental Rule 13), to order transfers of charge at other than headquarters (Fundamental Rule 17), to sanction the acceptance of honoraria under sub-rule (8), under Fundamental Rules 46 and 47 and to sanction the retention in service of a non-ministerial servant after the age of 55 [Fundamental Rule 56 (a)] do not call for frequent exercise and do not involve much work or correspondence. We agree that they may be left as they are. As regards sanctioning the acceptance of fees under subsidiary rule 8, under Fundamental Rule 47, we observe that the Surgeon-General and the Director of Public Instruction

have power up to Rs. 1,500 in each case. We therefore recommend that the limit for the Chief Engineer should be raised from Rs. 500 to Rs. 1,500.

44. Under the delegation under Fundamental Rule 49, heads of departments are empowered to appoint persons holding one office to be in additional charge of another in cases where they are the appointing authorities and in other cases where it is not proposed to grant extra remuneration for the additional charge. We consider that in all cases where the additional charge is ordered by the Chief Engineer he should have discretion to sanction the additional remuneration and should not be obliged to obtain the Government's orders. In the case of the Madras Engineering Subordinate Service a similar power should be devolved on Superintending Engineers. We observe, however, that this is not possible under the present rules as Superintending Engineers are not "heads of departments." If this is the only obstacle in the way we recommend that the desirability of declaring Superintending Enigneers to be heads of departments for this purpose should be examined with reference to officers similarly situated in other departments.

45. Under the Madras Travelling Allowance Rules the Chief Engineer exercises the following powers :—

(1) The Chief Engineer may for specially recorded reasons permit a Government servant to travel and draw mileage allowance by a route other than the shortest (Travelling Allowance Rule 20).

(2) The Chief Engineer may permit a Government servant in each case to draw daily allowance for a continuous halt up to thirty days at any one place (Travelling Allowance Rule 38).

(3) The Chief Engineer may permit a Government servant compelled on a sudden emergency to leave his camp and proceed rapidly on duty to a place more than 20 miles distant, to draw the actual expense of maintaining such camp in addition to the mileage admissible whether the camp be moved or not.

(4) The Chief Engineer may permit a Government servant who for valid reasons carries his personal effects by road or canal between stations connected by rail to draw actual expenses up to the limit of the amount which would have been admissible had he taken the maximum number of maunds by goods train [Travelling Allowance Rule 68 (iii), note 2].

(5) The Chief Engineer may in respect of non-gazetted subordinates decide for journeys generally or for particular journeys what class of accommodation a Government servant should be allowed for journeys by steamer (Travelling Allowance Rule 32).

All these powers are exercised by the Chief Engineer as head of the department but we see no reason why Superintending Engineers should not be permitted to exercise them in respect of officers of the Madras Engineering Service, Madras Engineering Subordinate Service and the Ministerial Service working under them. We consider that in these cases also the desirability of declaring Superintending Engineers to be heads of departments for the purpose of these rules be examined with reference to officers similarly situated in other departments.

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46. The Public Works Department Code lays down the financial limits up to which each class of officer can exercise powers to accord technical sanction or give administrative approval to works. We have examined each item in the paragraphs in the Code dealing with these powers. It seems to us generally that the limits are in most cases unduly low. For instance the limit of Rs. 10,000 to the Chief Engineer's power of sanction in the matter of estimates for works in the Buildings and Roads branch is low considering that the Chief Engineer is the head of an important department of Government. We observe however that this is due to the fact that according to budget practice all schemes costing over Rs. 10,000 should be placed before the Government for sanction. It seems to us that an increase in the powers of all grades of officers would conduce to more expedition and greater efficiency and less correspondence. We summarize below the delegations we regard as desirable in regard to each item of these powers.

47. Powers relating to the Building and Roads Branch.

I. Estimates.

(1) *Administrative approval*—(i) *Works required for the Public Works Department (other than residential and electrical works).*—The Chief Engineer's powers may be left as they are; but Superintending Engineers should have the same powers as the Chief Engineer, i.e., up to Rs. 10,000 and Executive Engineers should have powers up to Rs. 2,500.

Paragraphs 399 I (a) (1), 401 I (a) (i) and 410 I (a) (i) of the Madras Public Works Department Code.

(ii) (a) *Improvements to existing residential buildings (other than quarters for inferior servants).*—The powers of the Chief Engineer, Superintending Engineers and Executive Engineers should be fixed at Rs. 3,000, Rs. 1,000 and Rs. 500, respectively, subject in all cases to the condition that the standard rent of buildings does not exceed 10 per cent of the average emoluments of the tenant for whom it is intended.

Paragraph 421 of the Madras Public Works Department Code.

(b) *Works connected with quarters for employees in inferior service.*—Executive Engineers should have powers up to Rs. 2,000.

(iii) *Electrical works (provided it is not the first installation)*—

(a) *Non-residential building.*—The Chief Engineer should have powers up to Rs. 3,000, Superintending Engineers up to Rs. 1,000 and Executive Engineers up to Rs. 500.

Paragraphs 399 I (a) (ii) and 401 (a) of the Madras Public Works Department Code.

(b) *Residential buildings.*—The Chief Engineer, Superintending Engineers and Executive Engineers should have the same powers as those recommended under item (ii) (a) above.

Paragraph 423 of the Madras Public Works Department Code.

Paragraphs 399 I (a) (iii) and 401 (b) of the Madras Public Works Department Code.

(iv) *Contribution works.*—The Chief Engineer, Superintending Engineers and Executive Engineers should have full powers without any money limit.

Paragraphs 399 I (b) (v), 401 (c), 410 (b), 411 (a) and 418 of the Madras Public Works Department Code.

(2) *Technical sanction.*—No further delegation of power is necessary under this item.

II. Contracts.

Paragraphs 399 (v), 406, 413 and 418 (d) of the Madras Public Works Department Code.

The Chief Engineer has full powers in the matter so long as the amount is within the sanctioned estimate and the present limits for Superintending Engineers, Executive Engineers and Subdivisional Officers together with the discretion given to the Chief Engineer to raise these limits in the case of selected Executive Engineers and Subdivisional Officers are in our opinion suitable and do not require extension.

III. Sale and Dismantlement of buildings.

Paragraph 242 of the Madras Public Works Department Code.

Executive Engineers should be given powers up to Rs. 1,000 subject to the approval of the Collector of the district and to the conditions attaching to the exercise of the power by the Chief Engineer and Superintending Engineers.

IV. Furniture.

Paragraph 414 (a) (ii) of the Madras Public Works Department Code.

Executive Engineers should have powers up to Rs. 250 instead of Rs. 50.

Paragraphs 399, 407, 414 and 418 of the Madras Public Works Department Code.

V. Tools and Plant.

VI. Livestock.

VII. Disposal of stores.

No change need be made in the existing powers.

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VIII. Reappropriation of funds.

Paragraph 399 II. (7) of the Madras Public Works Department Code.

Paragraphs 408 (1) (a) (i) and 415 (1) (i) of the Madras Public Works Department Code.

The Chief Engineer's power to reappropriate funds is limited to Rs. 10,000; no reappropriation could be made to new works (major) costing over Rs. 10,000 as they are to be treated as Part II schemes. The limit of Rs. 10,000 fixed for major works may well be raised to Rs. 25,000 and the Chief Engineer given powers up to that limit to reappropriate funds. The powers of Superintending Engineers and Executive Engineers may remain as they are.

IX. Rents.

Paragraphs 247–248 of the Madras Public Works Department Code.

Hire of office accommodation for officers of the Public Works Department.—The powers of Superintending Engineers in the matter may be delegated to Executive Engineers.

X. Write off of losses.

Paragraphs 399 (vi), 407 (d) and 414 (6) (iv) of the Madras Public Works Department Code.

The Chief Engineer may be given powers to write off losses up to Rs. 1,000 and Superintending Engineers up to Rs. 500.

48. Powers relating to the Irrigation Branch.

I. Administrative approval.

Paragraph 400 of the Madras Public Works Department Code.

(1) 55. *Construction of irrigation, navigation, embankment and drainage works.*—The limit for the Chief Engineer's powers should be raised to Rs. 25,000 and Superintending Engineers should be given power up to Rs. 2,500—this power to be exercised with the consent of the Collector of the district.

Paragraph 404 of the Madras Public Works Department Code.

(2) *XIII—Extensions and improvements.*—The Chief Engineer's powers may remain as they are; but Superintending Engineers should be empowered to accord administrative approval to estimates up to Rs. 5,000 after obtaining the approval of the Collector of the district.

(3) 15. *Other revenue expenditure financed from ordinary revenues—Capital and Revenue accounts not kept.*—In respect of miscellaneous expenditure the Chief Engineer should be given powers up to Rs. 2,500 and Superintending Engineers up to Rupees 1,000.

Paragraphs 400, 404, 408 and 412 of the Madras Public Works Department Code.

(4) *Contribution works.*—No change need be made in the existing powers.

II. Technical sanction.

Paragraphs 404 and 408 of the Madras Public Works Department Code.

55, *XIII*, 15 *and contribution works.*—Superintending Engineers should have powers to accord technical sanction to estimates up to Rs. 1 lakh and Executive Engineers up to Rs. 10,000 in respect of both original works and repairs.

III. Excess over estimates.

Paragraphs 400 (c), 401 (d), 410 (c) and 417 (f) of the Madras Public Works Department Code.

No further delegations are necessary in respect of this item.

IV. Reappropriation.

Paragraph 400.II (1) of the Madras Public Works Department Code.

Under 'Extensions and Improvements' and under 'Works' the powers of the Chief Engineer to reappropriate funds are limited to Rs. 10,000. The limit may well be raised to Rs. 25,000.

V. Miscellaneous.

(1) *Suits.*—The Chief Engineer may be empowered to sanction the institution and defence of suits and may also be authorized to consult the Government Pleader where necessary.

(2) *Irrigation Advisory Boards and Panchayats.*—Members of Irrigation Advisory Boards and Panchayats may be appointed by Collectors in consultation with the Executive Engineers concerned.

(3) *Licences.*—Licences to occupy river, canal, channel and drain porambokes may be granted by Collectors in consultation with the Executive Engineers concerned.

(4) *Extension of dates for completion of works.*—Under the note to paragraph 384 of the Public Works Department Code, Superintending Engineers are empowered to sanction extension of dates of completion of works the estimates for which have been sanctioned under the open capital rules. The power now exercised by Superintending Engineers may be delegated to Executive Engineers.

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CHAPTER V—ORGANIZATION OF THE DEPARTMENT—SOME SUGGESTED CHANGES CONSIDERED.

49. At the top of the present organization of the department, there are two Chief Engineers, one of them in charge of Irrigation and the other in charge of Roads and Buildings together with other miscellaneous work. This functional differentiation of work is, however, not repeated in the case of the administrative and executive officers of the department below the Chief Engineers. Superintending Engineers, Executive Engineers, Subdivisional officers and section officers attend to duties connected with both irrigation and roads and buildings in their charges. The mileage of roads in charge of the Public Works Department is however so poor when compared with that in charge of local boards that it may be left out of account in considering the work of the department. The gradual transfer of Government roads and buildings to local authorities was advised by the Government of India on the recommendation of the Public Works Reorganization Committee of 1917. Roads are practically already transferred to local boards almost entirely, the Government being in charge only of a few ghat and agency roads. The decision taken over a decade ago by this Government against the transfer of Government buildings to local authorities was in our opinion correct. Nothing has happened since justifying a reconsideration of that decision. In 1923 the Public Works Department Enquiry Committee, Madras, recommended the amalgamation of the buildings and roads branch of the Public Works Department with the local fund engineering establishments. This implied as a corollary the division of the Public Works Department staff into two branches—Civil Works and Irrigation. Except in the three deltas, such a division would mean both increased cost and waste of energy and even in the deltas we doubt whether the separation would mean any appreciable increase in the efficiency of the officers who will be confined to irrigation work. The amalgamation of the engineering establishments of local authorities and of the Roads and Buildings branch of the Government Public Works Department would not be possible without a serious inroad being made on the powers possessed already by local authorities who are therefore unlikely to welcome it. We examined the question from a fresh point of view, viz., to see if by such an arrangement it was possible to eliminate intermediate higher supervision for that portion of the Public Works Department work relating to buildings and roads. Such a possibility rested on the assumption that the services of a Superintending Engineer were not so important or necessary in a predominantly buildings and roads area if divisions and subdivisions could be earmarked as irrigation or buildings and roads charges. We are satisfied that this assumption is wrong. The assistance of Superintending Engineers is necessary for exercising proper control and supervision over the executive staff of the department as much for the Chief Engineer, Roads and Buildings, as for the Chief Engineer, Irrigation.

The separation of the two branches will mean no economy. On the other hand, it is likely to increase expenditure. We are therefore unable to recommend it.

50. The suggestion for the amalgamation of the minor irrigation staff with the Public Works Department has, however, potentialities for economy in the cost of establishments which are by no means negligible. At present both the minor irrigation subordinates and the Public Works Department staff cover the same area each in respect of his work. Some figures as to the work of the minor irrigation staff will be found in appendix II. The number of irrigation works in their charge is 32,632 though only 3,087 of these get anything spent on them for maintenance on the average per year. The acreage irrigated by minor irrigation works is about one-sixth of the total irrigated area in the presidency. About 15 lakhs are spent on these works per annum. And for looking after this work we have a kind of miniature Public Works Department working under Collectors. The amalgamation of the minor irrigation staff with the regular Public Works Department will ensure better professional supervision and control. It will necessitate an increase in the number of sectional charges in the Public Works Department but the number must be much smaller than the number of minor irrigation sections which will be abolished. No increase in the number of subdivisions or divisions is likely to be necessary. The possible objections to the transfer of minor irrigation works to the Public Works Department are that the touch which the tahsildars and other revenue subordinates have with the ryots will thereby be lost, that the Public Works Department officers cannot in the nature of things be in touch with the ryots to the same extent as the revenue officials and that the ryots themselves may not on sentimental or other grounds be readily agreeable to the change. We do not attach much weight to these objections and in any case in view of the possible field for substantial economy in establishments on account of the amalgamation we recommend that this question is one deserving of investigation by Government. The Chairman, who has since examined this matter as a member of the Board of Revenue is not prepared to agree in this recommendation.

51. The Sanitary Engineering Department has been in existence as a separate branch of the Public Works Department organization since 1910. In 1931, it consisted of one Sanitary Engineer, four Deputy Sanitary Engineers and one Personal Assistant to the Sanitary Engineer. As a result of the recommendations of the Retrenchment Committee the strength of this department was reduced to one Sanitary Engineer and two Deputy Sanitary Engineers. We are unable to suggest further retrenchments in the executive of such a small organization. We considered whether it would not be better to make the whole of it a part of the Chief Engineer's office, to give the Chief Engineer two deputies or one deputy with one or two sub-deputies under him for sanitary engineering work and whether by such an arrangement a certain amount of economy could not be achieved. In view however of the almost certain development of the volume of

sanitary engineering work in the future and the apprehension of the Chief Engineer that the proposed arrangement would throw on him an enormous quantity of additional work and responsibility we have decided not to recommend it. We consider however that one improvement in the present functioning of the limited number of officers in the department is urgently necessary. At present its work is distributed on a territorial basis, the two Deputy Sanitary Engineers being stationed at Trichinopoly and Bezwada each in charge of a circle comprising about half the presidency. We agree with the two Chief Engineers that this distribution is wrong in principle in the case of such a small department with only two officers and a head. We are satisfied that it leads to inefficiency and waste of time and results in interminable and unnecessary correspondence. The most suitable and efficient arrangement for this small department is to locate the two deputies at Madras, give them and the Sanitary Engineer a common office and distribute the work between them on a functional basis. Such a system is peculiarly suited to this department. The department has no executive duties. Its functions are mainly to investigate and design schemes of sanitary improvements for municipal and local board areas. The execution of the schemes designed by them is done by the executive staff either of the regular Public Works Department or of the local body concerned. The maintenance of the schemes after their execution is entirely the responsibility of the local authorities though the officers of the Sanitary Engineering Department are expected to supply expert advice and help to the local authorities even in regard to such maintenance. All this work they can do conveniently from Madras. The amalgamation of the offices of the deputies with that of the Sanitary Engineer should by eliminating duplication of work and unnecessary correspondence make it possible to effect some economy in the office staff employed which will more than compensate for the extra travelling allowance, if any, that the deputies may have to draw. We therefore unanimously and strongly recommend that the two Deputy Sanitary Engineers should be brought back to Madras and that work should be distributed to them on a functional basis.

52. The boiler inspection staff consists of one Chief Inspector of Boilers and five Inspectors in charge of territorial circles. The main duty of the department is in connexion with the administration of the Indian Boilers Act, 1923. It also inspects the pumping plants of local bodies and assists the Sanitary Engineer in the preparation of proposals for the installation of pumping plant and similar mechanical equipment for water-supply and drainage schemes. The Chief Inspector of Boilers is under the immediate control of the Sanitary Engineer and the Chief Engineer is the head of the department—the ultimate control resting with Government. It struck us as peculiar that this department should be under the intermediary control of two officers. The first Boiler Inspector was appointed in 1895. It was then ordered that as he would have to work under the Sanitary Engineer in regard to municipal engines and boilers, he should be subordinate to the Sanitary Engineer in his duties as Boiler Inspector also, even though the then Chief Engineer had pointed out that the Boiler Inspector could well be

placed directly under the Chief Engineer. In 1921 the Government considered the question of the transfer of control of the Boiler Inspection staff from the Sanitary Engineer and the Public Works Department to the Director of Industries. But the then Sanitary Engineer to Government pointed out that the work done by the staff in connexion with municipal pumping machinery was so intimately connected with the Sanitary Engineer's work that it could not be carried out except under the direct control of the Sanitary Engineer. The staff was therefore continued under the control of the Sanitary Engineer. The duties of the boiler staff in respect of municipal pumping equipment are now a very small part of their work. The bulk of it is highly technical and concerns the administration of the Indian Boilers Act with which the Sanitary Engineer has no concern. Moreover the Sanitary Engineer is not yet the head of his own department and it is anomalous that he should exercise the powers of one in respect of the boiler staff. His interposition between the Chief Engineer and the Chief Inspector of Boilers only involves waste of time and unnecessary correspondence. We therefore recommend that the Boiler Inspection staff should be placed directly under the Chief Engineer, the intermediate control of the Sanitary Engineer being taken away. The Sanitary Engineer can always get the assistance of the staff in the matter of inspection of municipal pumping and other plant. The Chief Engineer will no doubt see that the Chief Inspector of Boilers and his assistants give the maximum of help to the Sanitary Engineer in this respect.

53. The Consulting Architect to Government belongs to the Madras Service of Architects which consisted of two posts, viz., that of the Consulting Architect and the Assistant Consulting Architect of which the latter post was abolished in 1932 as a measure of retrenchment. The duties of the Consulting Architect himself have been entrusted to the present Director of Town Planning in addition to his own duties, the Director of Town Planning getting an allowance of Rs. 200 per mensem for the additional work. The amalgamation of the two posts of Consulting Architect and Director of Town Planning has been made possible because of the decrease of the Consulting Architect's work consequent on the reduction of grants for buildings. We consider that the present arrangement may continue until the increase of work as a result of the return of financial prosperity makes its continuance impossible.

54. There are now three workshops at Madras, Bezwada and Dowlaishweram. The staff in these shops has already been retrenched to the minimum necessary for their efficient running and we have no further recommendation to make in this regard. The larger question was however raised before us as to whether the department should maintain these shops at all. The workshops at Bezwada and Dowlaishweram are small affairs and in the interests of attending to departmental work in the Kistna and Godavari Deltas cannot but be maintained. The necessity for the workshops at Madras which are much the largest has, however, been called in question. We obtained information as to the articles manufactured and the method of costing adopted at these

shops. This will be found in appendix III. Doubts were expressed as to whether it was necessary in the interests of the Public Works Department for the workshops to manufacture the articles described in appendix III, whether any comparison had been made between the cost of the articles in the shops and of similar articles in the market, and whether in case all such articles could be purchased in the open market, it was necessary that the Government should go to the expense of running these shops. The reasons which have weighed with the Government in establishing and maintaining these workshops are well known. The Public Works Department require a larger number of articles for use on their irrigation and other works; besides there is always the necessity for a large department dealing with Engineering work of various kinds to have readily available a place where urgent repairs to machinery could be carried out and parts replaced or manufactured specially. The articles and parts repaired are not always standardized and it is not always possible for private firms to execute orders for supplies of such articles except on a large scale. It is, therefore, more convenient and sometimes cheaper in such cases to get the articles made in the shops. Moreover, the existence of such shops capable of complying with orders has a steadying influence on the price of such articles in the market. There is always a certain amount of repairing work to be done for the department and a workshop should be maintained in any case this purpose. A mere repair shop may, however, not pay and rder to keep down the overhead charges the shops have to go or a certain amount of original manufacture as well. The lic Works Workshops Committee of 1926 went into the ques- thoroughly and finally recommended not only that the shops ıld be retained on the ground that they had accumulated erience of the kind of work to be done but that they should be e generously housed and equipped. It was brought to our ce that whatever the conditions might have been in 1926, it was now claimed that most, if not all of the articles required for the Public Works Department and manufactured in the shops could now be supplied more cheaply by private firms represented in Madras, in which case there might not be the same justification for the Government maintaining the workshops on any scale higher than necessary for a mere repair shop. This claim cannot be conceded without careful and detailed investigation. We recommend that the report of the Public Works Workshops Committee of 1926 and the grounds on which it was based should with reference to the alterations in conditions since be reviewed by another committee now and that this committee do consist of (1) a Government representative—an engineer for preference, (2) an outsider who is not competing with the shops but who has his own shops and knows the nature of the work well, (3) an engineer from a private firm and (4) a chairman who should not be an engineer.

55. As regards the Public Works Stores, we understand that the work done therein was recently overhauled by a Special Officer with experience in Railway Stores and their management and that his report will soon be under the consideration of Government.

CHAPTER VI—CHARGES IN THE PUBLIC WORKS DEPARTMENT—EXAMINATION—POSSIBILITIES OF REDUCTION.

56. For the purpose of enabling us to carry out the examination required by the first of our terms of reference, statistics have been laboriously compiled and placed before us. We have for obvious reasons confined this examination to what may be called administrative and executive charges, viz., circles, divisions, subdivisions and sections. The establishments working in the Cauvery-Mettur Project have been left out of account here as elsewhere in this report. For comparing the extents of charges, we have obtained the area in square miles of the jurisdiction of each. To judge the volume of work, figures have, under irrigation, been collected showing the number of Public Works Department sources, length in miles of canals and drains and the extent of the ayacut under Public Works Department sources. Under roads, the length in miles in each charge has been ascertained. Under buildings their number and capital value are available. The volume of correspondence work in each charge is shown by the number of papers received and issued. Separate figures for expenditure on maintenance and original works are not ascertainable for each section but they have been obtained for each circle, division and subdivision. The total number and value of the estimates prepared or scrutinized, and the number and value of these either not executed or relating to departments other than the Public Works Department have also been furnished.

57. Under each of the categories referred to above, information is available for each of the six years selected by us, viz., 1923-24 (the year immediately after the previous retrenchment) and each of the years in the quinquennium 1927–28 to 1931-32; we have also for purposes of comparison figures showing the average for the quinquennium and the state of things on 30th June 1932.

58. We consider it unnecessary to burden this report with all this mass of detailed figures even in the shape of an appendix. We have, however, had prepared three statements which summarize this large volume of information and which we think are sufficient for our present purpose. These are—

(1) a statement showing the present strength and distribution of permanent and temporary charges (circles, divisions, subdivisions and sections);

(2) an abstract of the statistics showing for circles, divisions and subdivisions, the average of the five years ending 1931-32 under area, number of Public Works Department sources (of irriga.) length of canals, ayacut in acres, mileage of roads, number and capital value of buildings, receipts and issues of correspondence, expenditure on repairs and original works and number and value of estimates; and

(3) a similar abstract for sections omitting figures for expenditure and estimates.

These statements are printed as appendices IV, V and VI.

59. We commenced our examination of existing charges by comparing them with similar charges in other parts of India with the help of such information as was available in published statistics or in the reports of the Retrenchment Committees of other provinces. A comparative statement showing the strength of the Public Works Department staff in the major provinces of India will be found in appendix VII. The varying conditions of work in the different provinces preclude us from drawing any certain conclusions from the figures in this statement but, after making every allowance for factors which prevent accurate comparisons, we feel that we are perfectly safe in stating that Madras, as compared with other provinces, does not err on the side of extravagance in respect of the strength of establishments employed.

60. The mileage of roads in charge of the Public Works Department in Madras is poor; and we have no figures as to the number and capital value of buildings in charge of the Public Works Department in other provinces. It is, however, possible to compare the quantity of irrigation work per charge in Madras with what it is in some of the other provinces. The total area irrigated annually and the area irrigated per Superintending Engineer, Executive Engineer, Subdivisional Officer and Section Officer in the different provinces during the triennium ending 1928–29 are given in appendix VIII. The area irrigated per Superintending Engineer is largest in Madras among the provinces with the exception of the Punjab. In the Punjab, however, the Irrigation branch is separate from the Roads and Buildings branch and there is irrigation of dry crops on a large scale. In Madras, there is very little dry crop irrigation and except in the deltas even the wet irrigation is not concentrated. The Superintending Engineers are in charge of roads and buildings besides. The same remarks should be borne in mind when comparing Madras with the Punjab as regards the irrigated area per Executive Engineer, per Subdivisional Officer and per Section Officer. The average area for each of these charges in Madras is so low as it is because entirely or predominantly buildings and roads charges have been reckoned in, in making the calculations. If charges connected with major works of irrigation are alone taken into account, the area irrigated per Section Officer will probably be 18,000 acres instead of 12,799; and if the sections in the major deltas alone are considered, the average will be not less than 20,000 acres. In the Madras deltas, there are Executive Engineers in charge of three to four lakhs of acres and Subdivisional Officers in charge of one lakh of acres and more. The predominantly irrigation charges in the three major delta systems of Madras compare very favourably with similar charges in the Punjab.

Our general conclusion, therefore, is that the territorial charges in Madras are not comparatively lighter than those in other provinces.

61. This conclusion, howere, does not by itself enable us to say that the existing charges in the Public Works Department are the minimum for the efficient performance of the work entrusted, that they are properly distributed or that their number is not susceptible of reduction. One thing which stares us in the face in the statistics that have been placed before us is the inequality in jurisdictions and the disparity in the volume of the different kinds, and the total amount of all kinds, of work between a charge in one part of the presidency and a similar charge in another. The disparity is in some instances so marked that it cannot be adequately explained away by extensiveness of jurisdiction, difficulty of touring or the larger volume of work which does not result in expenditure. In Appendix IX, the circles, divisions and subdivisions are arranged in the order of the average amount which during the quinquennium ending 1931-32 they spent on maintenance and repairs and on original works. The figures are interesting. The maximum expenditure for any one division exceeded ten lakhs and the minimum was less than two lakhs; the maximum for a subdivision exceeded five lakhs and the minimum was below half a lakh. Twelve divisions spent about six lakhs each while seven spent less than four lakhs each. Against twenty subdivisions which spent more than two lakhs each, there were as many as thirty-four which spent less than a lakh and of the latter five spent less than even half a lakh. These divisions and subdivisions have grown with years and while the figures adverted to above are not conclusive against the continued existence of all of them or in favour necessarily of a reduction in their number, it was pointed out to us that they definitely indicated a case for detailed investigation as to whether the continuation of the entire number of existing charges was justified. But we felt that an investigation of this nature could not be undertaken by us unless an expert was placed on special duty, made to tour the various Public Works Department charges, study the volume and conditions of work in detail in each of them and then make recommendations which could thereafter, if necessary, be considered by us. We were, however, invited by Mr. Gopalaswami Ayyangar to consider whether irrespective and independently of the appointment of such a special officer we could not evolve a 'standard' for a normal charge of the different types and then examine the statistics collected for existing charges with reference to this standard with a view to determine the feasibility of making recommendations, if any, as to modifications therein. After considerable discussion and with a great deal of hesitation we decided to make an attempt in this direction and called for further figures from certain typical divisions and the subdivisions included therein.

62. The scheme advocated by Mr. Gopalaswami Ayyangar was on the following lines. Work for which the Public Works Department is responsible falls into two broad divisions—

(a) Work which does not result in expenditure, and
(b) work which results in expenditure.

We have discussed (a) already and recorded our conclusion that while the volume of it is considerable it is not possible to say what

proportion of the time of the different classes of officers is occupied with it. No standard or normal that we can evolve, could be related to (a). It must be related to (b) and it is only appropriate that in the biggest spending department of the State, if we are to have a standard for charges at all that standard should be based on expenditure. The officers holding all our existing charges are in addition to doing the work falling under (a) responsible for expenditure falling under (b). With reference to the statistics already obtained it is possible to fix the normal capacity for expenditure of a division or subdivision. It is possible also to fix the maximum capacity. The difference between the normal and maximum capacity will be the margin within which additional work resulting in expenditure could be thrown on the charge. The charge must be territorial and should be subject to modification only on account of changes in conditions of a permanent nature and should not be interfered with even if the actual grants for expenditure in a particular year or two are less than the normal capacity referred to above. All work in the charge in excess of its maximum capacity should be looked after by special temporary staff which should be appointed for the work, should be taken off after the work is completed and should not interfere with the normal work of the charge.

63. Having fixed a standard in this way, the examination of existing charges should be taken up. The main items of work resulting in expenditure are—

(i) maintenance and repairs, and
(ii) original works.

The value of the irrigation and building assets of the State exceeds 23 crores; there are over 1,800 miles of road besides. These assets are being annually added to. They obviously require maintenance. The normal rate of maintenance of these assets could be arrived at by taking the average over a series of years of expenditure—

(a) on working expenses at so much per acre irrigable,
(b) on ordinary and special repairs for buildings at a percentage of the capital value; and
(c) on repairs including periodic renewal of roads at so many rupees per mile.

With reference to the statistics available, the amount of the normal grant for the maintenance of the different forms of assets in each existing charge according to the above rates should be ascertained and to this might be added, if necessary, the average proportion of the maintenance grant which the allotment for original works over a series of years represents. The total of the two would give the normal total expenditure for the existing charge and if this is less than the normal spending capacity of such a charge fixed under the previous paragraph, there would, other things being equal, be a *prima facie* case for considering whether the jurisdiction of the charge should not be enlarged. If other things are not equal, allowance should be made for the disturbing factors and deviations from the standard permitted.

64. In this way, the permanent charges might be fixed on a territorial basis and temporary staff confined to specific works of a temporary nature after the completion of which they will be taken off. The cutting and reshuffling of territorial charges which now takes place on account of the employment of temporary staff and the anomaly of a number of territorial charges on a temporary footing will no longer exist.

65. Before discussing in detail the scheme thus outlined by Mr. Gopalaswami Ayyangar, we decided to obtain for typical irrigation divisions, roads and buildings divisions and divisions combining both irrigation and roads and buildings, as also for the subdivisions included in such divisions the average for the 5 years ending 1930-31 and the figures for 1931-32 of the amounts of working expenses per acre of irrigation, of the percentage of the capital value for maintenance of buildings, and of the maintenance expenditure per mile of road. We also called for the average total expenditure on maintenance and repairs and on original works in each of these divisions and subdivisions. These figures have been obtained for 6 divisions and 22 subdivisions. They will be found in appendix X.

66. The figures obtained exhibit variations between one charge and another in almost every one of the respects referred to by Mr. Gopalaswami Ayyangar. While in his opinion the variations are themselves an indication of the need for laying down a standard and, by applying that standard, for reducing the inequalities between one charge and another, the majority of us are of opinion that these variations are proof that a reliable standard or normal cannot be fixed in such a matter. The conditions of work varied enormously in different areas in the presidency. Each division and subdivision had its own peculiarities and the fixing of a standard on the basis of expenditure would be purely hypothetical and even the special officer whose appointment we have suggested might not be successful in arriving at any normal standard of the kind suggested, though he might be able to suggest a few readjustments of charges here and there. We, as a Committee, have examined in detail the principles that have been suggested for retrenchments in establishments. We are not prepared to accept the rough and ready method of adjusting them with reference to the ratio of cost of establishments to works outlay. The rest of us have given very careful consideration to the proposal of fixing normals on the lines advocated by Mr. Gopalaswami Ayyangar and have gone very carefully through the great mass of figures placed before us but have been unable to fix a satisfactory standard for examining the adequacy or otherwise of existing charges in the Public Works Department. We would only add that the Retrenchment Committee itself recommended the appointment of a special officer with expert knowledge to go into the question, that this Committee does not possess that expert knowledge and that it is unable therefore to come to a satisfactory decision on the matter.

67. We wish to make it clear, however, that it is by no means our conviction that all existing charges should, and deserve to,

remain as they are or that no readjustment of their jurisdictions or reduction in their numbers is possible. We are, no doubt, of opinion that, in the light of such scrutiny as it has been possible for us to make of the statistics collected for us, there is no case for interfering with existing jurisdictions in respect of the great bulk of existing charges, but we recognize that in some few cases there is room for altering the limits and reducing the number of such charges. With the help in addition of the personal knowledge which some of us possess of parts of the Presidency, we reviewed rapidly the figures in appendix V relating to the work in each circle, division and subdivision. As a result of this review, we consider that the following proposals for retrenchment are deserving of consideration.

68. We gather that when the Orissa Province is constituted, most of the area now included in the Koraput and Ganjam divisions will be transferred to the new province. The Vizagapatam division—to which what remains of the Ganjam division could be added—will then be the only division left in the Waltair circle and might be added to the Dowlaishweram circle. There will then be no necessity for a separate circle in Waltair which might be abolished.

69. The Ramnad division is now on a temporary footing. It is a light one consisting of the two subdivisions of Madura and Ramnad. The latter which is also on a temporary footing could be abolished, the Sattur and Srivilliputtur taluks being transferred to the Tinnevelly division. The Madura subdivision will be more appropriately included in the Periyar division. Relief could be given to the latter by transferring the Dindigul subdivision to the Trichinopoly division. The Ramnad division will thus have no subdivisions left and might be abolished.

70. The present Madanapalle division is the lightest in the Presidency. Though it has an extensive area included in it, the acreage under irrigation is less than 75,000 while the average annual expenditure is less than Rs. 2 lakhs. The Bellary, Kurnool and Salem divisions are also light, the last-mentioned being the lightest of the three. Of the three subdivisions in the Madanapalle division, the Penukonda subdivision might be abolished and its jurisdiction added to the Anantapur subdivision; the Cuddapah subdivision might be included in the Kurnool division; the Madanapalle subdivision might be taken over by the North Arcot division and as a compensation the Polur subdivision might be added to the Salem division which now has only two subdivisions. The Madanapalle division might then cease to exist.

71. After the five-year programme of improvements is completed in the Godavari delta, the possibility of combining the Godavari Central and Godavari Eastern divisions might be within the range of practical politics.

72. After the formation of the Orissa Province and the Russellkonda subdivision goes out what remains of the Berhampur subdivision might be tacked on to the Chicacole subdivision, the latter being added as thus enlarged to the Vizagapatam division.

73. The amalgamation of the Kunnavaram and Dummagudem subdivisions in the Godavari Northern division is obviously indicated by the statistics of work in the subdivisions. The abolition of the temporary Polavaram subdivision is also deserving of consideration.

74. When the East Bank Canal scheme is completed and the Divi subdivision ceases to exist, the question of combining subdivisions in the present Guntur division and adding them on to the Kistna Central division—thus bringing about the abolition of the Guntur division also—will have to be considered.

75. The amalgamation of the Bellary and Hospet subdivisions is also possible.

76. When permanent arrangements are made for redistribution of charges in the Tanjore and Trichinopoly circles in connexion with Cauvery delta irrigation, one of the subdivisions in the present Trichinopoly division might be abolished.

77. As regards sections, we fell we do not possess the detailed and intimate knowledge necessary for reviewing the limits of and the necessity for existing charges. We are generally of opinion that there is no possibility of effecting a reduction in the existing number of *permanent* territorial section charges. Temporary section charges come under review once a year, when application for renewal of sanction has to be made. A detailed examination however of the number and jurisdictions of permanent and what now are termed quasi-permanent sections should be one of the matters referred to the Special Officer, if one is appointed.

CHAPTER VII—PERMANENT AND TEMPORARY STAFF.

78. The great bulk of the work in the Public Works Department is of a permanent character and should be attended to by establishments on a permanent footing. Over and above this permanent work, for which provision should be made even in the leanest of years, there is always additional work the volume of which varies with the funds available for expenditure. The position of the Public Works Department staff for dealing with this extra work has necessarily to be so organized as to be capable of expansion or contraction. For ensuring this elasticity, there has, from the beginning, always been a large temporary staff employed in this department.

79. Paragraph 54 of the Public Works Department Code lays down that temporary establishments are entertained ordinarily "to meet the demand for extra supervision arising from time to time as well as to provide for the contraction as well as the expansion of staff as the volume of work diminishes or increases." This, however, does not indicate on what principles the strength of permanent establishments should be fixed. Nor does the statement that "the permanent staff determined by its territorial organization is supplemented by temporary staff where extra work has to be done" constitute a full explanation either of the existing conditions or of the past history of the Public Works Department staff organization. In 1925, Government declared "that temporary establishments should be allowed only for specific works which are outside the ordinary work of the department, and not to supplement the permanent establishment for carrying on the normal work and that if in any case it is found that the permanent staff allowed is not sufficient to cope with the normal work, the proper remedy is to sanction additions to the permanent establishments to the extent absolutely necessary." The order in which this principle—which we think is the right one—is laid down directed the addition of ninety supervisors to the permanent establishment on the ground that the number of temporary supervisors sanctioned for 'general duty' during the years of retrenchment had been about 105. The expression 'general duty' is vague and it does not appear that at the time ideas were clear as to what items should be taken, as included in the 'normal work' of the department for the purpose of determining the strength of the permanent establishments.

80. Paragraph 54-A of Public Works Department Code divides temporary establishments into three categories :—

"(a) Temporary establishments engaged to provide for the normal work of the department, i.e., in temporary territorial divisions or subdivisions. These may be regarded as quasi-permanent and integral parts of the territorial organizations and will be sanctioned on that basis. Provision will be made for them in the budget and it will not be necessary to obtain renewal of sanction every year.

"(b) Temporary establishments employed on the investigation and execution of projects and works with which the territorial organizations are unable to cope. Standing sanction should be obtained for these for the period required for their completion. Fresh sanction will not be required except for alterations in the sanctioned scale or for extensions of the sanctioned period.

"(c) Establishments of a purely temporary nature required for short periods. The prior sanction of Government should be obtained except when they are required to meet sudden emergencies such as floods, cyclones, etc."

Under the policy declared in 1925, categories (*b*) and (*c*) alone should be treated as temporary establishments and category (*a*) should be merged with permanent establishments. We also understand that no temporary posts in the Engineer and Upper Subordinate establishments have, during the last two years, been allowed to be treated as quasi-permanent. At present the only things in common between posts which are permanent and those which are quasi-permanent are that there is no term for their tenure and that the necessity for their continuance is not annually or periodically examined. But the holders of quasi-permanent posts share all the disabilities of the holders of other temporary posts, the most important of which are that they are not on an incremental scale of pay and that they have no pension rights unless before they retire they are confirmed in permanent posts. This we consider is unfair.

81. We have reasons also to think that the principles embodied in paragraph 54-A of the Public Works Department Code are not always kept in view when sanctions for temporary establishments are applied for or are accorded. It has not unoften happened that in assigning work to staff sanctioned for specific works the existing territorial jurisdictions of permanent charges have been interfered with for the purpose of enabling an equitable distribution among the men available of both the ordinary and special work. In our opinion, this cutting up of the normal jurisdictions and their reshuffling after the special work is over and after the temporary staff sanctioned for it is taken away should be avoided as far as possible if we are to attempt to confine temporary establishments to specific works. This, however, does not mean that permanent men should not be posted to temporary charges or temporary men to permanent charges. There also have been cases where temporary establishments applied for under category (*a*) of paragraph 54-A have been sanctioned under category (*b*) or category (*c*). The general policy should in our opinion be (i) to do away with category (*a*), and (ii) not to sanction any additions to the permanent establishments unless the volume of normal work has grown to such dimensions as to justify such additions being made as a permanent measure.

82. Appendix XI gives the number of temporary men under each of the three categories referred to above as reported by Superintending Engineers. It gives the number of men of each class for the quinquennium ending 1931–32 and the number on 1st January 1933. During the quinquennium there were some transfers from temporary to permanent establishments notably under Assistant Engineers and Supervisors, from one kind of temporary establishment to another, and from work-charged to temporary establishment. Even after making allowance for these, it will be noticed that the effect of the recent retrenchment campaign is very marked in the figures for 1st January 1933 in respect of almost every class of establishments. And the figures should further be taken as proof that the proportion of temporary establishments to the total is not so low as to necessitate our cutting down permanent establishments (except of course for reasons of a permanent nature) for the purpose of effecting the economy required even in a year of drastic retrenchments.

83. It appears to us that in the additions that were made to permanent establishments in 1925 and 1930 especially under supervisors, care was not taken simultaneously to make permanent those temporary *charges* of a territorial character which are required for dealing with the normal work of the department. The distinction between *charges* and *posts* (or appointments) was apparently not kept clear and it would strike one as *prima facie* anomalous that while the sanctioned number to-day of supervisor charges is only 203, the sanctioned number of permanent supervisor *posts* (or appointments) is 372. The permanent strength of a cadre cannot be exactly the same as the number of permanent charges which are intended to be manned by men belonging to that cadre but the difference between 203 and 372 is too large to be looked upon with equanimity. In a later paragraph, we have some proposals to make for reducing this difference.

84. The number of permanent *charges* should, however, be fixed with reference to what is required for attending to the *normal* work of the department and, except for a few special charges like those of the Deputy Chief Engineers, the Personal Assistants to Superintending Engineers, the teaching staff in the Engineering College and the like, should be based on a territorial jurisdiction. The definition of 'normal work' is by no means easy but we are clear that it should certainly include—

(*a*) the requirements of administrative work which does not result in expenditure,

(*b*) repairs and maintenance of existing works in the charge of the department, and

(*c*) the irreducible minimum annual programme of original works.

The territorial jurisdictions of charges should be so fixed that in addition to the items mentioned above the officer holding the charge will in a year when funds are available be able to look after some additional expenditure under (c). We have already said that we find it impossible to fix any standard for determining the size of charges. The sufficiency or otherwise of the work in each charge will have to be judged with reference to the conditions of work in that charge.

85. Having fixed permanent charges in this way, we have next to consider what other factors we have to take into account in fixing the strength of the cadre of the officers meant for such charges. These factors are important and we find that they are either ignored or are not adequately taken into account in the different classes of the Public Works Services, viz., the Indian Service of Engineers, the Madras Engineering Service and the Madras Engineering Subordinate Service (supervisors).

86. In the first place, we consider that each one of these classes should have its own leave reserve and that this should be included in its permanent strength. We would fix the leave reserves as follows :—

Indian Service of Engineers—14 per cent.

Madras Engineering Service—10 per cent.

Supervisors (permanent)—10 per cent.

,, (temporary)—7 per cent.

87. Secondly, a further addition has to be made to the permanent strength of posts on account of the minimum number of temporary charges that experience enables us to count on. We have recommended that the charges to be sanctioned on a temporary footing should hereafter be confined to categories (b) and (c) of paragraph 80 above. Of these the charges falling under category (b)—like the Cauvery-Mettur Project—may be left out as they are sanctioned for specific periods extending beyond a year.

Though individually the charges falling under category (c) will be temporary there is always a minimum number of them which can be counted on from year to year. This minimum number is always required for specific jobs of a temporary nature though such jobs from year to year vary as to place and nature of work. For dealings with this minimum quantity of temporary work, we recommend that an addition should be made to the permanent strength. We would call this a deputation reserve and suggest that the Government might after fuller investigation than we have been able to make fix the number of this reserve for each class of officers.

88. A training reserve does not exist and is not required for supervisors; nor for the Madras Engineering Service so long as it is recruited entirely by promotion from the Madras Engineering Subordinate Service. There is a training reserve of 26 for the Indian Service of Engineers but recruitment for this All-India service is now in abeyance and may be taken to have ceased. We understand that direct recruitment is contemplated for the unified Madras Engineering Service of the future and if such direct recruitment is introduced a training reserve will be necessary or

at least a few appointments should be added to the permanent strength to provide for recruits undergoing probation. The number of such posts should be fixed with reference to the total strength of the unified service and the annual number of direct recruits that may be decided on.

89. With reference to the considerations mentioned in paragraph 84 above we recommend that the conditions in the existing quasi-permanent charges be examined at once and that such of them as are held to be necessary for the normal work of the department be added to the strength of permanent charges. The rest should either be abolished and their jurisdiction amalgamated with or distributed among existing permanent charges or, if they satisfy the criteria, converted into temporary charges under categories (b) and (c) of paragraph 80 above. Temporary charges falling under (b) have to go out at the expiry of the period for which they are sanctioned. Those falling under (c) cannot in any case continue beyond the financial year in which they are sanctioned unless the sanction is renewed. When application is made to the Chief Engineer and the Government for the renewal of such sanctions, opportunity is annually afforded for the scrutiny of the necessity for the continuance of such charges and we recommend that such scrutiny should be rigorously exercised and that it should extend not merely to the need of the temporary charge concerned for the specific work for which it is suggested but also to the question, whether, the permanent division, subdivision or section in which the work is situated could not attend to the temporary work also.

90. Proceeding to the number of posts or appointments, we find that the number of sanctioned posts of Superintending Engineers is the same as the number of circles. One of the posts is temporary as the circle itself will be on a temporary footing until 31st March 1934. We have already made recommendations as to the continuance or otherwise of this temporary circle and post.

There are 33 permanent and 4 temporary divisions or charges equivalent thereto besides 7 circles and 2 Chief Engineers' posts. The actual strength of the Indian Service of Engineers at present is 68. As recruitment for this service has ceased, we have considered it unnecessary to examine in detail the adequacy of the permanent strength of this service.

91. Of subdivisional charges there are 100 permanent and 21 temporary. Of the latter 5 are territorial, the abolition of two of which (Polavaram and Ramnad) we have recommended as worthy of consideration and four are in the Electricity Department. Against 100, the number of permanent charges, there are 104 permanent sanctioned posts in the Madras Engineering Service. There are besides 26 sanctioned posts of Assistant Executive Engineers but not all of these (not more than 9 on the average) are now available for the charge of subdivisions. The cadre of the Madras Engineering Service after the retrenchment of 1922 had

a strength of 75. It rose to 81 in 1929. It was then reported that the average number over the preceding ten years of temporary sub-division charges (excluding the Cauvery-Mettur Project) had been 37 and on the analogy of the deputation reserve in the Madras Civil Service (executive branch) the Government added 20 permanent posts to the Madras Engineering Service. We think that it is premature to add any more on account of deputation reserve. No separate leave reserve now exists for the Madras Engineering Service. An addition deserves to be made on this account but we are unable to indicate the number to be added as it must depend on the constitution and strength of the new unified provincial service.

92. We now come to supervisors. In 1924 there were 182 permanent supervisors and 151 temporary supervisors, the percentage of temporary to permanent men being 83. There is no difference between the work done by temporary supervisors and that done by permanent men; but temporary supervisors were at a great disadvantage in the matter of their pay and promotion. It was also found that a large number of temporary supervisors, were regularly employed on general duty to supplement the work of the permanent staff the number of such men being 104 in 1922-23 and 105 in 1923-24, the years in which drastic retrenchments were made in the Public Works Department. The Government considered that in the best interests of the department the minimum number of temporary men employed to meet the normal requirements of the department should be put on a permanent footing and accordingly sanctioned in 1925 the transfer of 90 posts of temporary supervisors to the permanent establishment. In the same order the Government discontinued the grant of the incremental scale of pay to temporary supervisors which had till then been in force and directed that temporary men should be started only on the minimum of Rs. 80 if they were passed upper subordinates and Rs. 125 if they were passed engineers. The incremental scale was discontinued for the reason that temporary men would have better chances of confirmation in the permanent establishment in view of the addition of 90 posts made to that establishment. Owing to the great expansion subsequently of the activities of the department large additions to the temporary establishments had to be made and in 1929-30 the number of temporary supervisors was 352 while the number of permanent supervisors was 275. The percentage of temporary to permanent posts was 128 against 22·5 after the 90 posts were transferred to the permanent establishment in 1925. Under the altered conditions, the chances of temporary supervisors being made permanent and their position in the service were worse than they were before 1925 when they had an incremental scale of pay. The question of the grant of incremental scales of pay to temporary men was again raised but the Government preferred making a fresh addition to the permanent establishment to granting an incremental scale of pay to temporary men. It was reported in 1930 that on the average there had been 170 temporary supervisors appointed annually for general charges during the five years ending 1929-30. As this average was arrived at after counting in the high figures for the previous three or four years, the Government sanctioned in 1930 the transfer of 100 posts only of temporary supervisors to the permanent cadre. These additions to the permanent establishment in 1925 and in 1930 were made with a view to better the prospects of men in the temporary establishment and the number added on each occasion was based on the number of temporary men required for 'general duty'—but not with direct reference to the number of territorial, or other charges required on a permanent basis. The result is that now while the number of permanent charges is 203, the number of permanent supervisors' posts (or appointments) sanctioned is 372.

93. There are besides 93 temporary charges and a leave reserve of 32 temporary posts.

94. The Chief Engineer (General, Buildings and Roads) has recommended that 28 of the 93 temporary charges might be made permanent. A list of these is given in appendix XII. We are of opinion that this recommendation is worthy of immediate investigation by Government.

95. Assuming that the Chief Engineer's recommendation is accepted in full the number of permanent supervisor charges will be 231. We have next to consider what with reference to this number the strength of the cadre of permanent supervisors should be fixed at.

In accordance with our recommendation in paragraph 86 above, a leave reserve of 23 posts should be added to the permanent strength.

We have held that a training reserve is unnecessary for supervisors.

The only other reserve to be provided for in the permanent cadre is the 'deputation reserve.' This reserve has in the case of supervisors, under the existing system, to be in two parts. The first has reference to the number required to fill officiating vacancies in the Madras Engineering Service consequent on the grant of leave to officers in the Indian Service of Engineers and Madras Engineering Service. This number should, we think, be fixed at 20. The second must have reference to the principle laid down in paragraph 87 and the number must be fixed with reference to the minimum number of temporary charges falling under category (c) in paragraph 80 which can be counted on from year to year. We find it by no means easy to fix this number with certainty. Some indication is, however, given by the conditions at present. During the present retrenchment campaign, 159 temporary supervisors have been sent out and yet there are left 93 temporary charges. Deducting the 28 which the Chief Engineer recommends to be made permanent the balance is 65. In view of the fact that the outlay on works for 1932-33 has touched the lowest point since 1926–27, it is not unreasonable to assume that the number of temporary supervisor charges required as a deputation reserve is in the current year as low as it can ever be expected to be. In order, however, to be on the safe side we would suggest this part of the deputation reserve being fixed at 50.

96. The strength of the cadre of permanent supervisors will, under our proposals, work out as follows:—

(i) Present number of permanent charges ...	203
(ii) Number of temporary charges recommended by the Chief Engineer to be made permanent ...	28
(iii) Leave reserve ...	23
(iv) Deputation reserve—	
(a) For officiating in the Madras Engineering Service ...	20
(b) For Supervisor charges of a temporary nature ...	50
	324

The present sanctioned strength of permanent supervisors, viz., 372, should in the circumstances be considered to be in excess of requirements by 48. This excess is for the moment obscured by two facts, viz.—

(a) There are about 18 permanent supervisors employed in the Cauvery-Mettur Project, and

(b) owing to the ban on confirmations since 15th August 1931, there are only 317 permanent supervisors now.

We consider that the facts adverted to above are sufficient to point to the necessity of the Government investigating very carefully the questions whether the permanent cadre of supervisors should be retained at its present strength of 372 and, whether even if the general ban on confirmations is lifted it should not be maintained in this case until the investigation is completed and orders are passed.

97. Lastly in regard to the overseer establishment, the present number of permanent charges is 160 (excluding 1 Boat Superintendent in the Bezwada circle) and the number of permanent posts is 164. We understand that the excess of four posts is being utilized for manning temporary charges and that action is being taken to reduce the strength of permanent posts so as to correspond with the number of permanent charges. We consider that no leave or deputation reserve is necessary for this class of establishment and that no addition to the permanent strength need be made on that account.

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CHAPTER VIII—OVERHEAD CHARGES IN THE REGULAR PUBLIC WORKS DEPARTMENT.

98. The fifth of our terms of reference requires us to suggest economies in the overhead charges of the Public Works Department. The real executive of the department consists of Executive Engineers, Subdivisional Officers and Section Officers working in the districts. We have in previous chapters already examined the possibilities of retrenchment in these. Over the district executive staff come seven Superintending Engineers and two Chief Engineers who supply the higher supervision and control in the department. We proceed to consider whether any changes conducive to economy are possible in these two classes of superior officers.

99. We have examined in detail the nature and volume of the various items of work that are carried out by the two Chief Engineers and their offices. A Chief Engineer for Irrigation and another for all other work are indispensable in this province. The report of Mr. Hall who examined the system of work in the Chief Engineers' offices in 1930 shows that there is not much scope for retrenchment of the staff working under these two officers so long as the present system continues. The volume of correspondence and of noting and drafting work in the Chief Engineers' offices is very considerable and unless this is reduced it is not, in our opinion, possible to reduce the strength of the office staff. We have already indicated that some reduction in the volume of correspondence is possible if full effect is given to our recommendations for delegation of powers to subordinate officers and our suggestions for simplifying the system of accounts and audit. Besides, as Mr. Hall also has noted, the fact that the Chief Engineers themselves are not Secretary and Joint Secretary to Government has resulted in their having to spend more time than before on cases which have to be submitted to Government for orders. They are now expected to prepare a complete and self-contained report in every such case. It seems to us that the scriptory and drafting work which this particular item entails can be minimized if the Chief Engineers are empowered to send at their discretion their entire files in original to the Public Works Secretariat—instead of sending separate letters of a self-contained character accompanied by copies of all connected papers. This suggestion should, if accepted, be feasible in the case of other heads of departments as well—and we commend it for careful examination by the Government. Whether this one change in the method of submission of cases to Government for orders will permit of any appreciable economy is problematical and we are, therefore, not in a position to recommend any definite and immediate reduction in the strength of the staff of the Chief Engineers' offices.

100. There remains, therefore, the class of Superintending Engineers which is intermediate between the Chief Engineers and the district executive. Our attention has been drawn to the

principle laid down by the recent Thomas Committee in Bombay regarding the position of intermediate authorities. They said " we consider that in no department should there be more than one intermediate authority between the actual executive and the Government. The ideal organization as we see it is the executive operating in the districts, an administrative authority (which may be either an individual or a board of individuals) responsible for the administration and working of its department and endowed with sufficient powers to enable it to discharge this responsibility and a Secretariat dealing primarily with questions of policy and those involving large financial issues." If this principle were accepted the only intermediate authority between the Government and the executive in the districts should, in the case of the Public Works Department, be the Chief Engineers, and Superintending Engineers should be considered superfluous. The necessity for the existence of Superintending Engineers has been questioned by the ordinary lay critic in the Legislative Council and outside, and the usual impression is that such officers act in the main as post offices for the passing on of papers from the head of the department above to the actual executive officers below and from the executive officers below to the head of the department above. We have considered this question with much care and discussed its pros and cons in great detail and we cannot agree to this wholesale criticism. For controlling efficiently the large area in the Presidency and the large number of Public Works Department officers, the two heads of the departments should have the assistance of senior intermediate officers like Superintending Engineers who form in the hierarchy of Public Works Department staff the principal inspecting and supervising authorities. The criticism that Superintending Engineers are mere post offices is due mainly to the lack of a proper appreciation of their work on account of insufficient information and the best way of meeting uninformed criticism of the kind is by the appointment of really picked men to these posts which call for special efficiency. The necessity for Superintending Engineers is also due in some measure to the fact that many of the Executive Engineers' divisions have to be manned by comparatively junior officers of about seven or eight years' experience. These require advice and guidance in the discharge of their responsible duties. For the adequate safeguarding of public expenditure in this, the principal spending department of Government, it is necessary that the proposals of the Executive Engineers—especially of the junior ones among them—should be subjected to the scrutiny of experienced senior officers like Superintending Engineers. It is not possible for the head of the department to exercise such close scrutiny on each and every proposal of the Executive Engineers without the assistance of Superintending Engineers. We have, therefore, arrived at the conclusion that we cannot recommend the abolition of the Superintending Engineers as a class and that economy if any should be looked for only by investigating the possibility of a reduction in their number.

101. There are at present seven Superintending Engineers' circles of which one, viz., Dowlaishweram, is on a temporary basis.

When examining the necessity for each of the existing circles, we decided that, if the new Orissa Province was constituted and a good portion of the Ganjam district was transferred to that Province it would be feasible to abolish the present Waltair circle as a separate unit and to amalgamate what remains of it with the present Dowlaishweram circle. Any further reduction in the number of Superintending Engineers does not appear to us possible unless there could be a change in the present system under which they work. One of us Mr. Gopalaswami Ayyangar has placed before us a proposal for concentrating Superintending Engineers in Madras and amalgamating their officers with that of the Chief Engineers. This in his opinion will enable a substantial reduction being effected in the strength both of the Superintending Engineers and of their office establishments.

102. The following are the main features of the scheme and Mr. Gopalaswami Ayyangar's arguments in support of it :—

The real executive of the department, viz., the Executive Engineers and their subordinates work in the districts. It is not necessary that the Superintending Engineers who are not really executive officers but whose duties are of a supervisory nature should also be stationed in the districts. Superintending Engineers are necessary solely for helping the Chief Engineers to function properly and their proper place is with the Chief Engineers. They should therefore be concentrated at the headquarters of the Chief Engineers and their staffs amalgamated with the staff of the Chief Engineers. They must however continue to be touring officers, having territorial jurisdictions and responsible within those jurisdictions for all the Public Works Department work, both irrigation and buildings, which now devolves on them. The only item of their present work which might be taken away from them is the work connected with local bodies. This latter item of work should be concentrated for the whole Presidency in an extra Superintending Engineer who should also be located in the Chief Engineer's office and he should be made to deal with all matters relating to advising local bodies, according technical sanction to Local Fund estimates and inspecting such roads and bridges as require his inspection.

The Superintending Engineers will deal finally with all matters on which they have powers to pass orders. Cases which require the Chief Engineer's orders will be put up by the Superintending Engineers to the Chief Engineer. All correspondence which now takes place between the Superintending Engineer and Chief Engineer and all the delay and unnecessary work that it involves will be avoided. At present when any question of general importance is referred to the Chief Engineer, he has to send seven copies out to his Superintending Engineers. Each Superintending Engineer has to issue as many further copies as there are Executive Engineers. When the replies are received, each Superintending Engineer's office notes on the replies relating to the particular circle and drafts a letter to the Chief Engineer and despatches it together probably with copies of the replies received from all the Executive Engineers. When these are received in the Chief Engineer's office, they have to be noted on again. The reports received from seven circle offices have to be collated and a fresh draft letter has to be made and then despatched to Government with copies of all the replies from Superintending Engineers and possibly of the replies of all or some of the Executive Engineers. It is obvious there is an enormous waste of time and labour in these processes. If Superintending Engineers are concentrated in the Chief Engineer's office, most of these general questions referred to the Chief Engineer by Government could probably be replied to after personal consultation between the Chief Engineer and his Superintending Engineers at headquarters. If local facts have to be ascertained, the Chief Engineer on the advice of his Superintending Engineers can pick out the Executive Engineers from whom alone reports need be called for and on receipt of those reports the Chief Engineer's office will deal once for all with the whole matter and send a reply to Government.

The system will also save a great deal of time that is now wasted in the various Superintending Engineers' offices in the compilation of the various accounts and the consolidation of the various returns and statistics which are received from Executive Engineers. The whole work of compilation and consolidation will be done once for all in the Chief Engineer's office.

The possible objection to locating all the Superintending Engineers in Madras is that parties who wish to have personal access to them will be inconvenienced and that the opportunities of personal consultation between the executive staff in the districts and the Superintending Engineer will become smaller. As regards the first, the transport facilities which now exist reduce the inconvenience to the minimum and, except for those persons who are actually residents of the present headquarters of Superintending Engineers, the effort of reaching him at Madras and the time within which they could do so will not be appreciably greater or longer than under existing conditions. As regards officers in the districts again, the only persons with whom the Superintending Engineer can now be in fairly constant touch are the officers at his present headquarters. As regards places in his jurisdiction outside his headquarters, his being in Madras will make no difference, for even under existing conditions opportunities for consultation occur only when the Superintending Engineer tours in the area concerned and under the proposed scheme he will tour as much in his area from Madras as he would from his present headquarters.

It is necessary at least for one officer in the Public Works Department to specialize in regard to Local Fund work and for this reason, if for nothing else, it is advisable that there should be a special Superintending Engineer at Madras for this purpose. He will, like the other Superintending Engineers, dispose of cases within his own powers and will put up cases to the Chief Engineer for orders where such orders are required.

The concentration of all the offices in Madras under the same roof with the Chief Engineer's office and the reduction of work which it must mean should enable a substantial retrenchment in both the technical and clerical sections of the establishments. If the Superintending Engineers are all in the Chief Engineer's office, the necessity for Deputy Chief Engineers will disappear. Each Superintending Engineer may however bring over his Personal Assistant to Madras so that even for matters within his powers all routine could be disposed of by the Personal Assistant.

The delegations that the committee has already recommended should also bring about a reduction in the volume of work.

The proposals involved in the above scheme for the concentration of Superintending Engineers at Madras are the following: -

(1) The reduction of the number of Superintending Engineers from 7 to 5—four of them having territorial jurisdictions and dealing with Public Works Department work proper and the fifth having the whole Presidency for his jurisdiction and dealing with all Local Fund work.

(2) There are now 31 territorial divisions and these may be divided amongst the four Superintending Engineers in the most suitable manner.

(3) The four Superintending Engineers will attend to both irrigation and buildings within their respective jurisdictions.

(4) The two posts of Deputy Chief Engineers to be abolished.

(5) Each Superintending Engineer may continue to have a Personal Assistant of the Assistant Engineer's rank.

(6) The clerical and technical sections of the offices of Superintending Engineers and Chief Engineers to be amalgamated into one office, the work of the common office being divided functionally or territorially as the Chief Engineers may consider most suitable.

(7) The question of debiting the cost of the fifth Superintending Engineer in charge of Local Fund work to grants-in-aid paid to local bodies or recovering it from local bodies to be considered.

The average cost of one Superintending Engineer and his establishment has been calculated at about Rs. 60,000. On two Superintending Engineers the saving will be Rs. 1,20,000. The economy that would result by the amalgamation of office establishments can be put conservatively at about one-third of the Superintending Engineers' establishments amalgamated with the Chief Engineer's office. The saving on this account will be roughly Rs. 34,000. The abolition of the two Deputy Chief Engineers will result in a saving of Rs. 30,000, and if the cost of the fifth Superintending Engineer for Local Self-Government work is debited to 'grants-in-aid,' the reduction

in the cost of regular Public Works Department establishments will be increased by roughly another Rs. 60,000. Against these economies will have to be set off an increase in the allotment for travelling allowance to Superintending Engineers. Even allowing each of them 50 per cent more than his existing allotment, the increase will not exceed Rs. 10,000, most of which could be made good by the savings bound to be realized under postage and other contingencies. The concentration of Superintending Engineers in Madras therefore makes for—

(*a*) economy in establishments;

(*b*) avoidance of unnecessary re-doing of the same work in a number of different offices;

(*c*) greater expedition than now; and consequent

(*d*) efficiency.

103. We considered very carefully the proposal to reduce the number of Superintending Engineers and locate them and their offices in Madras and after considerable discussion we decided by a majority not to recommend it. Messrs. Gopalaswami Ayyangar and Ratnasabhapati Mudaliyar are in favour of the scheme. The rest of us consider it all important that Superintending Engineers should have their headquarters ' in the field ' and should be easily accessible to Executive Engineers for obtaining both advice and orders on the many problems that daily arise in their work. This access exists to a remarkable degree now at Dowlaishweram, Bezwada and Tanjore where a number of Executive Engineers are concentrated at the headquarters of the Superintending Engineers. The touch between the Superintending Engineers and such Executive Engineers—whose maintenance is more important in our opinion, than the touch between the Superintending Engineers and the Chief Engineer—will be lost by moving the Superintending Engineers to Madras. The proposed common office in Madras will be very unwieldy for efficient management. The independent check on the technical side of proposals from Superintending Engineers which with the help of the Deputy Chief Engineers, is now made by the Chief Engineers, will be lost. For these and other reasons the majority of us, viz., Messrs. Souter, Greg, Swaminatha Ayyar and Howard, feel that the proposal would be administratively inconvenient to work and is on principle unsound and that the present system of stationing Superintending Engineers in the districts is the better and more efficient way of carrying out their work.

104. Reference must be made in passing to an alternative scheme, suggested by another of us, viz., Major Howard. It seemed to him that one administrative head for the department should suffice. In that case, the territorial jurisdiction of Superintending Engineers might be enlarged, their numbers reduced and each of them invested within his jurisdiction with all the administrative powers of the present Chief Engineer. The Superintending Engineers will correspond direct with the administrative head in Government who in technical matters would have the advice of a suitable Consulting Engineer of the rank of the present Chief Engineer. We considered however that this was too radical a change of the present organization for us to investigate.

105. We, however, unanimously recommend the other proposal of Mr. Gopalaswami Ayyangar, viz., the taking away from the Superintending Engineers of the work they now do in connexion with local bodies and concentrating all such work in a separate Superintending Engineer stationed at Madras, who should be made to deal with all matters relating to advising local bodies, according technical sanctions to local fund estimates and inspecting such roads and bridges as require inspection. Such an appointment will, besides relieving the regular Superintending Engineers of a large amount of work which is generally considered by them to be a thankless task and giving them more time to devote to their strictly departmental supervisory work, supply a glaring want in this province and furnish the Government with an expert adviser in respect of matters pertaining to roads and bridges. It may be possible to delegate to him more extensive powers than an ordinary Superintending Engineer so as further to relieve the Chief Engineer in local fund matters; perhaps Public Works Department roads might also be made subject to his supervisory jurisdiction. But these are matters of detail which we should leave to Government to examine. We make this recommendation for the appointment of a special Superintending Engineer for local fund works not merely for the intrinsic merit of the idea but also because we consider that it will reduce the cost of regular Public Works Department establishments. The cost of this special Superintending Engineer for local fund work should be debited outside the Public Works Department budget, possibly to the grants payable to local bodies. Further the result of taking away from the regular Superintending Engineers all their present duties of supervising local fund works will be an appreciable reduction in the amount of work that they now do; while the delegations we have recommended ought to lessen the ordinary office work of a Superintending Engineer and minimize his correspondence. Consequent on this reduction in work should, we think, be possible to reduce the number of regular Superintending Engineers in charge of circles and also to effect some reduction in their office staff. We recommend that the Government should investigate this possibility of economy also.

CHAPTER IX—ESTIMATE OF SAVINGS.

106. It remains now only to summarize in conclusion the savings that may be expected to result from such recommendations as we have been able to make.

107. The Retrenchment Committee which met before us made several recommendations and independently of it the Government after consulting the Chief Engineers have carried out retrenchments in several items of establishment. The subjoined statement shows the retrenchments ordered independently of us up to 1st January 1933.

1. Divisions and subdivisions abolished (exclusive of charges closed on the expiry of sanction thereto).

Divisions.	Subdivisions.
Waltair Circle—	
1 Ganjam Agency division (Temporary).	1 Tank Restoration Scheme subdivision, Vizagapatam (Temporary).
2 Narasapatam division (Temporary).	2 Tank Restoration Scheme subdivision, Chicacole (Temporary).
	3 Girisola channel subdivision (Temporary).
	4 R.K. Ghaut road subdivision (Temporary).
	5 Mohana subdivision (Temporary).
	6 G. Udayagiri subdivision (Temporary).
	7 New Hospital subdivision („).
	8 Rayagada subdivision („).
	9 Malkanagiri subdivision („).
	10 Kolab subdivision („).
	11 Chintapalli subdivision („).
	12 Padwa subdivision („).
Dowlaishweram Circle—	
	Nil.
Bezwada Circle—	
3 Tank Restoration Scheme division (Temporary).	13, 14 Two Tank Restoration subdivisions (Temporary).
	15 Remodelling subdivision, Kistna Western division (Temporary).
Madras Circle—	
4 Tank Restoration Scheme division (Temporary).	16, 17, 18 Three Tank Restoration Scheme subdivisions (two temporary and one permanent).
5 Central Presidency division (Temporary).	19 Penitentiary subdivision (Temporary).
Coimbatore Circle—	20 No. II subdivision, Coimbatore (Temporary).
	21 Thoppur-Mettur road subdivision (Temporary).
	22 Tank Restoration Scheme subdivision, Arni (Permanent).

Divisions.	Subdivisions.
*6 Coimbatore Water-works division.	23 Tirur subdivision (Temporary). 24 Coimbatore Water-supply Scheme subdivision (Temporary). 25 Iritty bridge subdivision (Temporary).
Tanjore Circle—	26 Tank Restoration Scheme subdivision (Temporary).
Trichinopoly Circle— 7 Tank Restoration Scheme division (Temporary).	27, 28, 29 Three Tank Restoration Scheme subdivisions (two temporary and one permanent).

(excluding Kattalai division and Bed Regulator subdivision, which were first abolished and then revived).

7 Divisions (Temporary).	29 Subdivisions (26 temporary and 3 permanent.

* But a resident Engineer of an Executive Engineer's rank has been sanctioned for the Siruvani Dam works

Other posts abolished or suspended.

II One post of Personal Assistant to the Sanitary Engineer (permanent) (abolished).

III Two Deputy Sanitary Engineers' posts (abolished).

IV One post of Personal Assistant to the Chief Inspector of Boilers (permanent) (temporarily suspended).

V One post of Assistant Superintendent, Public Works Workshops, Madras (permanent) (temporarily suspended).

VI Post of Consulting Architect to Government amalgamated with Director of Town-Planning.

VII Post of Assistant Architect to Government (abolished).

VIII 159 temporary supervisers have been discharged from service since August 1931.

Lower subordinate, Office and Petty Establishment.

IX * 112 clerks (* 6 permanent).

X † 40 draughtsmen (8 permanent).

XI 17 tracers (3 permanent).

XII 33 overseers (15 permanent).

XIII 224 peons (14 permanent).

XIV 7 typists.

XV 7 accountants.

XVI 1 boring mechanic.

XVII 24 irrigation conservancy subordinates.

XVIII 8 telephone gumastas.

XIX 4 sub-assistant surgeons.

XX 4 orderlies.

* Includes five head clerks of division offices, one Superintendent and two upper division clerks in Chief Engineer's office.

† Includes six head draughtsmen of division offices and two posts of draughtsmen converted into tracers.

108. The financial results of many of our recommendations of a general nature cannot be definitely gauged before they are actually put into effect—while the effect of other recommendations of ours like the investigation of the possibilities of combining the Minor Irrigation staff with the Public Works Department staff, and the removal of all local board and municipal work from the regular Superintending Engineers and the consequent possibilities of reducing their number together with the debiting of the cost of the Superintending Engineer entrusted with local board and municipal work to grants-in-aid of local bodies, are contingent on the Government accepting the policy we have suggested and finding it after examination to be worthy of bringing into effect. We summarize below the few concrete proposals for retrenchment which we have recommended as deserving of consideration by Government.

Proposal.	Possible savings (approximate).
	RS.
1 Abolition of the Waltair Circle when the Orissa Province is constituted and major portion of the present Ganjam and Koraput divisions goes to that Province	60,000
2 Amalgamation of the Godavari Central and Godavari Eastern divisions if possible at the end of the proposed programme for extension of irrigation in the Godavari Delta, the execution of which by a special staff is to be spread over a period of five years	30,000
3 Abolition of the Guntur division by re-arrangement of charges after the completion of the Kistna East Bank Canal	29,000
4 Abolition of the Ramnad division by a re-arrangement of charges.	25,000
5 Abolition of the Madanapalle division by a re-arrangement of charges	27,000
6 Amalgamation of the Berhampur subdivision with the Chicacole subdivision and the transfer of the combined subdivision to the Vizagapatam division when the Orissa Province is constituted.	7,000
7 Amalgamation of Kunnavaram and Dummagudem subdivisions of the Godavari Northern division	7,000
8 Abolition of the Polavaram subdivision in the Godavari Northern division	7,000
9 Amalgamation of the Anantapur subdivision of the Bellary division and the Penukonda subdivision of the Madanapalle division	7,000
10 Amalgamation of the Hospet and Bellary subdivisions of the Bellary division	7,000
11 Abolition of one of the subdivisions of the Trichinopoly division..	7,000
12 Abolition of the Ramnad subdivision	7,000

109. The total savings on account of these retrenchments if after examination they are accepted by Government will amount to Rs. 2·20 lakhs.

110. The reductions already ordered independently of us would result in a saving of Rs. 5·35 lakhs per annum. After the reductions in the number of charges recommended by us for consideration are all given effect to there would be a further saving of

Rs. 2·20 lakhs. This would bring the total savings in a year to Rs. 7·55 lakhs which is about 17 per cent of the average annual cost of establishments during the six years 1927–28 to 1932–33.

C. A. SOUTER.

L. H. GREG.

H. G. HOWARD.

N. SWAMINATHA AYYAR.

*C. S. RATNASABHAPATI MUDALIYAR.

N. GOPALASWAMI.

F. E. JAMES.

The Committee desires to express its very high appreciation of the great care and thoroughness with which Mr. Gopalaswami Ayyangar has dealt with the complicated questions which the Committee had to consider. Without his assistance, it would have been difficult for the Committee to come to the conclusions to which they have come. The manner in which he has presented the views of the Committee in the Report deserves, in the Committee's opinion, high commendation.

C. A. SOUTER.

L. H. GREG.

H. G. HOWARD.

N. SWAMINATHA AYYAR.

C. S. RATNASABHAPATI MUDALIYAR.

FORT ST. GEORGE,
6th March 1933.

* Subject to a minute of dissent.

MINUTE OF DISSENT ON THE REPORT OF THE PUBLIC WORKS ESTABLISHMENT COMMITTEE BY MR. C. S. RATNASABHAPATI MUDALIYAR.

I was appointed a member of the Committee only during the middle of its labours and, of the meetings held subsequent to my appointment, I regret I was not able, for unavoidable reasons, to attend one of the meetings of the Committee held in three continuous sittings. Though I did not attend the sittings at which the conclusions of the Committee were reached, I have had the advantage of studying the subject-matter closely as a member of the General Retrenchment Committee and this is my justification for appending this minute of dissent. Having gone very carefully

into the proceedings of the Public Works Establishment Committee, I record the following minute of dissent on some of the conclusions arrived at by the Committee :—

Paragraph 11.—The Committee have come to the conclusion that there were good reasons for the additions to establishments and for the formation of new divisions. I regret I am unable to agree with them. The additional temporary staff would appear to have been sanctioned more with reference to the budget provisions than what the actual work demanded. I still adhere to the view expressed in the report of the General Retrenchment Committee, that divisions had been formed for works that might have well been carried out under the superintendence of an assistant instead of an Executive Engineer and that works could have been carried out without additional staff without impairing efficiency. I may add that the conclusions of the General Retrenchment Committee were reached only after examining the Chief Engineer at very great length and after giving the fullest consideration to his opinions.

Paragraph 12.—The finding that, while the increase in works outlay between 1923–24 and 1931–32 was 62 per cent, the increase in the cost of establishment was only 31 per cent cannot bear examination. The percentage of expenditure on establishments is really high when compared with the outlay on works. The charges of the high executives and most of the establishment required remain constant and in view of the fact that such charges had been pitched high in the first instance, the 31 per cent increase in the cost of establishment is high.

Paragraph 13.—I do not concur with the conclusion arrived at in this paragraph. The heavy rise in the ratio of the cost of establishment to works outlay as in the years 1927–28 to 1930–31 could have been avoided had the minimum staff been engaged. The recognition by this Committee of the fact "that it is not always possible to reduce in the course of a year the cost of establishments in the same proportion as the reduction or surrender of grants for works" lends support to the conclusions of the General Retrenchment Committee quoted at the beginning of this paragraph.

Paragraph 14.—Though the ratio of expenditure on establishment to the works outlay in the Madras Presidency compares favourably with that of the other provinces, I consider that the percentage of expenditure on establishments could still be reduced. In Madras, we have the big project—the Cauvery-Mettur Project—where huge machinery is used on a large scale resulting in reduced manual labour and supervision charges, while in other provinces, such machinery is not used. When this aspect is taken into consideration, the percentage for Madras is, in my opinion, high. It will be seen from the statement that the percentage of expenditure on establishment in Madras prior to the taking up of the Cauvery-Mettur Project on hand, was higher than in Bombay.

Paragraphs 15 *to* 17.—I don't agree that the attempt to relate the cost of establishment to works outlay should be given up. In the case of local bodies, the Government have fixed the maximum limit of expenditure that may be incurred on establishments with reference to the normal expenditure of the department. If I remember right, the Bombay-Thomas Reorganization Committee have also recommended the adoption of some such principle with regard to the Public Works Department. A fixed ratio between the works outlay and establishment charge should be specified. I may here point out that in the case of works undertaken by the Public Works Department on behalf of the local bodies, the Government have fixed the centage charges at 15½ per cent made up as follows :—

	Per cent.
Construction establishment ..	7½
Supervision by Superintending Engineer and Chief Engineer	2½
Establishment of Superintending Engineer and Chief Engineer	½
Ordinary tools and plant	1½
Audit and Accounts	1
Preparation of estimates and investigation by Sanitary Engineer, etc. ..	2½
	15½

I would suggest the fixing of the percentage of expenditure on establishment at 22 to 25 per cent of the normal expenditure on the outlay of works subject to deviations, if found necessary, for unforeseen circumstances. The expenditure of large sums on establishment without reference to the outlay of works is not a sound financial proposition. The term "normal expenditure" may be deemed to be the average expenditure during the preceding three years.

Paragraph 20.—I am not in agreement with the Committee that a fee sufficient to cover the time taken by the Public Works Department officers in making the inspection of temple cars and rafts and giving certificates and their travelling allowances should be recovered from the temple authorities or interested parties. The inspection of cars is more in the interests of the safety of the general public and it is the duty of Government to undertake such work. If, however, it is thought that a change will result in economy of expenditure (in my opinion, it will not) in the Public Works Department, the work of inspection of temple cars, etc., may well be entrusted to the District Board Engineers and Local Fund Assistant Engineers.

Paragraph 27.—The officers of the other departments need not requisition the services of the Public Works Department officers only in cases where the cost of petty repairs of their department

does not exceed a certain money limit, say Rs. 200 a year. In my opinion, when big sums on heavy repairs have to be spent, the work should be carried out only by the Public Works Department.

Paragraph 29.—In most of the cases for contribution works, construction of bridges, etc., estimates are prepared and sent to the officers of the Public Works Department for technical sanction. After much labour, several estimates are shelved indefinitely as grants are refused in most of the cases. It will, therefore, be advantageous and economical if estimates are got prepared and technically sanctioned only in respect of works which are approved by Government and for which grants are promised. This will result in considerable reduction of work of the Public Works Department even if a special Superintending Engineer is not appointed for the local fund works.

I agree with the recommendation that a District Board Engineer should have the same powers as an Executive Engineer in the matter of according technical sanction.

Paragraph 34.—While I agree to the recommendation that a special experienced all-round chartered accountant be appointed with a view to simplify the existing Government accounts of the Public Works Department with reference specially to the considered and deliberate opinion of the Committee on the four points mentioned in paragraph 34 of the Report, I regret I am unable to join my colleagues in thinking that it is sufficient to have only a half-yearly outside audit instead of the present system of monthly audit.

Concurrent monthly audit is very essential in a big spending department like the Public Works Department if a close scrutiny over the expenditure is to be exercised. Even the monthly audit is done generally late and objections are received long after payments have been made. If it is made half-yearly, there will be still further delay in sending the objection statements to the officers who may find it difficult to rectify defects and recover the excess payments made. If it is done monthly, it will result in greater efficiency and defects could be rectified with the least delay and difficulty.

Chapter IV.—Delegation of Powers.

Paragraph 39.—I cannot agree with the recommendation that the Chief Engineers should be given the power to grant leave to the Executive Engineers and Assistant Executive Engineers without any limit or condition. The existing practice should, I think, continue. The Chief Engineers may, however, be delegated with the powers of granting leave to the Assistant Engineers of the Madras Engineering Service.

Paragraph 44.—As regards the grant of charge allowance to persons holding one office appointed in additional charge of another under Fundamental Rule 49, I cannot agree to the suggestion that the Chief Engineers should be given the discretion to sanction the additional remuneration much less to such discretion being vested in the Superintending Engineers in the cases of the Madras Engineering Subordinate Service. The granting of additional remuneration for holding charge of one or more offices in addition to one's own should be restricted to the minimum and the power of sanctioning it should vest only in Government.

Powers relating to Buildings and Roads.

Paragraph 47.—Furniture.—The Executive Engineer should have power to incur expenditure only to the extent of Rs. 100 against the present limit of Rs. 50. The limit of Rs. 250 suggested by the Committee is high.

Reappropriations of funds.—The existing powers of the Chief Engineer to reappropriate funds should not, in my opinion, be enhanced.

Chapter V.

Paragraph 49.—The maintenance cost of roads by the Public Works Department is, in many cases, more than that of the roads maintained by the local bodies for a specified standard of work. The few roads now maintained by the Public Works Department may well be transferred with necessary grants to the local boards for maintenance.

Minor Irrigation Works.

Paragraph 56.—I cannot persuade myself to agree to the suggestion that minor irrigation works may be transferred to the Public Works Department from the Revenue Department. Even if it should result in some saving, I am of opinion that no change in the existing system is called for. The ryots could now approach the local officials (Tahsildars and other revenue officials) in regard to their grievances in respect of minor irrigation works and could get the works done without much trouble and time. The Public Works Department officers are not in touch with the ryots to the same degree as the revenue officials and a change in the existing system will not be to the advantage of the ryots. Further, the ryots have always to approach the revenue official for one thing or other. Even if the minor irrigation works are transferred to the Public Works Department, the necessity for approaching the revenue officials will not cease and they will, therefore, be put to the hardship of approaching both the Public Works Department and the revenue officials in respect of irrigation matters and it is not desirable that hardships should be placed in their way.

Paragraph 102.—I generally support the views of Mr. N. Gopalaswami Ayyangar contained in his proposal regarding the location of the Superintending Engineers in Madras, amalgamating their offices and reducing their number and the appointment of a special Superintending Engineer for local fund work with jurisdiction over the whole Presidency. I am firmly of opinion that his proposals will, if adopted, result in considerable reduction in establishment charges.

C. S. RATNASABHAPATI MUDALIYAR.

12*th March* 1933.

APPENDIX I.

Statement showing the strength of clerical establishment engaged on accounts and audit, in the Public Works Department offices.

Name of office.	Total number of clerks.		Number of clerks dealing with accounts and audit.	Percentage of col. (4) to total of cols. (2) and (3).
	Permanent.	Temporary.		
(1)	(2)	(3)	(4)	(5)
				PER CENT.
Chief Engineer (General, Buildings and Roads)	44	..	4	9
Chief Engineer for Irrigation	24	..	2	8
Waltair Circle.				
Waltair Circle Office	10	..	5	50
Vizagapatam Division Office	9	3	6	50
Narasapatam Subdivision Office	..	2	1	50
Parvatipuram Subdivision Office	2	..	1	50
Yellamanchili Subdivision Office	2	1	2	66
Koraput Division Office	6	3	5	55
Jeypore Subdivision Office	2	..	1	50
Koraput Subdivision Office	2	..	1	50
Gunupur Subdivision Office	..	2	1	50
Indravati Subdivision Office	2	..	1	50
Ganjam Division Office	8	2	4	40
Berhampur Subdivision Office	2	..	1	50
Chicacole Subdivision Office	2	..	1	50
Russellkonda Subdivision Office	2	..	1	50
Total for Waltair Circle	49	13	31	50
Dowlaishweram Circle.				
Dowlaishweram Circle Office	..	10	6	60
Godavari Eastern Division Office	8	1	4	44
Cocanada Subdivision Office	2	..	1	50
Ramachandrapur Subdivision Office	2	..	1	50
Rajahmundry Water-Works Subdivision Office	..	2	1	50
Godavari Central Division Office	8	..	3	38
Gannavaram Subdivision Office	2	..	1	50
Amalapur Subdivision Office	2	..	1	50
Godavari Head Works Division Office	12	..	7	58
Head Works Subdivision Office	..	2	1	50
Workshops Subdivision Office	3	1	3	75
Vasista Subdivision Office	2	..	1	50
Gowtami Subdivision Office	2	..	1	50
Godavari Northern Division Office	9	..	5	55
Kunnavaram Subdivision Office	2	..	1	50
Dummagudem Subdivision Office	3	..	1	33
Rajahmundry Subdivision Office	2	..	1	50
Polavaram Subdivision Office	..	2	1	50
Samalkota Subdivision Office	2	..	1	50
Godavari Western Division Office	11	..	5	45
Narasapur Subdivision Office	2	..	1	50
Tanuku Subdivision Office	2	..	1	50
Delta Subdivision Office	2	..	1	50
Undi Subdivision Office	2	..	1	50
Total for Dowlaishweram Circle	80	18	50	51
Bezwada Circle.				
Bezwada Circle Office	10	..	3	30
Kistna Eastern Division Office	10	1	5	45
Cowtaram Subdivision Office	2	..	1	50
Bezwada Subdivision Office	2	..	1	50
Bandar Subdivision Office	2	..	1	50
Gudivada Subdivision Office	2	..	1	50
Special Localization Subdivision Office	..	1	..	..
Kistna Central Division Office	10	..	5	50
Headquarters Subdivision Office	2	..	1	50
Workshops Subdivision Office	4	..	3	75
Divi Subdivision Office	2	..	1	50
Drainage Subdivision Office	..	2	1	50
Kistna Western Division Office	11	..	5	45
River Conservancy Subdivision Office	2	..	1	50
Central Subdivision Office	2	..	1	50

Statement showing the strength of clerical establishment engaged on accounts and audit, in the Public Works Department offices—*cont.*

Name of office.	Actual number of clerks.		Number of clerks dealing with accounts and audit.	Percentage of col. (4) to total of cols. (2) and (3).
	Per-manent.	Tem-porary.		
(1)	(2)	(3)	(4)	(5)
				PER CENT.
Bezwada Circle—cont.				
Eastern Subdivision Office	2	..	1	50
Western Subdivision Office	2	..	1	50
Guntur Division Office	7	1	4	50
Tanks Subdivision Office	2	..	1	50
Guntur Subdivision Office	2	..	1	50
Ellore Buildings Subdivision Office	..	2	1	50
Nellore Division Office	8	..	4	50
Nellore Subdivision Office	2	..	1	50
Sangam Subdivision Office	2	..	1	50
Kandukur Subdivision Office	2	..	1	50
Total for Bezwada Circle	90	7	46	47
Madras Circle.				
Madras Circle Office	13	..	6	38
North Presidency Division Office	10	..	5	50
North-West Subdivision Office	2	..	1	50
North-East Subdivision Office	2	..	1	50
Government House Subdivision Office	2	..	1	60
South Presidency Division Office	10	..	5	50
South-West Subdivision Office	2	..	1	50
South-East Subdivision Office	2	..	1	50
General Hospital Subdivision Office	..	3	1	38
Chingleput Division Office	11	..	8	58
Tiruvallur Subdivision Office	2	..	1	50
B. Canal Subdivision Office	2	..	1	60
Chingleput Subdivision Office	2	..	1	60
Mount Subdivision Office	..	2	1	50
Bellary Division Office	9	..	1	44
Bellary Subdivision Office	2	..	1	50
Anantapur Subdivision Office	2	..	1	50
Hospet Subdivision Office	2	..	1	50
Kurnool Division Office	9	..	4	44
Kurnool Subdivision Office	2	..	1	50
Nandyal Subdivision Office	2	..	1	50
Proddatur Subdivision Office	2	..	1	50
Madanapalle Division Office	10	..	4	40
Madanapalle Subdivision Office	2	..	1	50
Penukonda Subdivision Office	2	..	1	60
Cuddapah Subdivision Office	2	..	1	50
Total for the Madras Circle	106	5	52	47
Coimbatore Circle.				
Coimbatore Circle Office	11	..	4	36
Coimbatore Division Office	16	1	10	59
Coimbatore Subdivision Office	2	..	1	50
Erode Subdivision Office	2	..	1	50
Pollachi Subdivision Office	2	..	1	50
The Nilgiris Subdivision Office	3	..	1	33
Salem Division Office	7	..	3	43
Salem Subdivision Office	2	..	1	50
Tirupattur Subdivision Office	2	..	1	50
North Arcot Division Office	7	2	4	44
Vellore Subdivision Office	2	..	1	50
Ranipet Subdivision Office	2	..	1	50
Polur Subdivision	2	1	1	33
West Coast Division Office	9	1	5½	55
Calicut Subdivision Office	2	..	1	50
Mangalore Subdivision Office	2	..	1	50
M.S.P. Subdivision Office	..	2	1	50
Resident Engineer, Siruvani Dam Works	..	1	1	100
Total for Coimbatore Circle	73	8	39½	49

Statement showing the strength of clerical establishment engaged on accounts and audit, in the Public Works Department offices—*cont.*

Name of office.	Total number of clerks.		Number of clerks dealing with accounts and audit.	Percentage of col. (4) to total of cols. (2) and (3).
	Per-manent.	Tem-porary.		
(1)	(2)	(3)	(4)	(5)
				PER CENT.
Tanjore Circle.				
Tanjore Circle Office	10	..	4	40
South Arcot Division Office	10	..	5	50
Cuddalore Subdivision Office	2	..	1	50
Chidambaram Subdivision Office	2	..	1	50
Vriddhachalam Subdivision Office	2	..	1	50
Tindivanam Subdivision Office	2	..	1	50
Cauvery Division Office	9	..	4	44
Tanjore Subdivision Office	2	..	1	50
Nannilam Subdivision Office	2	..	1	50
Mayavaram Subdivision Office	2	..	1	50
Vellar Division Office	9	..	4	44
Vellar Subdivision Office	2	..	1	50
Tiruturaipundi Subdivision Office	2	..	1	50
Negapatam Subdivision Office	2	..	1	50
Mannargudi Subdivision Office	2	..	1	50
River Conservancy Division Office	8	..	4	50
Trichinopoly Subdivision Office	2	..	1	50
Grand Anicut Subdivision Office	2	..	1	50
Lower Anicut Subdivision Office	2	..	1	50
Total for Tanjore Circle	74	..	35	47

APPENDIX II.

Statement showing Statistics of the work of the Minor Irrigation staff of the Revenue Department.

Name of district.	Total number of Minor Irrigation works.	Total number of Minor Irrigation Overseers (permanent and temporary) (including Supervisors).	Average number of works repaired (for three years ending 1931-32).	Average expenditure (for three years ending 1931-32).	Per Minor Irrigation Overseer. Number of works in charge.	Number of works repaired per year.	Expenditure per year.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				RS.			RS.
Ganjam	2,898	7 + 1 (Supervisor).	209	64,369	342	30	9,195
Vizagapatam	1,222	5 + 1 („).	174	45,878	244	35	9,175
Godavari, East	1,047	6 ..	166	62,658	174	28	10,443
„ West	329	2	57	26,277	164	28	13,138
Kistna	72	1	19	17,271	72	19	17,271
Guntur	283	4 + 1 (Supervisor).	88	52,584	71	22	13,146
Nellore	391	5 + 1 („).	88	46,556	78	17	9,311
Cuddapah	1,321	8 + 1 („).	169	66,587	165	21	8,323
Anantapur	2,581	9 + 1 („).	146	57,990	287	16	6,443
Bellary	343	4	58	17,907	86	14	4,477
Kurnool	494	6 + 1 (Supervisor).	67	28,946	82	11	4,824
Madras	4	....	..	..	..	..	..
Chingleput	2,347	9 + 1 (Supervisor).	343	1,03,395	261	38	11,488
Chittoor	4,770	11 + 1 („).	120	58,337	434	11	5,303
North Arcot	2,802	13 + 1 („).	264	1,44,117	215	20	11,086
South Arcot	2,072	14 + 1 („).	307	1,31,396	148	22	9,385
Tanjore	619	3	168	45,358	206	56	15,119
Trichinopoly	1,416	6	120	63,566	236	20	10,594
Madura	3,757	8 + 1 (Supervisor).	164	87,825	470	20	10,978
Ramnad	254	2 + 1 („).	48	66,295	127	24	33,147
Tinnevelly	1,008	8 + 1 („).	114	84,882	200	14	10,610
Coimbatore	73	2	40	15,245	36	20	7,622
Salem	2,432	9 + 1 (Supervisor).	154	81,575	270	17	9,064
Malabar	2	....	2	65	..	..	..
Total for the Presidency.	32,632	142+15 (Supervisor).	3,087	13,69,908	230	22	9,647

APPENDIX III.

Report showing the description of articles manufactured and the method of costing adopted in the Public Works Workshops Madras.

1. *Description of articles manufactured.*—The following are the articles manufactured :—

(1) Shutters with gears to operate them, of various designs and sizes, for control of flow of water in rivers and canals.

(2) Lock gates with operating gear.

(3) Fabricated structural steel work of various descriptions, including steel-framed buildings, steel stanchions and roof work for ordinary buildings.

(4) Steel tanks and stagings.

(5) Steel road bridges of various sizes and descriptions.

(6) Steel railings and gates, ornamental and plain.

(7) Steel windows, doors and gratings of various descriptions for buildings.

(8) Steel gas holders.

(9) Steel carts for various purposes, with and without springs.

(10) Steel kitchen ranges for hospitals and jails.

(11) Steel hot water boilers and tanks for hospitals.

(12) Steel record racks of various sizes and descriptions for record rooms of Government offices.

(13) Mechanical equipment, such as cranes, hoists, runways, and mortar mills.

(14) Steel pipes and aqueducts with staging for irrigation channels.

(15) Cast iron castings of various descriptions up to three tons.

(16) Steel welded safes, special locks, cash chests, strong room doors.

(17) Scales and weights and measures.

(18) Peons' badges and stamps and seals, letter and figure punches and dies of various descriptions.

(19) Surveying instruments such as cross staff, levelling staff, measuring rods and gauges of various descriptions.

(20) Miscellaneous articles for replacement of worn out and broken parts of machines, such as springs, wheels, bearings, levers, etc.

NOTE.—The above list is for articles of manufacture. Besides above the workshops undertake repairs to plant and machines and scientific instruments of various kinds.

II. *Method of costing* Follows paragraphs 446 to 449 of the Madras Public Works Account Code :—

The procedure of costing is uniform for all class of work.

Before an article can be manufactured, an estimate and working drawings are prepared and on sanction of the design and estimate and acceptance by Indenting Officer a work order is opened showing the provisions made for various component items of debit. These component items of debit are as follows :—

(*a*) *Debit for material.*—This debit in the case of stock articles is made up of the cost of material as per Stores Ledger rate plus handling charges on the cost to cover storage and handling charges and also 10 per cent supervision charges for works executed for other than Public Works Department. In the case of articles of direct purchase by Public Works Workshops it represents the cost delivery of the stores at Workshops.

(*b*) *Labour.*—The labour on work order is made up of the total wages paid to the men engaged on the work and if part or whole of this work is done on piecework, it includes the amount paid to the pieceworkers. An overhead charge on this total labour at 31¼ per cent is levied, to defray the cost of supervision of work, receipt and despatch of materials, watch and ward, time office and costing staff and yard cleaning staff. The total labour therefore is actual labour plus 31¼ per cent on it.

(*c*) *Castings required for the work.*—The foundry works on piecework basis. The outturn for a month is classified into various classes and the cost per pound for each class is worked out at the end of each month. Debit to each work order is made, based on the weight of casting of each class supplied for the work order.

(*d*) *Use of power-driven machine tool equipment.*—Allocating the total cost incurred per month for providing power for the power-driven machinery to the average number of machines of each class used in a month, rate of charge per hour for use of each power-driven machine is fixed and debit is raised on each work order for the use of power-driven machinery at the fixed rates mentioned above.

(*e*) *Packing and carting.*—Actual debit incurred in packing and carting is raised on each work order.

(*f*) *Overhead charges.*—An overhead charge on the total of the above items (*a*) to (*e*) at 30 per cent is raised to defray the cost of the following :—

(1) Six per cent for interest on capital cost of premises with fittings and their maintenance and depreciation. The last year debit on this score is about Rs. 39,000.

(2) *Tools and plant—Eleven per cent.*—This is made of two parts :—

(*a*) Repairs and renewals for the year, which will roughly be proportionate to the outturn. This debit has been reduced from Rs. 46,397 in 1927–28 to Rs. 20,000 for 1931–32 to suit the reduced outturn from about Rs. 5,10,000 to Rs. 2,70,000.

(*b*) Depreciation on the value of tools and plant at the rate of 5 per cent on the original or replacement value. The debit on this score is about Rs. 30,000.

(3) *Establishment—Twelve per cent plus pension contribution* 1 *per cent.*—This is made up of as follows :—

(*a*) One-third pay of the General Superintendent.

(*b*) Two-thirds pay of Assistant Superintendent—Post temporarily retrenched.

(*c*) Pay of office establishment.

(*d*) Pay of Drawing office.

(*e*) Pay of menials.

(*f*) Contingencies.

The charge on this score for 1931–32 is about Rs. 50,000. By retrenchment a saving of about Rs. 17,000 * has been effected for this current year.

The total average debit against this overhead charge per year is Rs. 1,32,300 equivalent to an outturn of about 4,40,000.

NOTE.—The value of tools and plant based on their present value was Rs. 59,327 in 1928–29 and the depreciation on this was about Rs. 3,934. In the year 1929–30 orders were received (refer G.O. No. 3046 W., dated 5th December 1928) that the depreciation should be on the original value of plant and not on their depreciated value. The tools and plant were revalued at Rs. 4,75,816 and the yearly depreciation charges were raised to Rs. 30,000. This charge is not fair as many of the equipment are old and would have been completely depreciated by now if the system of depreciation had been introduced when they were purchased.

* *Details of the saving of Rs.* 17,000.—The debit for the year 1932-33 under Establishment, Contingencies and Stationery is taken as Rs. 33,000 approximately—vide details below. Comparing this with Rs. 50,000 of 1931-32 a saving of Rs. 17,000 was noted :—

	RS.
One-third pay of General Superintendent	3,670
Pay of Accountant	2,052
Pay of Drawing Branch	6,250
Pay of office	9,328
Pay of menials	2,598
Add for leave arrangements	1,540
	25,438
Pension allowance at 14 per cent on above	3,562
Contingencies, stationery and printing	4,000
	33,000

APPENDIX IV.

Statement showing the present strength and distribution of permanent and temporary charges (circles, divisions, subdivisions, sections including Overseers' sections).

Division.	Subdivision.	Section.	Supervisor or Overseer.	Permanent or Temporary.
		WALTAIR CIRCLE.		
1. Ganjam (Permanent).	1. Berhampur (Permanent).	1. Berhampur	Supervisor	Premanent.
		2. Chatrapur	Do.	Do.
		3. Kukkudakhandi	Do.	Do.
		4. Mohana	Do.	Temporary.
		5. Tanganapalle	Overseer	Permanent.
	2. Chicacole (Permanent).	1. Chicacole	Supervisor	Permanent.
		2. Narasannapeta	Do.	Do.
		3. Ichchapur	Do.	Do.
		4. Parlakimedi	Do.	Temporary.

Division.	Subdivision.	Section.	Supervisor or Overseer.	Permanent or Temporary.
		WALTAIR CIRCLE—*cont.*		
1. Ganjam (Permanent)—*cont.*	3. Russellkonda (Permanent).	1. Russellkonda	Supervisor	Permanent.
		2. Madhavaborida	Do.	Do
		3. Aska	Do.	Do
		4. Ballipodoro	Do.	Temporary.
		5. Combined G. Udayagiri and Kalinga.	Do.	Do.
		6. Balliguda	Do.	Do.
2. Vizagapatam (Permanent).	1. Yellamanchili (Permanent).	1. Anakapalle	Do.	Permanent.
		2. Vizagapatam	Do.	Do.
		3. Hospital	Do.	Temporary.
		4. Rayavaram	Overseer	Permanent.
		5. Yellamanchili	Do.	Do.
	2. Parvatipuram (Permanent)	1. Parvatipuram	Supervisor	Do.
		2. Viraghattam	Do.	Do.
		3. Anantagiri	Do.	Do.
		4. Palakonda	Do.	Do.
	3. *Narasapatam* (Temporary).	1. Narasapatam	Do.	Do.
		2. Lammasinghi	Do.	Temporary.
..		3. Chintapalle	Do.	Do.
		4. Combined Krishnadevipet and Koyyur	Do.	Do
3. Koraput (Permanent).	1. Koraput (Permanent).	1. Sunki	Do.	Permanent.
		2. Pottangi	Do.	Do.
		3. Koraput South	Do.	Do.
		4. Rallagedda	Do.	Temporary.
		5. Padwa	Do.	Do.
	2. Jeypore (Permanent).	1. Koraput North	Do.	Permanent.
		2. Jeypore	Do.	Do.
		3. Kolab	Do.	Temporary.
	3. Indravati (Permanent).	1. Indravati	Do.	Permanent.
		2. Borigumma (Bridge).	Do.	Do.
		3. Umerkota	Do.	Temporary
	4. Gunupur (Temporary).	1. Elwinpeta	Do.	Do.
		2. Narayanapatnam	Do.	Do.
		3. Rayagada	Do.	Do.
		4. Bissemcuttack	Do.	Do.

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Divisions.		Subdivisions.		Supervisors' sections.		Overseers' sections.	
Permanent	Temporary.	Permanent.	Temporary.	Permanent.	Temporary.	Permanent.	Temporary.
3	Nil.	8	2	23	17	3	..
		10		40		3	
				43			

Division.	Subdivision.	Section.	Supervisor or Overseer.	Permanent or Temporary.
		DOWLAISHWERAM CIRCLE (TEMPORARY).		
1. Godavari Eastern (Permanent).	....	2. Sections for the preparation of ayacut registers.	Overseer	Temporary.
	1. Cocanada (Permanent).	1. Cocanada	Supervisor	Permanent.
		2. Biccavole	Overseer	Do.
		3. Tossipudi	Do.	Do.
		4. Kovvur	Do.	Temporary.
	2. Ramachandrapur (Permanent).	1. Kotipalli	Do.	Permanent.
		2. Coringa	Do.	Do.
		3. Injaram	Do.	Do.
		4. Tapeswaram	Do.	Do.
		5. Mandapeta	Do.	Do.
		6. Alamur	Do.	Do.
	3. Rajahmundry Water works (Temporary).	1. No. 1, Water works.	Supervisor.	Temporary.
		2. No. 2, Water works.	Do.	Do.
2. Godavari Central (Permanent).		2. Sections for the preparation of ayacut registers.	Overseer	Do.
	1. Gannavaram (Permanent).	1. Gopalpur	Supervisor	Permanent
		2. Razole	Overseer	Do.
		3. Thatipaka	Do.	Do.
	2. Amalapur (Permanent).	1. Amalapur	Supervisor	Do.
		2. Kothapeta	Overseer	Do.
		3. Mukteswaram	Do.	Do.
		4. Inapur	Do.	Do.
		5. Polavaram Irrigation.	Supervisor	Do.

Division.	Subdivision.	Section.	Supervisor or Overseer.	Permanent or Temporary.
		DOWLAISHWERAM CIRCLE (TEMPORARY)—*cont.*		
3. Godavari Head works (Permanent).	1. Head works and supply (Temporary).	1. Head works	Supervisor	Permanent.
		2. River charts	Overseer	Do.
		3. Quarry	Do.	Temporary.
	2. Gowtami (Permanent).	1. A.G.R.B	Supervisor	Permanent.
		2. G.R.B. Upper	Overseer	Do.
		3. G.L.B. Lower	Do.	Do.
		4. A.G.L.B.	Do.	Do.
		5. G.L.B. Upper	Do.	Do.
		6. Lanka Inspection.	Do.	Do.
		7. G.R.B. Lower	Do.	Temporary.
	3. Vasista (Permanent).	1. V.R.B. Upper	Supervisor	Permanent.
		2. V.L.B. Lower	Do.	Do.
		3. V.R.B. Lower	Overseer	Do.
		4. V.L.B. Upper	Do.	Do.
		5. Lanka Inspection.	Do.	Do.
4. Godavari Northern (Permanent).	1. Rajahmundry (Permanent).	1. Chodavaram	Supervisor	Temporary.
		2. Gokavaram	Do.	Permanent.
		3. Rajahmundry	Do.	Do.
		4. Investigation	Do.	Temporary.
	2. Polavaram (Temporary).	1. Bineru Bridge	Do.	Do.
		2. Polavaram	Do.	Do.
		3. Jangareddigudem	Do.	Permanent.
	3. Kunnavaram (Permanent).	1. Gowridevipeta	Do.	Do.
		2. Waddigudem	Do.	Do.
		3. Bhadrachalam	Do.	Do.
	4. Dummagudem (Permanent).	1. Dummagudem	Do.	Do.
		2. Cherla	Do.	Do.
		3. Venkatapuram	Do.	Do.
		4. Pragallapalle	Do.	Do.
	5. Samalkota (Permanent).	1. Samalkota	Do.	Do.
		2. Yerravaram	Do.	Temporary.
		3. Yelleswaram	Do.	Do.
5. Godavari Western (Permanent).		1. Section for the preparation of ayacut registers	Do.	Do.
	1. Tanuku (Permanent).	1. Canal section, Tanuku.	Do.	Permanent.
		2. Attili	Overseer	Do.
		3. Mandapaka	Do.	Do.
		4. Penumantra	Do.	Do.
		5. Bhimavaram	Do.	Do.
	2. Delta (Permanent).	1. Canal Section Chettipeta	Supervisor	Do.
		2. Pentapad	Overseer	Do.
		3. Tadepalligudem	Do.	Do.
		4. Gundugolanu	Do.	Do.
	3. Narasapur (Permanent).	1. Narasapur	Supervisor	Do.
		2. Peravali	Overseer	Do.
		3. Marutam	Do.	Do.
		4. Palacole	Do.	Do.
		5. Siddhantam.	Do.	Do.
	4. Undi (Permanent).	1. Yenamadurru Drain.	Supervisor.	Temporary.
		2. Undi	Overseer	Permanent.
		3. Akid	Do.	Do.
		4. Ganapavaram	Do.	Do.
		5. Chilakampad	Do.	Do.
		6. Yendagandi	Do.	Do.
	5. Remodelling (Temporary).	1. Remodelling section 1.	Do.	Temporary.
		2. Remodelling section 2.	Do.	Do.
		3. Remodelling section 3.	Do.	Do.
		4. Remodelling section 4.	Do.	Do.
		5. Remodelling section 5.	Do.	Do.

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Division.		Subdivisions.		Supervisors' sections.		Overseers' sections.	
Permanent.	Temporary.	Permanent.	Temporary	Permanenet.	Temporary.	Permanent.	Temporary.
5	Nil.	14	4	22	10	38	12
		18		32		50	
				82			

Division.	Subdivision.	Section.	Supervisor or Overseer.	Permanent or Temporary.
		BEZWADA CIRCLE.		
1. Guntur Division (Permanent).	1. Guntur (Permanent).	1. Guntur	Supervisor	Permanent.
		2. Vinukonda	Do.	Do.
		3. Sattenapalli	Overseer	Do.
	2. Tank (Permanent).	1. Ellore	Supervisor	Do.
		2. Kovvur	Do.	Do.
	3. Ellore Buildings (Temporary).	1. No. 1 Section	Do.	Temporary.
		2. No. 2 Section	Do.	Do.
2. Kistna Western (Permanent).	1. River Conservancy (Permanent).	1. Vallabhapuram	Do.	Permanent.
		2. Mopidevi	Do.	Do.
		3. Vallur	Do.	Do.
		4. Penumudi	Do.	Do.
		5. R.C. Section, Kolli	Overseer	Do.
		6. R.C. Section, Bezwada.	Do.	Do.
		7. R.C. Inspector, Penumudi	Do.	Do.
		8. R.C. Inspector, Bezwada	Do.	Do.
	2. Central (Permanent).	1. Main canal section	Supervisor	Do.
		2. Tenali Hospital	Do.	Temporary.
		3. Kuchipudi	Overseer	Permanent.
		4. Aramanda	Do.	Do.
		5. Tsandole	Do.	Do.
	3. Eastern (Permanent).	1. Kollipara	Do.	Do.
		2. Vallatur	Do.	Do.
		3. Repalli	Do.	Do.
		4. Kollur	Do.	Do.
	4. Western (Permanent).	1. Ongole	Supervisor	Do.
		2. Jagarlamudi	Overseer	Do.
		3. Santaravur	Do.	Do.
		4. Bapatla	Do.	Do.
		5. Poondla	Do.	Do.
3. Kistna Eastern (Permanent).		1. Section for the preparation of ayacut registers ..	Supervisor	Temporary.
		2. Overseers for Block map and ayacut works ..	Overseer	Do.
	1. Bandar (Permanent).	1. Bandar Town works.	Supervisor	Permanent.
		2. Wayyur	Overseer	Do.
		3. Veeranki	Do.	Do.
		4. Nadumole	Do.	Do.
	2. Remodelling (Temporary).	1. No. 1 Section	Do.	Temporary.
		2. No. 2 Section	Do.	Do.
		3. No. 3 Section	Do.	Do.
		4. No. 4 Section	Do.	Do.
	3. Bezwada (Permanent).	1. Kankipad	Do.	Permanent.
		2. Uppalur	Do.	Do.
		3. Atkur	Do.	Do.
		4. Ellore	Do.	Do.
	4. Special Localization (Temporary).	1. No. 1 Special duty section ..	Supervisor ..	Temporary.
		2. No. 2 Special duty section ..	Do.	Do.
	5. Gudivada (Permanent).	1. Upper Gudivada	Overseer	Permanent.
		2. Lower Gudivada ..	Do.	Do.
		3. Jonnapad ..	Do.	Do.
		4. Ventrpragada	Do.	Do.
	6. Cowtaram (Permanent).	1. Cowtaram ..	Do.	Do.
		2. Gudlavalleru	Do.	Do.
		3. Vinjaram	Do.	Do.
		4. Pedalanka	Do.	Do.
		5. Bantumilli	Do.	Do.
4. Kistna Central (Permanent).	1. Headquarters (Permanent).	1. Bezwada Town works	Supervisor ..	Temporary.
		2. Muniyeru Muchintala	Do.	Permanent.
		3. Kondapalli	Overseer ..	Do.
		4. Gauging ..	Do.	Do.
		5. Anicut.	Do.	Do.
	2. Divi (Permanent).	1. Divi, South	Supervisor ..	Do.
		2. Divi, East	Do.	Do.
		3. Head works	Overseer ..	Do.
	3. Drainage Bezwada (Temporary).	1. Water works	Supervisor ..	Temporary.
		2. No. 1 Section	Overseer ..	Do.
		3. No. 2 Section	Do.	Do.
5. Nellore (Permanent).	1. Nellore (Permanent).	1. Headquarters ..	Supervisor ..	Permanent.
		2. Gudur	Do.	Do.
		3. Nellore water works	Do.	Temporary.
		4. No. 1 Section ..	Overseer	Permanent.
		5. No. 2 Section	Do.	Do.
	2. Sangam (Permanent).	1. Kanigiri Reservoir.	Supervisor ..	Do.
		2. Atmakur ..	Do.	Do.
		3. Allur	Overseer	Do.
		4. Kodavallur	Do.	Do.
		5. Kovvur ..	Do.	Do.

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Division.	Subdivision.	Section.	Supervisor or Overseer.	Permanent or Temporary.
		BEZWADA CIRCLE—cont.		
5. Nellore (Permanent)—cont.	3. Kandukur (Permanent).	1. Kandukur ..	Supervisor ..	Permanent.
		2. Kavali ..	Do.	Do.
		3. Buckingham Canal	Do.	Do.
		4. Mopad ..	Do.	Do.

Abstract.

Divisions.		Subdivisions.		Supervisors' sections.		Overseers' sections.	
Permanent.	Temporary.	Permanent.	Temporary.	Permanent.	Temporary.	Permanent.	Temporary.
5	Nil.	15	4	22	9	41	8
		19		31		49	
				80			

Division.	Subdivision.	Section.	Supervisor or Overseer.	Permanent or Temporary.
		MADRAS CIRCLE.		
1. North Presidency (Permanent).	1. North-east (Permanent).	1. Rayapuram ..	Supervisor ..	Permanent.
		2. Beach ..	Do.	Do.
		3. Georgetown (Old Fort).	Do.	Do.
	2. North-west (Permanent).	1. Kilpauk ..	Do.	Do.
		2. Egmore ..	Do.	Do.
		3. Vepery ..	Do.	Do.
		4. Tuberculosis ..	Overseer ..	Temporary.
	3. Government House (Permanent).	1. Government House.	Supervisor ..	Do.
2. South Presidency (Permanent).	1. South-east (Permanent).	1. Chepauk ..	Do.	Quasi-permanent.
		2. Triplicane ..	Overseer ..	Permanent.
	2. South-west (Permanent).	1. Brickfields	Supervisor ..	Quasi-permanent.
		2. Guindy ..	Do.	Do.
	3. General Hospital (Temporary).	1. Section 1 ..	Do.	Temporary.
		2. Section 2 ..	Do.	Do.
		3. Section 3 ..	Do.	Do.
		4. Overseers' section.	Overseer	Permanent.
3. Chingleput (Permanent).	1. Buckingham Canal (Permanent).	1. No. 1 Section, Mypauri.	Supervisor ..	Do.
		2. No. 2 Section, Madras.	Do.	Do.
		3. No. 3 Section, Adyar.	Do.	Do.
	2. Tiruvallur (Permanent).	1. Ponneri ..	Do.	Do.
		2. Saidapet ..	Do.	Do.
		3. Tiruvallur ..	Do.	Do.
		4. Chembarambakkam.	Overseer ..	Do.
		5. Red Hills ..	Do.	Do.
	3. Chingleput (Permanent).	1. Chingleput ..	Supervisor ..	Do.
		2. Madurantakam ..	Do.	Do.
	4. Mount (Temporary).	1. Sriperumbudur ..	Do.	Do.
		2. Conjeeveram ..	Do.	Do.
		3. Saidapet Water works.	Do.	Temporary.
4. Bellary (Permanent).	1. Bellary (Permanent).	1. Bellary ..	Do.	Permanent.
		2. Siruguppa ..	Overseer	Do.
		3. Rayadrug ..	Do.	Do.
	2. Anantapur (Permanent).	1. Adoni ..	Supervisor ..	Do.
		2. Anantapur	Do.	Do.
		3. Tadpatri cum Gooty.	Do.	Do.
		4. Tadpatri Water works	Do.	Temporary.
		5. Kalyandrug ..	Overseer ..	Permanent.
	3. Hospet (Permanent).	1. Hospet ..	Supervisor	Do.
		2. Kudligi ..	Do.	Do.
		3. Tungabhadra channels—Hospet.	Overseer	Do.
		4. Tungabhadra channels—Kambli.	Do.	Do.
		5. Harpanahalli ..	Do.	Do.
		6. Hampi Ruins ..	Do.	Do.
5. Kurnool (Permanent).	....	1. Section for the preparation of ayacut registers—No. 1.	Supervisor ..	Temporary.
		2. Section for the preparation of ayacut registers—No. 2.	Do.	Do.

Division.	Subdivision.	Section.	Supervisor or Overseer.	Permanent or Temporary.
		MADRAS CIRCLE—*cont.*		
5. Kurnool (Permanent)—*cont.*	1. Kurnool (Permanent).	1. Kurnool	Supervisor	Permanent.
		2. Atmakur	Do.	Do.
		3. K. C. Canal	Overseer	Do.
		4. Nandikotkur	Do.	Do.
		5. Dhone	Do.	Do.
	2. Nandyal (Permanent).	1. Nandyal	Supervisor	Do.
		2. Markapur	Do.	Do.
		3. Allagadda	Do.	Do.
	3. Proddatur (Permanent).	1. Proddatur	Do.	Do.
		2. Mydukur	Do.	Do.
		3. Rajoli	Overseer	Do.
		4. Badvel	Do.	Do.
		5. Adhalmavapalle	Do.	Do.
	4. Thippayapalayam Project.	2 Sections	Supervisor	Temporary.
6. Madanapalle (Permanent).	1. Madanapalle (Permanent).	1. Chittoor	Do.	Do.
		2. Tirupati	Do.	Do.
		3. Madanapalle	Do.	Do.
	2. Cuddapah (Permanent).	1. Cuddapah	Do.	Do.
		2. Nandalur	Do.	Do.
		3. Kamalapuram	Overseer	Do.
	3. Penukonda (Permanent).	1. Kadiri	Do.	Do.
		2. Penukonda	Supervisor	Do.
		3. Hindupur	Do.	Do.

Abstract.

Divisions.		Subdivisions.		Supervisors' sections.		Overseers' sections.	
Permanent.	Temporary.	Permanent.	Temporary.	Permanent.	Temporary.	Permanent.	Temporary.
6	Nil.	17	3	36	13	19	1
		20		49		20	
				69			

Division.	Subdivision.	Section.	Supervisor or Overseer.	Permanent or Temporary.
		COIMBATORE CIRCLE.		
1. Coimbatore (Permanent).	1. Lower Bhavani Project (Temporary).	4 Sections	Supervisor	Temporary.
	1. Coimbatore (Permanent).	1. Town works	Supervisor	Permanent.
		2. Agricultural College, Research Institute and Jail section.	Do.	Do.
		3. Taluk section	Do.	Do.
	2. Erode (Permanent).	1. Erode	Do.	Do.
		2. Gobichettipalaiyam.	Do.	Do.
		3. Thadapalli channel	Overseer	Do.
		4. Dharapuram	Do.	Do.
		5. Kalingarayan channel.	Do.	Do.
	3. The Nilgiris (Permanent).	1. Coonoor	Supervisor	Do.
		2. Ootacamund Town works.	Do.	Do.
		3. Government House.	Do.	Do.
		4. Ootacamund-Mettupalaiyam road.	Overseer	Do.
	4. Pollachi (Permanent).	1. Anamalai Ghaut road	Supervisor	Permanent.
		2. Udamalpet Taluk works.	Do.	Do.
		3. Kottur	Do.	Temporary.
		~~4. Road works section~~	~~Do.~~	Do.
2. West Coast (Permanent).	1. Central (Permanent).	1. Calicut Town section.	Supervisor	Do.
		2. Calicut Taluk section.	Do.	Do.
		3. Meppadi section	Do.	Temporary.
		4. Tirur	Do.	Do.
	2. North (Permanent).	1. Mangalore	Do.	Permanent.
		2. Cannanore	Do.	Do.
		3. Kuthuparamba	Do.	Do.
		4. Puthur	Do.	Do.
	3. Malabar Special Police works (Temporary).	1. No. 1 section for Malabar Special Police works.	Do.	Temporary.
		2. No. 2 section for Malabar Special Police works.	Do.	Do.
		3. Nilambur-Kalikavvu-Karuvarakundu road works.	Do.	Do.
	4. Irrity Bridge works (Temporary).	4. Palghat	Do.	Permanent.

Division.	Subdivision.	Section.	Supervisor or Overseer.	Permanent or Temporary.
		COIMBATORE CIRCLE—*cont.*		
3. Salem (Permanent)	1. Salem (Permanent).	1. Town Works section	Supervisor	Permanent.
		2. Taluk section	Do.	Do.
		3. Namakkal	Do.	Do.
		4. Sankari	Do.	Do.
		5. Salem Drainage	Do.	Temporary.
	2. Tirupattur (Permanent).	1. Dharmapuri	Do.	Permanent.
		2. Hosur	Do.	Do.
		3. Tirupattur	Do.	Do.
		4. Kollegal	Do.	Do.
		5. Barur	Overseer	Do.
4. North Arcot (Permanent).	1. Vellore (Permanent).	1. Town section	Supervisor	Do.
		2. Arni section	Do.	Do.
		3. Vellore taluk	Overseer	Do.
		4. Gudiyattam	Do.	Do.
		5. Arcot	Do.	Do.
	2. Ranipet (Permanent).	1. Palar North (Kaveripauk).	Supervisor	Do.
		2. Palar South (Kalavai.)	Do.	Do.
		3. Ranipet	Do.	Do.
		4. Palar Anicut	Overseer	Do.
		5. Tiruvattiyur	Do.	Do.
		6. Minnel	Do.	Do.
		7. Panapak	Do.	Do.
		8. Dusi	Do.	Do.
		9. Kauveripauk	Do.	Do.
		10. Polney Anicut	Do.	Do.
	3. Polur (Permanent).	1. Tiruvannamalai	Supervisor	Do.
		2. Wandiwash	Do.	Do.
		3. Tiruvannamalai water works.	Do.	Temporary.
		4. Polur	Overseer	Permanent.
		5. Kovilur	Do.	Do.
		6. Veerambakkam	Do.	Do.
		7. Cheyyar Anicut	Do.	Do.
5. Resident Engineer, Siruvani Dam works.	....	1. Head works	Supervisor	Temporary.

Abstract.

Division.		Subdivision.		Supervisors' sections.		Overseers' sections.	
Permanent.	Temporary.	Permanent.	Temporary.	Permanent.	Temporary.	Permanent.	Temporary
4	1	11	3	31	13	19	..
5		14		44		19	
				63			

Division.	Subdivision.	Section.	Supervisor or Overseer.	Permanent or Temporary.
		TRICHINOPOLY CIRCLE.		
1. Trichinopoly (Permanent).	1. South (Permanent).	1. Trichinopoly Town works.	Supervisor	Permanent.
		2. Trichinopoly taluk	Do.	Do.
		3. Uyyacondan Upper.	Do.	Do.
		4. Uyyacondan Lower.	Do.	Do.
		5. Kulittalai	Do.	Do.
	2. West (Permanent).	1. Musiri	Do.	Do.
		2. Karur	Do.	Do.
		3. Kutham	Overseer	Do.
		4. Perambalur	Do.	Do.
		5. Thuraiyur	Do.	Temporary.
	3. East (Permanent).	1. Lalgudi	Supervisor	Permanent.
		2. Udaiyarpalaiyam	Do.	Do.
		3. Monacianallur	Overseer	Do.
		4. Tirumalavadi	Do.	Do.
		5. Srirangam Island	Do.	Do.
Periyar (Permanent).	1. Periyar (Permanent).	1. Andipatti	Supervisor	Do.
		2. Chittampatti	Do.	Do.
		3. Melur	Do.	Do.
		4. Peraiyur	Overseer	Do.
		5. Madura	Do.	Do.
		6. Kallandir	Do.	Do.
		7. Edayapatti	Do.	Do.
		8. Mettupatti	Do.	Do.
		9. Taniyamangalam	Do.	Do.
	2. Dindigul (Permanent).	1. Dindigul	Supervisor	Do.
		2. Kodaikanal	Do.	Do.
		3. Palni	Overseer	Temporary.
	3. Uttamapalaiyam (Permanent).	1. Periyakulam	Supervisor	Permanent.
		2. Uttamapalaiyam	Do.	Do.
		3. Gudalur	Overseer	Do.

APPENDIX V.

Abstract statement of statistics showing for circles, divisions and subdivisions, the average for the five years ending 1931–32 under area, number of Public Works Department sources of irrigation, length of canals, ayacut in acres, mileage of roads, number and capital value of buildings, receipts and issues of correspondence, expenditure on original works and repairs, and number and value of estimates.

Names of divisions and subdivisions.		Area in square miles.	Number of P.W.D. sources of irrigation canals / tanks	Length of canals, drains, etc.	Ayacut in acres under P.W.D. sources of irrigation.	Length of P.W.D. roads in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Correspondence. Issues.	Expenditure on repairs and original works. RS.	Total number and value of estimates in rupees.
	Waltair Circle—Permanent.										
Vizagapatam Division P.	Narasapatam subdivision T.	445	..	36	9,300	71	22 / 1,95,462	Not furnished.		2,14,464	..
	Parvatipuram subdivision P.	1,945	58 / 87	165	40,553	11	46 / 6,63,255	8,641	2,555	47,056	..
	Yellamanchili subdivision P.	2,023	106 / 42	285	45,196	4	90 / 32,51,802	5,209	4,761	1,11,573	
	Vizagapatam Division	7,435 *	168 / 129	440	85,750	190	202 / 40,04,760	12,598	11,129	6,23,961	160 / 1,07,[illegible]
Koraput Division P.	Jeypore subdivision P	472			..	59	31 / 4,17,527	4,306	4,433	90,851	
	Koraput subdivision P.	1,098				74	2? / 1,20,961	4,736	1,167	1,26,221	
	Gunupur subdivision T	1,420				174	9 / 37,925	1,936	1,460	1,22,62[illegible]	
	Indravati subdivision P.	1,987				120	19 / 92,480	1,352	1,210	75,880	
	Koraput Division	7,810	..	..	..	400	55 / 6,66,194	12,038	9,676	4,12,166	139 / 6,56,107

* This figure is said to be the correct

Names of divisions and subdivisions.		Area in square miles.	Number of P.W.D. sources of irrigation canals / tanks	Length of canals, drains, etc.	Ayacut in acres under P.W.D. sources of irrigation.	Length of P.W.D. roads in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Correspondence. Issues.	Expenditure on repairs and original works. RS.	Total number and value of estimates in rupees.
Ganjam Division P.	Berhampur subdivision P.	450	63 / 68	190	82,541	5	77 / 6,30,182	5,157	5,406	1,47,221	Figure not available
	Chicacole subdivision P.	752	79 / 115	409	92,846	..	74 / 3,33,303	5,432	3,644	1,10,987	..
	Russellkonda subdivision. P.	1,285	15 / 40	144	34,000	24	65 / 6,89,199	4,900	7,482	1,27,584	..
	Ganjam Division ..	2,457	157 / 223	743	210,933	22	226 / 78,68,028	704	569	4,61,177	507 / 6,51,677
Waltair Circle ..	....	25,569	299 / 164	1,147	458,729	360	.. / 56,91,356	..	..	17,83,805	948 / 2,50,25,242
	Dowlaishweram Circle—Temporary.										
Godavari Eastern Division. P.	Cocanada subdivision P.	178	3-c	342	89,318	..	67 / 8,63,742	8,218	7,848	1,48,374	..
	Ramachandrapuram subdivision. P.	253	5-c	542	132,700	..	31 / 2,07,015	8,669	7,395	86,896	..
	Godavari Eastern Division.	431	8-c	884	222,018	..	97 / 10,70,755	13,213	12,686	3,08,746	139 / 3,67,447
Godavari Central Division. P.	Gannavaram subdivision. P.	105	3-c Parts.	450	62,793	..	25 / 1,68,947	5,391	5,208	1,43,870	..
	Amalapuram subdivision. P.	254	4-c Parts.	545	81,576	..	39 / 3,05,353	5,281	4,158	65,903	..
	Channels subdivision. P.	33	..	77	17,500	..	2 / 11,224	3,563	3,158	63,526	
	Godavari Central division.	471	6-c	1,041	154,869	..	65 / 4,51,694	12,539	11,468	3,60,224	95 / 4,64,289

APPENDIX V—*cont.*

Names of divisions and subdivisions.		Area in square miles.	Number of P.W.D. sources of irrigation—canals / tanks.	Length of canals, drains, etc.	Ayacut in acres under P.W.D. sources of irrigation.	Length of P.W.D. roads in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Correspondence. Issues.	Expenditure on repairs and original works. RS.	Total number and value of estimates in rupees.
				Bezwada Circle—Permanent—cont.							
Kistna Western Division .. P.	River Conservancy subdivision. P.	258	..	108	..	..	7 / 17,007	4,229	1,821	2,93,916	..
	Centra lsubdivision. P.	258	136 C	450	117,061	..	43 / 1,93,530	7,728	6,026	85,187	..
	Eastern subdivision. P.	271	118 C	444	111,517	..	18 / 1,35,952	3,856	2,343	86,985	..
	Western subdivision. P.	915	140 / 1	544	104,102	..	73 / 3,44,459	4,880	2,746	1,75,283	..
Kistna Western Division.		1,651	376 / 1	1,456	300,285	..	132 / 6,51,981	42,546	34,304	7,32,532	341 / 20,16,998
Guntur Division. P.	Tanks subdivision. P.	1,210	43	27	21,000	..	25 / 3,06,583	2,446	1,860	47,135	.
	Guntur subdivision. P.	3,612	6	23	3,019		63 / 13,92,795	2,725	2,462	1,45,501	..
	Ellore buildings subdivision. T.	..	..	..	..	.		1,715	1,195	2,39,572	.
Guntur Division ..		4,822	51	50	24,619		86 / 17,01,378	6,302	6,500	4,95,948	118 / 1,96,874
Nellore Division. P.	Nellore subdivision P.	3,080	100 / 151	245	95,130	5	61 / 9,21,667	4,609	3,219	1,27,889	..
	Sangam subdivision. P.	1,275	101 / 50	305	102,447	..	36 / 2,48,904	2,564	1,569	98,676	..
	Kandukur subdivision. P.	3,619	155 / 74	177	52,676	..	58 / 5,08,087	4,095	3,567	1,15,645	..

Names of divisions and subdivisions.		Area in square miles.	Number of P.W.D. sources of irrigation—canals / tanks.	Length of canals, drains, etc.	Ayacut in acres under P.W.D. sources of irrigation.	Length of P.W.D. roads in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Correspondence. Issues.	Expenditure on repairs and original works.	Total number and value of estimates in rupees.
	Nellore Division ..	7,974	356 / 325	917	250,253	5	155 / 16,80,508	10,596	10,517	3,82,512	587 / 8,99,571
Bezwada Circle ..		17,490	1,309 / 350	4,315	10,30,140	8	678 / 62,54,670	..	..	25,52,218	243 / 34,81,077
				Madras Circle—Permanent.							
North Presidency Division .. P.	North-east subdivision. P.	8	..	..	..	..	89 / 71,43,475	3,600	2,020	2,65,500	..
	North-west subdivision. P.	..	..	..	..	..	* 145 / 71,55,300	2,745	1,880	2,96,405	..
	Government House subdivision. P.	3	..	..	..	6	139 / 20,34,180	1,547	1,273	1,49,060	..
	North Presidency Division.	11	..	..	..	6	221 / 1,39,44,534	12,106	10,025	8,37,381	373 / 12,46,543
South Presidency Division. P.	South-west subdivision. P.	8	..	..	..	..	54 / 41,36,028	2,406	1,993	2,26,808	..
	South-east subdivision. P.	10	..	..	..	2	60 / 67,31,043	2,756	1,992	2,24,888	..
	General Hospital subdivision. T.	..	..	..	..	..	.. / 11,66,530	1,901	1,247	..	..
	South Presidency Division.	18	..	..	..	2	187 / 1,28,10,819	10,843	12,749	7,03,315	496 / 9,70,875
Chingleput Division. P.	Chingleput subdivision. P.	993	24 / 205	49 C / 3 F.B.	96,351	..	212 / 10,97,171	2,968	2,184	1,69,938	..
	Buckingham Canal subdivision. P.	236	.. / 13 tanks.	152 C. / 12 F.B. / 12 R. / 4 D.	3,807	..	42 / 44,623	3,373	3,031	1,96,296	..

* As on 30th June 1932.

Appendix V—*cont.*

Names of divisions and subdivisions.		Area in square miles.	Number of P.W.D. sources of irrigation canals / tanks.	Length of canals, drains, etc.	Ayacut in acres under P.W.D. sources of irrigation.	Length of P.W.D. roads in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Correspondence. Issues.	Expenditure on repairs and original works.	Total number and value of estimates in rupees.
					Madras Circle—Permanent—cont.					RS.	
Chingleput Division—*cont.* P.	St. Thomas' Mount subdivision. T.	511	63 / 190	189½ C. 3½ F.B. 60 Ch.	72,823	..	24 / 2,69,409	4,556	7,827	1,09,935	..
	Tiruvallur subdivision. P.	1,153	40 / 293	3 D. 18 F.B.	126,258	2¾	73 / 7,05,050	7,116	7,132	1,35,100	..
	Chingleput Division ..	2,789	84 / 711	189 C. 193 Ch. 7 D. 34 F.B. 12 R.	264,110	2¾	341 / 20,08,489	28,182	33,418	5,67,296	425 / 9,26,134
Bellary Division. P.	Anantapur subdivision. P.	3,270	32 tanks.	..	15,032	..	61 / 15,86,634	3,911	3,900	1,13,413	..
	Bellary subdivision. P.	3,302	5 / 15	37½	11,550	..	106 / 17,64,557	3,472	5,375	1,56,063	..
	Hospet subdivision. P.	2,598	8 / 69	91	26,744	4	40 / 2,44,631	4,585	4,533	1,43,820	..
	Bellary Division ..	9,170	13 / 116	129	53,326	4	207 / 35,95,871	11,994	10,991	3,98,476	296 / 5,18,494
Kurnool Division. P.	Nandyal subdivision. P.	4,097	1 / 48	70¼	34,118	..	55 / 6,76,754	3,057	3,362	63,380	..
	Kurnool subdivision. P.	3,562	1 / 20	118¼	31,547	..	107 / 10,63,478	4,210	3,846	1,01,476	..
	Proddatur subdivision. P.	1,670	1 / 34	198	53,250	..	72 / 2,97,[illegible]	[illegible]	3,638	1,07,281	..
	Kurnool Division ..	9,800	1 / 102	382	1,88,915	..	234 / 20,48,558	10,705	10,188	2,72,137	373 / 5,17,415
Madanapalle Division .. P.	Madanapalle subdivision. P.	5,545	65 tanks.	..	19,661	..	96 / 22,19,472	4,220	4,502	72,537	..
	Cuddapah subdivision. P.	4,350	55 tanks.	..	15,819	..	70 / 14,04,344	4,448	4,979	90,278	..
	Penukonda subdivision. P.	3,429	80 tanks.	..	36,505	..	58 / 4,97,515	3,139	4,041	34,315	..
	Madanapalle Division.	13,324	200 tanks.	..	71,985	..	224 / 44,21,231	11,840	11,692	1,83,959	317 / 2,30,975
Madras Circle ..		35,122	98 / 1,129	946	4,00,386	15	1,414 / 3,88,24,847	..	..	29,61,560	320 / 48,36,656
					Coimbatore Circle—Permanent.						
Coimbatore Division .. P.	Coimbatore subdivision. P.	1,573	16 / 19	45	17,058	..	329 / 51,54,355	6,104	6,046	3,08,675	..
	Nilgiris subdivision. P.	1,010	..	..	..	50	528 / 58,78,858	3,334	7,481	5,15,690	..
	Erode subdivision. P.	3,391	11 / 12	219	48,552	..	58 / 5,36,771	7,248	6,056	97,543	..
	Coimbatore Division.	6,029	36 / 36	317	73,951	59	[illegible] / 1,16,84,200	17,000	14,960	10,34,960	507 / 12,09,180

Appendix V—*cont.*

Names of divisions and subdivisions.		Area in square miles.	Number of P.W.D. sources of irrigation canals / tanks.	Length of canals, drains, etc.	Ayacut in acres under P.W.D. sources of irrigation.	Length of P.W.D. roads in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Correspondence. Issues.	Expenditure on repairs and original works.	Total number and value of estimates in rupees.
	Coimbatore Circle—Permanent—cont.										
Coimbatore Water-works Division. T. (abolished).	Tirur subdivision (abolished).	2,915	16	65	400	..	116 / 16,78,812	5,270	4,434	RS 1,34,517	..
	Pollachi subdivision. P.	1,258	14 / 9	104	14,927	90	44 / 3,06 445	6,135	5,363	2,36,796	
	Coimbatore Water-works Division.	4,176	15 / 9	169	15,327	90	161 / 19,85,200	7,320	6,060	7,70,285	105 / 1,83,460
Salem Division. P.	Salem subdivision. P.	3,365	41 / 55	..	20,848	40	108 / 17,86,135	5,754	5,961	2,42,908	
	Tiruppattur .. P.	5,342	28 / 61	105	21,242	5	245 / 12,21,133	5,241	5,299	67,440	
	Salem Division ..	8,707	69 / 116	105	42,090	45	353 / 30,07,269	12,415	11,111	4,12,990	371 / 5,72,890
North Arcot Division .. P.	Ranipet subdivision. P.	1,068	17 / 418	411	81,459	..	4,56,060	4,408	3,967	1,02,25[illegible]	
	Vellore subdivision. P.	2,708	33 / 95	94	44,165	..	57 / 1,95,518	6,149	5,342	1,84,667	..
	Polur subdivision. P.	1,415	3 / 215	28	42,277	..	34 / 2,99,341	5,547	4,596	1,76,795	.
	North Arcot Division.	4,626	51 / 642	521	1,58,515	..	235 / 5,85,673	12,965	11,494	4,17,940	595 / 6,71,720
West Coast Division .. P.	North subdivision. P.	4,720	..	3	..	32	218 / 24,97,547	5,850	3,568	1,84,767	..
	Iritty subdivision T.	..	..	..	..	32	..	3,170	2,255	2,63,145	..
	Calicut subdivision. P.	1,524	..	16	..	76	127 / 14,85,490	7,077	7,615	2,90,732	..
	M.S.P. subdivision. T.	..	..	..	..	24	..	1,750	1,610	84,788	..
	West Coast Division.	8,061	..	44	..	119	422 / 46,39,605	14,380	13,040	6,80,180	586 / 16,52,5[illegible]
Coimbatore Circle ..		32,199	171 / 803	1,156	2,80,883	313	2,093 / 9,19,01,947	..	..	33,24,465	127 / 49,08,140
	Trichinopoly Circle—Permanent.										
Trichinopoly Division .. P.	South subdivision. P.	611	33 / 32	216	41,153	..	371 / 16,39,100	4,951	3,710	2,35,137	..
	East subdivision. P.	1,125	218 / 21	278	57,040	..	48 / 4,02,562	5,308	3,468	4,40,885	..
	West subdivision P.	1,855	55 / 53	272	37,881	..	118 / 5,13,494	3,779	4,112	1,06,270	..
	Trichinopoly Division.	3,591	306 / 106	766	1,36,074	..	540 / 50,55,906	12,007	10,267	7,75,294	577 / 14,37,91
Periyar Division P.	Periyar subdivision P.	363	90 / 409	260	1,87,818	..	36 / 1,63,479	7,071	7,494	94,864	..
	Uttamapalayam sub-division P.	264	16 / 28	62	20,800	16	22 / 2,25,176	5,331	4,661	1,11,547	...
	Dindigul subdivision P.	2,014	444	..	17,883	29	74 / 6,13,699	5,164	4,374	1,13,176	..
	Periyar Division ..	4,450	103 / 270	322	1,76,500	45	161 / 13,40,073	16,507	14,334	4,77,630	250 / 10,98,464

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APPENDIX V.—*cont.*

Names of divisions and subdivisions.	Area in square miles.	Number of P.W.D. sources of irrigation canals / tanks.	Length of canals, drains, etc.	Ayacut in acres under P.W.D. sources of irrigation.	Length of P.W.D. roads in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Correspondence. Issues.	Expenditure on repairs and on original works. RS.	Total number and value of estimates in rupees.
Trichinopoly Circle—Permanent—cont.										
Ramnad Division. T. — Madura subdivision P.	2,862	1 / 48	32	24,724	..	78 / 19,70,320	4,905	4,541	97,773	..
Ramnad Division. T. — Ramnad subdivision T.	4,656	1 / 49	..	21,048	..	106 / 10,46,626	4,018	3,802	94,144	..
Ramnad Division. T. — Drainage subdivision. T (not now in existence).	..	..	..	..	..	77 / 19,61,284	2,486	3,019	..	..
Ramnad Division ..	4,743	1 / 57	44	27,004*	..	176 / 29,26,442	11,994	11,361	5,94,359	197 / 4,97,337
Tinnevelly Division. — Tinnevelly subdivision P.	2,065	12 / 118	141	31,947	..	123 / 19,73,631	3,707	4,195	1,61,754	..
Tinnevelly Division. — Srivaikuntam subdivision. P.	684	32 / 63	124	43,186	..	112 / 4,53,440	1,114	2,298	1,31,461	..
Tinnevelly Division. — Sermadevi subdivision. P.	1,075	40 / 148	259	52,336	..	51 / 4,96,251	4,653	3,937	88,658	..
Tinnevelly Division. — Floods subdivision. T.	15	2 / 2	13	6,274	..	..	796	559	6,426	..
Tinnevelly Division ..	3,824	84 / 323	520	1,27,469	..	286 / 29,23,322	12,951	11,413	4,01,845	394 / 6,37,919
Trichinopoly Circle ..	16,608	494 / 756	1,652	4,67,047	45	1,163 / 1,22,45,833	..	..	22,52,137	586 / 1,24,37,682

Names of divisions and subdivisions.	Area in square miles.	Number of P.W.D. sources of irrigation canals / tanks.	Length of canals, drains, etc.	Ayacut in acres under P.W.D. sources of irrigation.	Length of P.W.D. roads in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Correspondence. Issues.	Expenditure on repairs and on original works. RS.	Total number and value of estimates in rupees.
Tanjore Circle—Permanent.										
South Arcot Division. P. — Cuddalore subdivision. P.	992	47 / 159	158	46,482	7	335 / 1,37,927	7,259	4,893	1,61,514	..
South Arcot Division. P. — Chidambaram subdivision. P.	426	43 / 24	212	1,43,857	39	122 / 3,19,398	4,577	2,311	98,632	..
South Arcot Division. P. — Vriddhachalam subdivision. P.	1,467	9 / 94	118	57,237	7	106 / 3,46,918	4,550	2,641	59,492	..
South Arcot Division. P. — Tindivanam subdivision. P.	1,328	3 / 232	40	66,162	..	161 / 5,20,611	4,500	2,774	98,876	..
South Arcot Division.	4,213	103 / 510	530	3,13,738	53	724 / 25,59,652	16,790	13,157	4,82,945	569 / 6,60,412
Cauvery Division. P. — Tanjore subdivision. P.	83	5C	107	27,612	3	75 / 60,85,216	7,511	5,761	3,06,650	..
Cauvery Division. P. — Nanni'am subdivision. P.	389	16C	348	1,76,927	32	46 / 8,66,964	5,276	3,191	1,26,732	..
Cauvery Division. P. — Mayavaram subdivision. P.	574	22 / 2	353	2,46,765	27	48 / 3,34,307	*,460	2,979	2,32,343	..
Cauvery Division ..	1,046	42C	804	4,51,274	62	169 / 72,86,487	15,917	14,264	6,60,746	382 / 8,38,863
Vennar Division. P. — Vennar subdivision. P.	512	5 / 12	167	1,29,491	..	28 / 72,854	4,286	3,172	96,943	..
Vennar Division. P. — Tiruturaipundi subdivision. P.	560	7C	135	1,14,744	..	53 / 1,50,200	4,825	4,824	1,27,722	..
Vennar Division. P. — Negapatam subdivision. P.	312	7 / 2	202	1,44,823	..	57 / 5,91,809	4,198	3,948	1,39,728	..
Vennar Division. P. — Mannargudi subdivision. P.	1,200	2 / 59	65	61,220	..	25 / 4,08,650	4,127	3,216	48,687	.
Vennar Division ..	2,584	15 / 73	569	4,41,278	..	153 / 12,23,412	12,781	10,291	4,99,415	516 / 6,39,350

* Ayacut on 30th June 1932 is 40,473.

APPENDIX V—*cont.*

Names of divisions and subdivisions.	Area in square miles.	Number of P.W.D. sources of irrigation canals / tanks.	Length of canals, drains, etc.	Ayacut in acres under P.W.D. sources of irrigation.	Length of P.W.D. roads in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Correspondence. Issues.	Expenditure on repairs and on original works.	Total number and value of estimates in rupees.
Tanjore Circle—Permanent—cont.										
									RS.	
River Conservancy Division. P. — Trichinopoly subdivision. P.	..	..	89	..	7·4	18 / 23,928	5,124	4,130	2,29,199	..
River Conservancy Division. P. — Grand Anicut sub-division. P.	..	..	94	..	6·5	17 / 17,227	3,950	1,838	1,72,215	..
River Conservancy Division. P. — Lower Anicut sub-division. P.	..	..	101	..	84	21 / 25,860	5,331	4,254	3,70,954	..
River Conservancy Division.	..	..	284	..	98	56 / 64,749	11,448	9,280	7,72,369	281 / 9,74,422
Tanjore Circle	7,843	160 / 583	2,177	12,06,290	213	1,102 / 1,11,38,300	..	..	24,16,505	249 / 17,28,038

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APPENDIX VI.

Abstract statement of statistics showing for sections the average for the five years ending 1931–32 under area, number of Public Works Department sources of irrigation, length of canals, ayacut in acres, mileage of roads number and capital value of buildings and receipts and issue of correspondence.

Name of section. (1)		Area in square miles. (2)	Number of Public Works Department sources of irrigation, canals/tanks. (3)	Length of canals, drains and other irrigation, navigation, embankments, drainage and protective works, in miles. (4)	Ayacut in acres under Public Works Department sources of irrigation. (5)	Length of Public Works Department roads, in miles. (6)	Number and capital value of buildings in rupees. (7)	Correspondence. Receipts. (8)	Correspondence. Issues. (9)
WALTAIR CIRCLE.									
VIZAGAPATAM DIVISION.									
Narasapatam Subdivision.									
Chintapalli section (Supervisor) ..	T.	Not available.	Not available.	..	Not available.	8	1,39,275	Not available.	160
Lammasingbi section (Supervisor) ..	T.	..	..	..	..	20	2/12,100	Do.	423
Krishnadevipeta section (Supervisor) ..	T.	14	..	..	..	7	3/3,875	Do.	Not available.
Narasapatam section (Supervisor) ..	P.	497	24/23	36	9,300	..	16/1,66,455	400	600
Parvatipuram Subdivision.									
Palakonda section (Supervisor) ..	P.	170	26/55	70	20,764	..	30/72,436	Not available.	400
Parvatipuram section (Supervisor) ..	P.	1,360	..	..	..	..	51/5,65,919	Do.	500
Viraghattam section (Supervisor) ..	P.	256	32/32	84	19,791	1½	14/34,293	1,600	1,800
Anantagiri section (Supervisor) (Attached to this subdivision after 1931–32.) ..	P.	..	..	..	..	44	3/17,367	642	651

APPENDIX VI—*cont.*

Name of section.		Area in square miles.	Number of Public Works Department sources of irrigation, canals/tanks.	Length of canals, drains and other irrigation, navigation, embankments, drainage and protective works, in miles.	Ayacut in acres under Public Works Department sources of irrigation.	Length of Public Works Department roads, in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Correspondence. Issues.
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VIZAGAPATAM DIVISION—*cont.*									
Yellamanchilli Subdivision.									
Vizagapatam section (Supervisor) ..	P.	2	..	..	..	..	205/12,74,888	Not available.	950
Yellamanchilli section (Overseer) ..	P.	60	50/4	154	15,379	..	..	..	..
Anakapalle section (Supervisor) ..	P.	905	10/1	14	7,002	..	35,2,18,100	1,440	1,200
Rayavaram section (Overseer)	P.	30	24/12	67	13,000	..	..	448	468
Hospital section (Supervisor)	T.	½	..	..	..	2	70,12,52,184	1,155	949
KORAPUT DIVISION.									
Jeypore Subdivision.									
Koraput North section (Supervisor) ..	P.	107	..	..	..	23	23/2,82,501	840	799
Jeypore section (Supervisor)	P.	25	..	..	..	17½	11/79,481	1,195	720
Kolab section (Supervisor) ..	T.	..	..	..	..	10	..	..	..
Koraput Subdivision.									
Sunki section (Supervisor)	P.	258	..	..	..	15	14/25,500	1,219	1,240
Rallagedda section (Supervisor) ..	T.	36	..	..	..	10	8/7,506	Not available.	1,330
Pottanghi section (Supervisor)	P.	..	..	..	..	18	11/72,500	532	472
Koraput South section (Supervisor) ..	P.	181	..	..	..	17	9/39,312	633	641
Padwa South section (Supervisor)	T.	384*	..	..	..	51*	2/7,886*	Not available.	Not available.
Gunupur Subdivision.									
Gunupur section (Supervisor)	T.	..	..	..	..	46	15/37,519	Not available.	300
Rayaghada section (Supervisor) ..	T.	400	..	..	..	37	3/35,600	900	667
Narayanapatnam section (Supervisor).	T.	..	..	..	..	50	3/14,163	Not available.	Not available.
Bissamcuttack section (Supervisor) ..	T.	..	..	..	..	59	5/15,799	Do.	Do.
Indravati Subdivision.									
Indravati section (Supervisor)	P.	850	..	..	..	71	15/81,029	972	541
Borigumma section (Supervisor) ..	P.	1,200	..	..	..	47	5/13,997	1,133	416
Umerkota section (Supervisor)	T.	..	..	..	..	61	..	321	417
GANJAM DIVISION.									
Berhampur Subdivision.									
Kukkudakhandi section (Supervisor) ..	P.	638	18/22	59	30,690	..	6/8,000	Not available.	731
Berhampur section (Supervisor) ..	P.	68	5/16	20	8,730	..	42/3,65,735	1,640	758
Purushothapuram section (Overseer) (Tanganapalle).	P.	160	11/25	84½	31,200	..	8/14,000	562	670
Chatrapur section (Supervisor)	P.	192	4/18	21	9,970	..	23/2,13,309	1,810	1,240
Taptapani section (Supervisor) .. (Mohana)	T.	5	..	..	..	6	1/9,000	336	402
Chicacole Subdivision.									
Chicacole section (Supervisor)	P.	216	100/40	192	29,700	..	22/1,07,300	704	568
Narasannapeta section (Supervisor) ..	P.	350	6/40	132	30,000	..	28/1,10,200	Not available.	1,149
Ichhapuram section (Supervisor) ..	P.	256	10/27	50	35,386	..	24/1,14,163	Do.	1,134
Parlakimedi section (Supervisor) ..	T.	86*	..	..	..	5*	10/63,600*	Not available.	Not available.

* Figures as on 30th June 1932.

APPENDIX VI—*cont.*

Name of section. (1)		Area in square miles. (2)	Number of Public Works Department sources of irrigation, canals/tanks. (3)	Length of canals, drains and other irrigation, navigation, embankment, drainage and protective works, in miles. (4)	Ayacut in acres under Public Works Department sources of irrigation. (5)	Length of Public Works Department roads, in miles. (6)	Number and capital value of buildings in rupees. (7)	Correspondence, Receipts. (8)	Correspondence, Issues. (9)
GANJAM DIVISION—*cont.*									
Russellkonda Subdivision.									
Russellkonda section (Supervisor) ..	P.	600	7/1	95	8,630	..	20/1,77,880	1,009	1,323
Madhavaborida section (Supervisor) ..	P.	280	6/6	47	7,520	..	13/5,757 *	Not available.	Not available.
Aska section (Supervisor)	P.	150	3/1	44	7,200	..	24/1,06,000	Do.	1,977
Ballipodoro section (Supervisor) ..	T.	10	..	..	..	..	..	584	584
G. Udayagiri and Kalinga section Supervisor	T.	..	..	..	..	28	1/4,791	Not furnished.	
Baliguda section (Supervisor)	T.	..	..	..	..	26	1/4,571		
DOWLAISHWARAM CIRCLE.									
GODAVARI EASTERN DIVISION.									
Cocanada Subdivision.									
Cocanada section (Supervisor)	P.	35	1-C Part	23	11,425	..	44/7,94,080	1,482	1,058
Biccavole section (Overseer)	P.	44	2-C Parts	110	24,138	..	15/52,553	Not furnished.	1,076
Tossipudi section (Overseer)	P.	45	1-C Part	103	24,142	..	4/9,039	780	794
Kovvur section (Overseer)	T.	54	2-C (one part and one full).	106	29,613	..	4/8,070	967	967
Ramachandrapuram Subdivision.									
Alamur section (Overseer)	P.	53	2-C Parts	103	21,800	..	8/60,766	Not furnished	1,468
Tapeswaram section (Overseer) ..	P.	32	2-C „	77	16,000	..	1/2,128	Do.	571
Mandapeta section (Overseer) ..	P.	34	1-C Part	84	22,000	..	9/1,13,032	537	801
Injaram section (Overseer)	P.	39	2-C Parts	77	22,100	..	2/8,471	982	1,109
Coringa section (Overseer)	P.	47	1-C Part	106	25,300	..	6/10,549	Not furnished	876
Kotipalli section (Overseer)	P.	48	1-C „	95	25,500	..	5/12,185	Do.	1,311
GODAVARI CENTRAL DIVISION.									
Gannavaram Subdivision.									
Gopalapur section (Supervisor) ..	P.	73	3-C Parts	125	20,829	..	8/10,212	632	1,030
Thatipalla section (Overseer)	P.	50	1-C Part	162	18,609	..	8/31,432	699	856
Razole section (Overseer)	P.	72	1-C „	163	23,355	..	9/1,27,303	941	939
Amalapur Subdivision.									
Amalapur section (Supervisor)	P.	80	2-C Parts	178	24,835	..	14/2,01,477	Not furnished	869
Kothapeta section (Overseer)	P.	43	3-C „	123	12,008	..	12/42,857	Do.	1,464
Mukteswaram section (Overseer) ..	P	55	1-C Part	117	18,998	..	9/58,111	Do.	427
Sivapuram section (Overseer) ..	P.	76	1-C „	127	25,735	..	4/2,908	Do.	458
Polavaram irrigation section (Supervisor)	P.	36	..	46	17,500	..	2/11,224	Do.	Not furnished.
GODAVARI HEADWORKS DIVISION.									
Headworks Subdivision.									
Headworks section (Supervisor) ..	P.	..	..	2½	..	..	31/3,79,135	3,760	2,909
Quarries section (Overseer)	T.	..	..	..	..	..	..	592	1,217
Vasista Subdivision.									
V.L.B. Upper section (Overseer) ..	P.	..	..	28	..	..	..	715	792
V.L.B. Lower section (Supervisor) ..	P.	..	..	51	..	..	..	766	766
V.R.B. Upper section (Supervisor) ..	P.	..	..	31	..	..	..	803	1,003
V.R.B. Lower section (Overseer) ..	P.	..	..	18	..	..	..	580	580

* Figures as on 30th June 1932.

APPENDIX VI—*cont.*

Name of subdivision. (1)		Area in square miles. (2)	Number of Public Works Department sources of Irrigation, canal/tanks. (3)	Length of canals, drains and other irrigation, navigation, embankment, drainage and protective works, in miles. (4)	Ayacut in acres under Public Works Department sources of irrigation. (5)	Length of Public Works Department roads, in miles. (6)	Number and capital value of buildings in rupees. (7)	Correspondence. Receipts. (8)	Correspondence. Issues. (9)
GODAVARI HEADWORKS DIVISION—*cont.*									
Gowtami Subdivision.									
A.G.R.B. section (Supervisor) ..	.. P.	..	..	24	..	..	..	606	757
A.G.L.B. section (Overseer) ..	.. P.	..	..	25½	..	..	..	602	828
G.L.B. Upper section (Overseer)	.. P.	..	..	20½	..	..	..	367	353
G.L.B. Lower section (Overseer)	.. P.	..	..	18½	..	..	..	518	565
G.R.B. Upper section (Overseer)	.. P.	..	..	33	..	..	..	716	755
G.R.B. Lower section (Overseer)	.. P.	..	..	25	..	..	..	414	452
GODAVARI NORTHERN DIVISION.									
Kunnavaram Subdivision.									
Bhadrachalam section (Supervisor)	.. P.	78	..	..	..	19	17/1,66,216	1,233	647
Gowridevipeta section (Supervisor)	.. P.	312	..	..	..	22	3/7,670	1,052	484
Waddigudem section (Supervisor)	.. P.	615	..	..	..	13	3/4,558	Not furnished.	
Dummagudem Subdivision.									
Dummagudem section (Supervisor)	.. P.	180	2 tanks	7	424	21	13/44,601	1,636	1,078
Chera section (Supervisor) ..	.. P.	105	..	..	..	18	7/37,459	1,431	584
Venkatapuram section (Supervisor)	.. P.	208	..	..	..	18	20/1,46,971	1,338	747
Pragallapalli section (Supervisor)	.. P.	198	..	..	..	19	2/4,141	871	451
Rajahmundry Subdivision.									
Rajahmundry section (Supervisor)	.. P.	175	8 T	..	2,188	..	246/13,15,878	1,565	1,426
Gokavaram section (Supervisor)	.. P.	200	23 T	..	7,848	7	8/4,869	805	698
Chodavaram section (Supervisor)	.. T.	200	..	..	..	35	31/64,758	880	708
Polavaram Subdivision.									
Polavaram section (Supervisor) ..	.. T.	330	6 T	2	1,612	33	12/1,25,484	Not furnished.	
Jangareddigudem section (Supervisor) ..	P.	213	9 T	..	2,736	23	5/42,327	1,567	1,689
Samalkota Subdivision.									
Samalkota section (Supervisor) ..	.. P.	720	12 T	..	3,262	..	19/2,53,846	Not furnished.	
Yelleswaram section (Supervisor)	.. T.	830	8 T	..	6,812	10	7/30,769	Do.	
Jaddangi section (Supervisor) ..	.. T.	210	..	..	..	16	2/9,060	Do.	
GODAVARI WESTERN DIVISION.									
Narasapur Subdivision.									
Sidhantam section (Overseer) ..	.. P.	47	24-C	126	25,452	..	6/15,939	691	556
Narsapur (Supervisor)	.. P.	110	24-C	111	27,352	..	11/88,873	1,096	755
Palacole section (Overseer) ..	.. P.	47	21-C	101	24,719	..	3/8,920	1,225	920
Peravali section (Overseer) ..	.. P.	54	26-C	143	22,865	..	4/7,862	1,206	1,067
Martair section (Overseer) ..	.. P.	54	40-C	111	27,266	..	8/55,686	728	677
Tanuku Subdivision.									
Tanuku canal section (Supervisor)	.. P.	20	1-C	72	..	..	18/2,07,075	1,042	1,232
Attilli section (Overseer)	.. P.	40	17-C	77	21,450	..	4/10,641	528	628
Mandapaka section (Overseer) ..	.. P.	40	16-C	87	21,111	..	2/2,687	512	596
Penumantra section (Overseer)	.. P.	40	25-C	68	24,187	..	..	500	570
Bhimavaram section (Overseer)	.. P.	55	26-C	61	23,467	..	1/4,924	454	56[illegible]
Delta Subdivision, Ellore.									
Chettipeta canal section (Supervisor) ..	P.	38	3-C	38	..	2½	14/84,190	2,535	2,646
Gundugolanu section (Overseer)	.. P.	172	24-C	61	33,650	..	5/10,920	Not furnished.	9[illegible]7
Tadepalligudem section (Overseer)	.. P.	94	32-C	60	24,915	..	2/2,880	Do.	414
Pentapadu section (Overseer) ..	.. P.	60*	15-C	64	23,532	..	3/22,643	829	693

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APPENDIX VI—*cont.*

Name of section.		Area in square miles.	Number of Public Works Department sources of Irrigation, canals/tanks.	Length of canals, drains and other irrigation, navigation, embankment, drainage and protective works, in miles.	Ayacut in acres under Public Works Department sources of irrigation.	Length of Public Works Department roads, in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Correspondence. Issues.
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
GODAVARI WESTERN DIVISION—*cont.*									
Undi Subdivision.									
Yendagandy section (Overseer) ..	P.	40	21	99	21,249	..	1/2,203	1,000	800
Undi section (Overseer)	P.	64	21	118	24,775	..	4/17,812	1,510	1,350
Akudu section (Overseer)	P.	54	15	106	24,180	..	3/9,961	1,500	1,320
Ganapavaram section (Overseer) ..	P.	50	13	68	24,012	..	1/1,940	1,000	850
Chilakalampadu section (Overseer) ..	P.	53	17	105	21,913	..	2/3,984	1,500	1,100
Yenamadurru section (Supervisor) ..	T.	15	..	24	..	..	..	500	533
BEZWADA CIRCLE.									
KISTNA EASTERN DIVISION.									
Coutaram Subdivision.									
Cowtaram section (Overseer)	P.	66	44-C	133	32,577	..	17/29,411	Not furnished.	
Bantumalli section (Overseer)	P.	150	57-C	191	39,187	..	10/8,340	Do.	
Pedlanka section (Overseer)	P.	70	18-C	153	18,972	..	2/300	Do.	
Gudlavalleru section (Overseer) ..	P.	50	38-C	126	23,824	..	4/6,735	Do.	
Vinjaram section (Overseer)	P.	65	25-C	142	21,405	..	17/1,02,835	Do.	

Bezwada Subdivision.									
Ellore section (Overseer)	P.	70	13-C	50	34,246	.	12/11,968	Not furnished.	
Kankipad section (Overseer)	P.	51·2	24-C	66	26,529		7/2,870	Do.	
Uppalur section (Overseer)	P.	37·3	8-C	55	13,771		4/42,204	Do.	
Atukur section (Overseer)	P.	65	16-C	39	33,488		10/12,961	Do.	
Bandar Subdivision.									
Nidumole section (Overseer)	P.	100	24-C	67	27,578		10/19,794	Not furnished.	
Veeranki section (Overseer)	P.	84	19-C	98	28,844		7/13,387	Do.	
Vuyyur section (Overseer)	P.	50	17-C	72	27,440		1/7,463	Do.	
Town works section (Supervisor) ..	P.	130	6-C	26	7,106		29/4,21,608	Do.	
Gudivada Subdivision.									
Jonnapad section (Overseer)	P.	38·5	42-C	116	20,689		ot furnished.	Not furnished.	
Ventrapragada section (Overseer) ..	P.	55	14-C	63	29,000		5/14,992	Do.	
Upper Gudivada section (Overseer) ..	P.	54	29-C	93	26,486		1/31,693	Do.	
Lower Gudivada section (Overseer) ..	P.	64	39-C	115	30,514		27/1,77,488	Do.	
KISTNA CENTRAL DIVISION.									
Headquarters Subdivision.									
Town works section (Supervisor) ..	T.	2½	3-C	4	..	2	26/4,89,219	735	703
Anicut section (Overseer)	P.	1½	1-C	½	..	1	33/1,94,346	841	603
Muniyeru section (Supervisor) ..	P.	531	17-C/13-T	65	10,600	..	15/82,000	886	1,122
Kondapalle section (Overseer) ..	P.	1,150	12-T	..	4,964	..	8/61,667	526	562
Gauging section (Overseer)	P.	..	..	..	..	..		..	..
Divi Subdivision.									
Headworks section (Overseer) ..	P.	2	2-C	18½	..	..	47/[illegible]	753	64
Divi South section (Supervisor) ..	P.	77	30-C	141½	20,678	..	[illegible]35	248	1,032
Divi Eastern section (Supervisor) ..	P.	9	40-C	162½	18,103	..	3/9,164	198	1,116

APPENDIX VI—*cont.*

Name of section. (1)		Area in square miles. (2)	Number of Public Works Department sources of irrigation canal/tanks. (3)	Length of canals, drains and other irrigation, navigation, embankment, drainage and protective works, in miles. (4)	Ayacut in acres under Public Works Department sources of irrigation. (5)	Length of Public Works Department roads in miles. (6)	Number and capital value of buildings in rupees. (7)	Correspondence: Receipts. (8)	Correspondence: Issues. (9)
KISTNA WESTERN DIVISION.									
River Conservancy-Subdivision.									
Bezwada section (Overseer)	P.	16	..	20	..	..	..	389	511
Vallur section (Supervisor)	P.	10	..	18	..	..	3/6,879	..	568
Mopidevi section (Supervisor)	P.	18	..	17	..	..	2/3,525	638	436
Vallabhapuram Section (Supervisor)	P.	13	..	19	..	..	1/3,770	372	372
Kollur section (Overseer)	P.	14	..	18	..	..	2/4,332	343	368
Penamudy section (Supervisor)	P.	8	..	16	..	..	..	..	[illegible]
R.C.I. Bezwada section (Overseer)	P.	70	..	..	..	..	..	274	263
R.C.I. Penamudy section (Overseer)	P.	109	..	..	..	..	..	257	225
Central Subdivision.									
Main Canal section (Supervisor)	P.	50	17-C	48	15,451	..	15/36,947	1,515	1,528
Tenali Hospital section (Supervisor)	T.	50	30-C	92	2,545	..	9/1,35,782	1,359	651
Kuchipudi section (Overseer)	P.	53	26-C	87	28,906	..	5/11,775	628	667
Tsandole section (Overseer)	P.	54	30-C	118	23,132	..	13/7,300	1,006	349
Aremanda section (Overseer)	P.	51	33-C	105	24,457	..	1/1,726	887	423
Eastern Subdivision.									
Kollipara section (Overseer)	P.	49	15-C	92	21,601	..	2/3,528	1,512	1,512
Kollur section (Overseer)	P.	42	26-C	94	26,500	..	2/8,411	729	540
Vallatur section (Overseer)	P.	58	33-C	112	24,598	..	2/8,420	790	485
Repalle section (Overseer)	P.	101	32-C	104	29,251	..	8/86,976	840	695
Western Subdivision.									
Jagarlamoodi section (Overseer)	P.	55	42-C	118	27,503	..	8/29,566	Not furnished.	
Poondla section (Overseer)	P.	62	33-C	154	27,000	..	10/10,480	Do.	
Bapatla section (Overseer)	P.	58	29-C	143	25,000	..	22/93,122	Do.	
Santhoramur section (Overseer)	P.	120	35-C	92	16,000	..	10/13,270	Do.	
Ongole section (Supervisor)	P.	600	1 tank	6	627	..	19/1,90,375	Do.	
GUNTUR DIVISION.									
Tanks Subdivision.									
Ellore section (Supervisor)	P.	760	21 tank	..	10,000	..	21/2,43,509	Not furnished.	
Kovvur section (Supervisor)	P.	450	22 tank	37	11,600	..	4/65,074	Do.	
Guntur Subdivision.									
Guntur section (Supervisor)	P.	[illegible]	..	..	..	..	37/10,54,571	Not furnished.	
Vinukonda section (Supervisor)	P.	[illegible]	5-C	17	2,121	..	12/1,76,620	Do.	
Sattanapalle (Overseer)	P.	[illegible]	3-C	6	898	..	14/1,61,604	Do.	
NELLORE DIVISION.									
Nellore Subdivision.									
Gudur section (Supervisor)	P.	[illegible],300	60 T	..	34,611	..	18/2,30,167	362	385
Nellore section (Supervisor)	P.	460	42 T	2	15,246	..	35/6,58,996	275	298
No. 2 section (Overseer)	P.	194	37-C/26 T	84	32,300	5	7/34,090	125	130
No. 1 section (Overseer)	P.	96	54-C/22 T	112	36,000	..	1/414	173	188

APPENDIX VI—*cont.*

Name of section.		Area in square miles.	Number of Public Works Department sources of irrigation canals/tanks.	Length of canals, drains and other irrigation, navigation, embankment, drainage and protective works in miles.	Ayacut in acres under Public Works Department sources of irrigation.	Length of Public Works Department roads in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Issues.
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NELLORE DIVISION—*cont.*									
Sangam Subdivision									
Atmakur section (Supervisor)	P.	600	13	1½	11,639	..	17/1,39,180	Not furnished.	
Kanigiri reservoir (Supervisor)	P.	110	13-C/8-T	39	17,271	..	12/24,285	216	250
Kodavailur (Overseer)	P.	80	31-C/5-T	83	21,045	..	2/3,867	227	185
Allur section (Overseer)	P.	110	17-C/10-T	64	23,916	..	4/13,619	350	298
Kovvur section (Overseer)	P.	75	36-C/3-T	172	22,405	..	1/63,923	176	136
Kandukur Subdivision.									
Kandukur section (Supervisor)	P.	2,546	19-T	..	11,616	..	25/2,84,706	236	289
Kavali section (Supervisor)	P.	670	50-T	2	28,560	..	13/1,72,726	289	606
Buckingham canal section (Supervisor).	P.	3	..	83	...	..	18/37,789	323	430
Mopad section (Supervisor)	P.	400	15-C/14-T	92	12,500	..	2/12,816	246	336
MADRAS CIRCLE.									
NORTH PRESIDENCY DIVISION.									
North-east Subdivision.									
Georgetown section (Supervisor) ..	P.	..	..	..	..	..	34/18,13,842	Not furnished.	
Beach section ,, ..	P.	2	..	..	..	..	23,20,483	274	210
Rayapuram section ,, ..	P.	3	..	..	..	..	..	268	221

North-west Subdivision.									
Kilpauk section (Supervisor)	P.	Not measurable.	..	..	..	..	*44/11,99,892	Not available.	
Vepery ,, ,, ...	P.	..	..	..	..	..	* 49/26,49,504		
Tuberculosis section (Overseer) ..	T.	..	..	..	..	..	* 31/8,50,316		
Egmore ,, (Supervisor) ..	P.	..	..	..	..	..	* 21/24,55,607		
Government House Subdivision.									
Government House section (Supervisor).	T.	3	..	..	..	..	138/20,34,180	Not available.	
SOUTH PRESIDENCY DIVISION.									
South-west Subdivision.									
Guindy section (Supervisor) quasi-permanent.		2	..	..	..	..	16/26,33,482	667	606
Brickfields section (Supervisor) quasi-permanent.		6	..	..	..	..	38/15,52,545	478	454
South-east Subdivision.									
Chepauk section (Supervisor) quasi-permanent.		3	..	..	..	2	18/34,72,745	960	1,009
Triplicane section (Overseer)	P.	7	..	..	..	..	42/32,82,291	604	604
General Hospital Subdivision.									
Consisting of three Supervisors' section, temporary and one Overseer's section, permanent.		Non territorial.	..	..	..	..	/11,66,530	Not furnished.	
CHINGLEPUT DIVISION.									
Chingleput Subdivision.									
Chingleput section (Supervisor) ..	P.	381	8/112	13	41,279	..	140/6,38,768	Not available.	
Madurantakam section (Supervisor) ..	P.	445	5/93	10	26,552	..	14/75,875	870	982

* Figures as on 30th June 1932.

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APPENDIX VI—*cont.*

Name of section. (1)		Area in square miles. (2)	Number of Public Works Department sources of irrigation canals/tanks. (3)	Length of canals, drains and other irrigation, navigation, embankment, drainage and protective works in miles. (4)	Ayacut in acres under Public Works Department sources of irrigation. (5)	Length of Public Works Department roads in miles. (6)	Number and capital value of buildings in rupees. (7)	Correspondence. Receipts. (8)	Correspondence. Issues. (9)
CHINGLEPUT DIVISION—*cont.*									
Buckingham Canal Subdivision.									
Mypad section No. (Supervisor) ..	P.	97	..	66/10	..	..	18/9,316	Not available.	1,204
No. 2 Canal section	P.	119	6-T	..	1,364	..	16/19,543	Do.	2,228
No. 3 Canal section, Adyar (Supervisor).	P.	120	7-T	..	2,443	..	11/15,762	Do.	1,031
St. Thomas Mount Subdivision.									
Sriperumbudur section (Supervisor) ..	P.	297	40/109	89½	38,367	..	10/51,249	Do.	811
Conjeeveram „ „ ..	P.	214	23/81	54	34,596	..	8/64,529	Do.	932
Saidapet Water-works section (Supervisor).	T.	..	..	..	..	..	1/6,248	Do.	771
Tiruvallur Subdivision.									
Chembarambakkam section (Overseer).	P.	45	1-T	4½	13,400	2¼	14/68,267	192	189
Ponneri section (Supervisor)	P.	302	90 C/F.B-6	9	42,263	..	7/1,10,011	811	872
Tiruvallur section (Supervisor)	P.	436	95-T	6	28,558	..	13/1,16,097	700	606
Saidapet section (Supervisor)	P.	199	60-T	..	17,785	..	25/3,70,382	950	928
Red hills section (Overseer)	P.	52	4-T	20	8,906	..	9/19,228	1,275	2,614
BELLARY DIVISION.									
Anantapur Subdivision.									
Anantapur taluk section (Supervisor) ..	P.	915	8-T	..	4,573	..	33/12,19,607	Not available.	
Gooty section (Supervisor)	P.	1,540	12-T	..	5,789	..	25/3,13,161	Do.	
Kalyandrug section (Overseer)	P.	815	12-T	..	4,670	..	3/53,866	Do.	
Bellary Subdivision.									
Bellary section (Supervisor)	P.	705	..	..	..	..	64/15,10,283	784	962
Adoni section (Supervisor)	P.	1,379	1/2	10½	3,000	..	27/2,26,597	618	623
Siruguppa section (Overseer)	P.	403	2/1	13	2,950	..	8/1,61,822	484	535
Rayadrug section (Overseer)	P.	815	2/12	14	5,600	..	7/89,786	508	556
Hospet Subdivision.									
Hospet section (Supervisor)	P.	467	2/12	26	8,109	..	12/69,326	663	732
Kamalapuram section (Overseer) ..	P.	30	2/1	25	7,226	..	..	577	540
Hampi Ruins section (Overseer) ..	P.	25	2/C	14	2,539	4	2/9,455	701	657
Kampli section (Overseer)	P.	30	3-C	36	3,386	..	3/13,160	582	654
Harpanahalli section (Overseer) ..	P.	1,168	17-T	..	2,709	..	12/83,696	420	415
Kudligi section (Supervisor)	P.	890	39-T	..	5,665	..	11/68,911	720	960
KURNOOL DIVISION.									
Nandyal Subdivision.									
Markapur section (Supervisor)	P.	2,201	1/16	25½	11,600	..	25/2,77,919	Not available.	
Nandyal section (Supervisor)	P.	679	1/14	23	9,234	..	17/2,22,152	Do.	
Allegedda section (Supervisor)	P.	1,217	1/18	22	13,284	..	12/1,76,682	Do.	
Kurnool Subdivision.									
Dhone section (Overseer)	P.	1,564	8-T	..	3,515	..	24/2,36,976	Not available.	
Kurnool Town Works section (Supervisor)	P.	540	1-T	..	734	..	38/6,34,675	Do.	
Atmakur section (Supervisor)	P.	1,140	1/10	55	10,664	..	5/45,531	Do.	
Nandikotkur section (Overseer) ..	P	218	1/1	32	12,875	..	8/1,10,391	Do.	
K. C. Canal section (Overseer)	P	100	1/C	31½	3,759	..	33/34,900	Do.	

APPENDIX VI—*cont.*

Name of section. (1)		Area in square miles. (2)	Number of Public Works Department sources of irrigation canals/tanks. (3)	Length of canals, drains and other irrigation, navigation, embankment, drainage and protective works in miles. (4)	Ayacut in acres under Public Works Department sources of irrigation. (5)	Length of Public Works Department roads in miles. (6)	Number and capital value of buildings in rupees. (7)	Correspondence. Receipts. (8)	Correspondence. Issues. (9)
KURNOOL DIVISION—*cont.*									
Proddatur Subdivision.									
Proddatur section (Supervisor)	P.	330	1/6	41	9,000	..	19/1,94,083	Not available.	
Badvel section (Overseer)	P.	780	1/19	9	10,050	..	11/55,376	Do.	
Rajoli section (Overseer)	P.	180	1/1	52	8,000	..	16/20,031	Do.	
Adivimayapalle section (Overseer)	P.	190	1/1	30	10,200	..	11/10,399	Do.	
Maidukur section (Supervisor)	P.	270	1/7	61	16,000	..	15/17,933	Do.	
MADANAPALLE DIVISION.									
Madanapalle Subdivision.									
Madanapalle section (Supervisor)	P.	1,929	26 T	..	10,436	..	29/2,98,787	Not available.	768
Chittoor section (Supervisor)	P.	1,197	20 T	..	5,744	..	39/16,47,391	Do.	Not available.
Tirupati or Chandragiri section (Supervisor).	P.	2,098	12 T	..	2,282	..	24/3,36,122	1,303	1,712
Cuddapah Subdivision.									
Cuddapah section (Supervisor)	P.	332	17 T	..	3,593	..	29/7,04,161	980	1,062
Nandalur section (Supervisor)	P.	1,641	17 T	..	5,758	..	22/4,33,427	1,220	1,305
Kamalapuram section (Overseer)	P.	1,097	21 T	..	6,468	..	10/1,31,515	296	465

Name of section. (1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
MADANAPALLE DIVISION—*cont.*									
Penukonda Subdivision.									
Penukonda section (Supervisor)	P.	1,058	21 T	..	11,112	..	25/3,45,713	727	840
Hindupur section (Supervisor)	P.	871	44 T	..	20,273	..	22/2,08,201	850	703
Kadiri section (Overseer)	P.	1,510	15 T	..	5,120	..	10/1,43,601	483	672
COIMBATORE CIRCLE.									
COIMBATORE DIVISION P.									
Coimbatore Subdivision.									
Coimbatore Taluk section (Supervisor).	P.	1,560	16-C/19-T	46	17,058	..	Not furnished.	1,362	802
Agricultural College section (Supervisor).	P.	4	..	..	..	..		845	356
Coimbatore Town section (Supervisor).	P.	9	..	..	..	..		2,529	1,318
Nilgiris Subdivision.									
Town section (Supervisor)	P.	742	..	..	..	..	Not furnished.	3,908	2,513
Government House section (Supervisor).	P.	..	..	..	..	..		1,259	803
Coonoor section (Supervisor)	P.	268	..	..	..	45		1,854	1,351
Ootacamund-Mettupalayam Road (Overseer)	P.	..	..	..	..	..		..	..
Erode Subdivision.									
Taluk section (Supervisor)	P.	1,314	11 T	..	..	..	Not furnished.	450	500
Gobi section (Supervisor)	P.	1,124	1-C/1-T	24	4,941	..		1,000	1,000
Tadpalli Channel section (Overseer)	P.	..	1-C	71	14,187	..		1,383	1,333
Dharapuram Channel section (Overseer)	P.	853	8-C	63	11,002	..		1,198	1,186
Kalingarayan Channel section (Overseer)	P.	..	1-C	61	9,211	..		Not available.	969
Pollachi Subdivision.									
Iyerpadi section (Supervisor)	P.	212	..	..	..	64	18/63,241	778	778
Pollachi section (Suppervisor)	P.	480	6-C/1-T	41	6,631	13	17/135,652	500	1,039
Udamalpet section (Supervisor)	P.	566	8-C/8-T	63	8,296	13	10/1,14,918	1,237	1,237

APPENDIX VI—*cont.*

Name of section. (1)		Area in square miles. (2)	Number of Public Works Department sources of irrigation canals/tanks. (3)	Length of canals, drains and other irrigation, navigation embankment, drainage and protective works in miles. (4)	Ayacut in acres under Public Works Department sources of irrigation. (5)	Length of Public Works Department roads in miles. (6)	Number and capital value of buildings in rupees. (7)	Correspondence. Receipts. (8)	Correspondence. Issues. (9)
SALEM DIVISION.									
Salem subdivision.									
Salem Town section (Supervisor) ..	.. P.	66	..	..	..	40	58 12,95,193	1,640	1,482
Attur section (Supervisor) ..	.. P.	1,221	15-C/40-T	..	10,559	..	14 74,283	988	1,050
Sanrrari section (Supervisor) ..	.. P.	904	22-C	..	5,562	..	7/2,00,833	1,150	1,125
Namakkal section (Supervisor) ..	.. P.	1,088	4-C/15-T	..	4,727	..	21/1,77,602	1,087	1,234
Tirupattur subdivision.									
Hosur section (Supervisor) ..	.. P.	1,259	3-C/5-T	8	1,638	..	70/5,51,632	482	470
Dharmapuri section (Supervisor)	.. P.	1,633	7-C/11-T	13	4,836	..	68 3,11,840	600	652
Barur section (Overseer) ..	.. P.	25	4-C/13-T	38	4,597	5	3 5,572	325	403
Tirupattur section (Supervisor)	.. P.	1,351	9-C/19-T	33	4,639	..	99/2,11,659	662	569
Kollegal section (Supervisor) ..	.. P.	1,076	4-C/13-T	11¼	5,532	..	14 1,40,433	491	688
NORTH ARCOT DIVISION.									
Ranipet Subdivision.									
Poiney Anicut (Overseer) ..	.. P.	177	4-C/63-T.	97	9,406	..	42,325	Not furnished.	
Mihnel section (Overseer) ..	.. P.	110	2-C/50-T.	34	9,946	..	74,080		
Ranipet section (Overseer) ..	.. P.	115	2-C/43-T.	101	7,776	..	1,39,039		
Palar Anicut section (Overseeer)	.. P.	53	5-C/26-T.	44	4,300	..	79,492		

Name of section. (1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Kaveripauk section (Overseer) ..	.. P.	..	..	..	23,060	..	..	Not furnished.	
Palar North section (Supervisor)	.. P.	208	5/90	117	..	..	19,100		
Panapakkam section (Overseer)	.. P.	67	1-C/37-T.	111	8,600	..	4,632		
Palar South section (Supervisor)	.. P.	166	7-C/83-T.	58	10,948	..	54,904		
Tiruvattipuram section (Overseer)	.. P.	58	2-C/22-T.	6	6,083	..	80,631		
Dusi section (Overseer)	.. P.	93	2-C/28-T.	12	9,320	..	29,629		
Vellore Subdivision.									
Vellore Town section (Supervisor)	.. P.	5	..	..	5,276	..	..	Not furnished.	
Polur section (Overseer)	.. P.	312	11-C/34-T.	3	10,613	..	17/65,816		
Arni section (Supervisor) ..	.. P.	432	12-C/29-T.	28	..	..	..		
Vellore Taluk section (Overseer)	.. P.	210	3-C/23-T.	13	6,600	..	2/		
Gudiyattam section (Overseer) ..	.. P.	980	14-C/25-T.	42	6,500	..	38/1,26,000		
Arcot section (Overseer) ..	.. P.	160	9-C/37-T.	..	8,357	..	3/24,012		
Polur Subdivision.									
Cheyyar Anicut section (Overseer)	.. P.	112	1-C/38-T.	14	7,719	..	4/19,131	Not furnished.	
Kovilur section (Overseer) ..	.. P.	57	1-C/40-T.	9	5,904	..	4/7,615		
Wandiwash section (Supervisor)	.. P.	112	35-T.	..	7,435	..	8/4,454		
Veerambakkam section (Overseer)	.. P.	42	1-C/48-T.	5	4,208	..	1/3,686		
Tiruvannamalai (Supervisor) ..	.. P.	762	21-T.	..	7,009	..	16/22,161		
Do. Water-works section (Supervisor).	T.	..	..	..	..	..	..		
WEST COAST DIVISION.									
North Subdivision.									
Mangalore section (Supervisor) ..	.. P.	402	..	..	..	..	64/10,68,738	1,143	401
Cannanore section (Supervisor) ..	.. P.	1,879	..	3	..	..	137/14,15,544	1,537	2,273
Kuthuparamba section (Supervisor)	.. P.	..	..	..	..	32	36/1,13,312	1,304	2,219
Puttur section (Supervisor) ..	.. T.	2,589	..	..	..	..	38/3,63,257	309	301
Central Subdivision.									
Calicut section (Supervisor) ..	.. P.	213	..	..	..	..	82/11,68,964	1,473	1,058
Road I, Calicut section (Supervisor)	.. P.	445	..	16	..	23	15/1,08,621	1,364	1,541
Meppadi section (Supervisor) ..	.. T.	..	..	..	..	19	..	861	1,250
Tirur section (Supervisor) ..	.. T.	1,358	..	..	..	..	53/5,01,064	1,539	1,539

APPENDIX VI—*cont.*

Name of section. (1)		Area in square miles. (2)	Number of Public Works Department sources of irrigation canals/tanks. (3)	Length of canals, drains and other irrigation, navigation, embankment, drainage and protective works in miles. (4)	Ayacut in acres under Public Works Department sources of irrigation. (5)	Length of Public Works Department roads in miles. (6)	Number and capital value of buildings in rupees. (7)	Correspondence. Receipts. (8)	Correspondence. Issues. (9)
WEST COAST DIVISION—*cont.*									
M.S.P. Subdivision.									
N.K.K. Road Kalikovvu (Supervisor).	T.								
M.S.P. Malappuram section (Supervisor).	T.	..	..	..	..	19	..	..	..
M.S.P. Melmuri section (Supervisor) ..	T.	..	..	..	..	..	..	..	..
Palghat section (Supervisor)	P.	1,252	1-C	17	400	..	50/9,63,735	2,029	2,167
TRICHINOPOLY CIRCLE.									
TRICHINOPOLY DIVISION.									
South Subdivision.									
Trichinopoly taluk section (Supervisor).	P.	242	20 T		4,600	..	5/19,206	Not available.	404
Town Works Section (Supervisor) ..	P.	16	..	..	..	..	96/21,90,284	1,500	1,495
Uyyakondan Lower section (Supervisor).	P.	97	6 C/10 T	56	16,471	..	..	..	..
Do. Upper section (Supervisor).	P.	89	2 C/17 T	89	12,507	..	6/11,196	692	954
Kulittalai section (Supervisor)	P.	217	9 C/2 T	66	7,775	..	10/79,259	950	1,055
West Subdivision.									
Karur section (Supervisor)	P.	614	11 C/3 T	165	15,354	..	79/1,65,174	1,098	888
Musiri section (Supervisor)	P.	195	11 C/11 T	48	5,910	..	10/1,10,634	943	707
Natham section (Overseer)	P.	72	3 C	29	4,490	..	5/14,138	429	544
Thorayur section (Overseer)	T.	300	15 C/9 T	20	6,127	..	6/1,05,088	Not available.	185
Perambalur section (Overseer)	P.	674	15 C/27 T	33	6,000	..	11/67,839	507	580
East Subdivision.									
Manachanellore section (Overseer) ..	P.	200	..	50	16,378	..	2/2,250	Not given.	735
Srirangam Nattu Voikal (Overseer) ..	P.	23	2	31	7,144	..	15/58,310	Do.	963
Lalgudi section (Supervisor)	P.	141	32 C/168 Dis.	110	17,869	..	12/80,608	1,015	721
Tirumalavadi section (Overseer) ..	P.	326	3 C/4 T	71	8,007	..	8/1,07,563	431	659
Udayarpalaiyam section (Supervisor) ..	P.	433	1 C/9 T	19	6,809	..	6/74,929	Not available.	936
PERIYAR DIVISION.									
Periyar Subdivision.									
Chittampatti section (Supervisor) ..	P.	49	18 C/21 T	40	21,890	..	5/19,364	1,094	1,011
Melur section (Supervisor)	P.	17	8 C/16 T	22	11,500	..	5/10300	1,202	1,190
Andipatti section (Supervisor)	P.	55	1 C/38 T	61	36,000	..	13/25,600	1,079	1,069
Tanimangalam section (Overseer) ..	P.	51	8/38 T	25	13,000	..	2/1,703	..	448
Edayapatti section (Overseer)	P.	55	6/127 T	19	17,500	..	2/6,886	Not given.	332
Madura section (Overseer)	P.	29	6/47 T	35	11,750	..	3/89,506	516	633
Kallandiri section (Overseer)	P.	30	6/96 T	29	13,660	..	1/2,300	319	336
Mettupatti section (Overseer)	P.	45	12/15 T	34	14,240	..	2/6,300	Not available.	412
Peranai section (Overseer)	P.	26	7/2 [illegible]	22½	7,438	..	10/15,000	Not given.	438
Uttamapalaiyam Subdivision.									
Uthamapalaiyam section (Supervisor) ..	P.	72	10/14 T	50	9,500	..	11/59,548	Not furnished.	Not furnished.
Gudalur section (Overseer)	P.	42	3 C/5 T	12	3,800	6	2/7,694		
Periyakulam section (Supervisor) ..	P.	150	12 C/9 T	..	8,000	11	3,000		

APPENDIX VI—*cont.*

Name of section.		Area in square miles.	Number of Public Works Department sources of irrigation canals / tanks.	Length of canals, drains and other irrigation, navigation, embankment, drainage and protective works in miles.	Ayacut in acres under Public Works Department sources of irrigation.	Length of Public Works Department roads in miles.	Number and capital value of buildings in rupees.	Correspondence. Receipts.	Correspondence. Issues.
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
PERIYAR DIVISION.									
Dindigul Subdivision.									
Palni section (Overseer) ..	T.	599	17 T	..	10,825	..	5/4,70,854	665	630
Kodaikanal section (Supervisor)	P.	96	1 T	..	Not available.	29	43/3,16,000	1,400	1,374
Dindigul section (Supervisor) ..	P.	1,002	26 T	..	7,058	..	26/4,16,126	695	637
RAMNAD DIVISION.									
Madura Subdivision.									
Town Works section (Supervisor)	P.	20	..	..	..	..	78/19,70,526	1,322	1,399
Hospital section (Supervisor) ..	T.	..	..	..	..	..	..	159	95
Nilayur channel section (Overseer)	P.	100	1/23	44	17,584	..	..	1,157	913
Tirumangalam section (Supervisor)	P.	1,193	33 T	..	8,606	..	20/2,06,282	631	611
Ramnad Subdivision.									
Ramnad section (Supervisor) ..	P.	2,589	1 T	..	512	..	58/5,12,472	1,181	951
Sivaganga section (Supervisor) ..	T.	1,908	..	..	..	..	29/2,95,953	608	649
Srivilliputtur section (Supervisor)	P.	[illegible]	41 T	..	12,480	..	..	..	..

Name of section.		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
TINNEVELLY DIVISION.									
Tinnevelly Subdivision.									
Headquarters section (Supervisor) ..	P.	214	..	..	..	..	90/17,31,190	Not furnished.	
Chittar section (Supervisor) amalgamated with Headquarters section.	P.	45	9 C/10 T	75	5,661	..	..	Do.	
Koilpatti section (Supervisor) ..	P.	1,719	17 T	..	6,506	..	27/2,39,972	Do.	
Tinnevelly channel section (Overseer) ..	P.	40	2 C/34 T	33	11,630	..	4/1,793	Do.	
Palaiyam channel section (Overseer) ..	P.	47	1/57	33	8,600	..	2/681	Do.	
Srivaikuntam Subdivision.									
Srivaikuntam north section (Supervisor).	P.	157	..	15	..	..	27/2,80,000	327	520
Srivaikuntam south section (Supervisor).	P.	384	1/T	15	..	..	19/1,64,777	522	431
Srivaikuntam Marudur Melkal channel section (Overseer).	P.	20	3/20	18	11,272	..	..	Not available.	470
South main channel section (Overseer).	P.	50	12/15	21	12,850	..	54/1,842	662	581
Marudur Keelakal channel section (Overseer).	P.	20	2/21	14	8,084	..	6/2,241	Not available.	516
Shermadevi Subdivision.									
Nanguneri section (Supervisor) ..	P.	700	15/34	70	14,588	..	17/1,58,070	489	384
Tenkasi section (Supervisor) ..	P.	120	6/34	68	10,533	..	20/2,11,327	1,276	1,061
Shermadevi section (Supervisor)	P.	225	18/38	98	16,700	..	13/1,14,129	1,008	959
TANJORE CIRCLE.									
SOUTH ARCOT DIVISION.									
Cuddalore Subdivision.									
Cuddalore section (Supervisor) ..	P.	113	8C/34 T	28	8,503	..	267/11,65,302	2,343	1,230
Tirukkoyilur section (Supervisor)	P.	443	27C/51 T	82	13,074	..	48/1,59,222	608	406
Tiruvannainallur section (Overseer)	P.	106	6C/55 T	25	7,800	..	5/9,941	..	..
Kirinjipudi section (Overseer) ..	P.	329	6 C/19 T	23	14,048	7	14/38,261	350	281

APPENDIX VI—*cont.*

Name of section. (1)		Area in square miles. (2)	Number of Public Works Department sources of irrigation canals/tanks. (3)	Length of canals, drains and other irrigation, navigation, embankment, drainage and protective works in miles. (4)	Ayacut in acres under Public Works Department sources of irrigation. (5)	Length of Public Works Department roads in miles. (6)	Number and capital value of buildings in rupees. (7)	Correspondence. Receipts. (8)	Correspondence. Issues. (9)
SOUTH ARCOT DIVISION—*cont.*									
Chidambaram Subdivision.									
Chidambaram section (Supervisor) ..	P.	136	4 C/1 T	59	34,130	11	63/2,33,230	..	489
Lalpet section (Supervisor)	P.	144	4 C	43	51,668	19	20/22,450	1,001	1,537
Bhuvanagiri section (Overseer)	P.	59	6 C/3 T	38	18,700	5	65/13,009	..	609
Shatiatope section (Overseer)	P.	46	5 C/3 T	29	25,000	..	16/17,363	..	590
Kattumannargudi section (Overseer) ..	P.	41	1 C	14	15,284	5	7/24,939	..	520
Srimushnam section (Overseer)	P.	32	23 C/17 T	38	11,281	..	8¼/8,407	..	323
Vriddhachalam Subdivision.									
Vriddhachalam section (Supervisor) ..	P.	402	4 C/29 T	44	16,351	6	45/1,68,715	..	1,652
Pelandurai section (Supervisor)	P.	32	2 C/3 T	37	12,156	1	7/5,730	..	670
Kilcheruvoi section (Overseer)	P.	130	1 C/7 T	3	1,112	..	12/18,008	..	660
Kallakurichi section (Supervisor) ..	P.	873	52 T	..	13,320	..	33/1,13,432	..	..
Tindivanam Subdivision.									
Tindivanam section (Supervisor) ..	P.	446	75 T	..	19,226	..	62/1,68,740	1,000	1,200
Villupuram section (Supervisor)	P.	472	3 C/113 T	40	34,493	..	74/2,71,122	1,676	1,084
Gingee section (Overseer)	P.	410	44 T	..	11,993	..	25/80,749	768	904

Name of section. (1)		Area in square miles. (2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CAUVERY (PERMANENT) DIVISION.									
Tanjore Subdivision.									
Grand Anicut section (Supervisor) ..	P.	1	1 C	..	..	..	12/33,158	..	..
Tirukkatupalli section (Overseer) ..	P.	37	2 C	35	11,468	..	7/17,384	..	..
Tanjore town works section (Supervisor) ..	P.	6	..	..	..	..	53/60,13,474	1,978	1,469
Tiruvadi section (Overseer)	P.	39	2 C	72	16,710	¼	3/30,000	Not maintained.	
Nannilam Subdivision.									
Kumbakonam section (Overseer) ..	P.	41	4 C	49	29,390	..	26/6,99,363	Not maintained.	1,082
Valangiman section (Overseer)	P.	51	6 C	73	34,785	..	2/27,301	Do.	670
Tirumarugal section (Overseer)	P.	72	5 C	57	25,480	9	2/3,500	Do.	619
Nannilam section (Overseer)	P.	71	6 C	54	36,400	2	11/1,18,800	Not available.	654
Peralam section (Supervisor)	P.	154	8 C	109	50,840	12	7/18,000	1,760	1,740
Mayavaram Subdivision.									
Mayavaram section (Supervisor)	P.	166	4 C	71	68,201	3	13/1,55,952	Not maintained.	936
Shiyali section (Supervisor)	P.	167	8 C/2 T	139	64,000	..	8/94,661	991	1,926
Veerasholan section (Supervisor) ..	P.	120	4 C	93·6	75,889	22	10/76,263	..	1,000
Lower Anicut section (Overseer) ..	P.	16	3 C	23	4,720	1	15/25,623	..	434
Manniar section (Overseer)	P.	105	2 C	44	33,953	..	2/1,807	363	313
VENNAR DIVISION.									
Vennar Subdivision.									
Katchamangalam section (Overseer) ..	P.	80	1 C/11 T	39	22,760	..	5/12,065	Not furnished.	
Vennar-Vettar Head section (Overseer) ..	P.	88	3 C/1 T	31	15,875	..	4/10,129	Do.	
Vennar section (Supervisor)	P.	280	3 C	91	55,416	..	11/13,222	Do.	
Korayar Head section (Overseer) ..	P.	64	3 C	26	26,440	..	8/37,438	Do,	

APPENDIX VI—*cont.*

Name of section. (1)		Area in square miles. (2)	Number of Public Works Department source of irrigation $\frac{\text{canals}}{\text{tanks}}$. (3)	Length of canals, drains and other irrigation, navigation, embankment, drainage and protective works in miles. (4)	Ayacut in acres under Public Works Department source of irrigation. (5)	Length of Public Works Department roads in miles. (6)	Number and capital value of buildings in rupees. (7) RS.	Correspondence. Receipts. (8)	Correspondence. Issues. (9)
VENNAR DIVISION —*cont.*									
Tiruttaraipundi Subdivision.									
Tiruturaipundi East section (Supervisor).	P.	89	2-C	39	35,367	..	6/6,265	Not furnished.	
Tiruturaipundi West section (Supervisor)	P.	320	4-C	81	64,993	..	17/1,04,608	..	
Lawford Straight cut section (Supervisor)	P.	151	2-C	15	14,384	..	10/39,327	..	
Negapatam Subdivision.									
Tiruvarur section (Supervisor) ..	P.	128	2-C	83	40,000	..	15/1,61,258	..	
Vellayar section (Supervisor)	P.	120	3-C	65	72,000	..	5/11,158	Not furnished.	
Negapatam section (Supervisor) ..	P.	64	3-C 2-T	54	32,823	..	37/4,18,983	..	
Mannargudi Subdivision.									
Mannargudi section (Supervisor) ..	P.	416	2-C 16-T	65	45,180	..	20/2,42,236	Not furnished.	
Arantangi (Pattukkottai) section (Supervisor)	P.	784	43-T	..	16,040	..	15/1,66,423	..	
RIVER CONSERVANCY DIVISION.									
Trichinopoly Subdivision.									
Kulittalai section (Supervisor) ..	P.	..	..	27	..	2	4/5,144	..	2887
Musiri section (Supervisor)	P.	..	..	33	..	0·4	2/1,793	1353	1304
Trichinopoly section (Supervisor) ..	P.	..	..	27	..	8	7/6,993	1477	968
Upper Anicut section (Overseer) ..	P.	..	..	8	..	..	11/24,993	492	442
Grand Anicut Subdivision.									
Srirangam section (Supervisor) ..	P.	..	..	28	..	1	2/3,246	637	1045
Tirukkattupalli section (Supervisor) ..	P.	..	..	35	..	3	8/9,332	..	684
Tiruvadi section (Supervisor) ..	P.	..	..	31	..	3	7/4,642	..	916
Lower Anicut Subdivision.									
Lower Anicut section (Supervisor) ..	P.	..	..	35	..	15	4/5,262	..	1156
Puliyangudi section (Supervisor) ..	P.	..	..	33	..	38	11/5,606	..	605
Siddamalli section (Supervisor) ..	P.	..	..	33	..	31	5/14,931	..	..

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APPENDIX VII.

COMPARATIVE STATEMENT SHOWING THE PUBLIC WORKS DEPARTMENT STAFF IN THE MAJOR PROVINCES OF INDIA.

Name of province.		Chief Engineers.	Superintending Engineers.	Executive Engineers or Divisional officers.	Assistant Executive Engineers.	Assistant Engineers or Subdivisional officers.	Section officers. Upper Subordinates.	Lower Subordinates.	Total.
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Madras	..	2 (a)	6 + 1 T	34	26	104	372	160	532
Bombay	..	3	6	40	30	180			450
	Irrigation Branch	1	4	11	11	21 (b)		97	97
Bengal	Buildings and Roads Branch	1	4	10 + 2 (c)	4 (c)	39 (d)	..	..	110
	Irrigation Branch	1	2	6	6	28 (e)	..	..	92
Bihar and Orissa	Buildings and Roads Branch	1	3	9	8	32	..	..	111
	Irrigation	1 (f)	1	5		18	59 (h)	120 (i)	209
Central Provinces	Buildings and Roads Branch	..	2	9 + 1 (g)	..	25	101	63	163
	Irrigation	2	6	36	26	73	..	..	355 (k)
United Provinces	Buildings and Roads Branch *	1	4	15	14	37		..	129 (115)
	Irrigation Branch (inclusive of North-West Frontier Province)	3	15	75 (l)	55	140		..	536
Punjab	Buildings and Roads Branch	1	3	17 (m)	1	28 (m)			94
	Irrigation Branch	1	4 (n)	12 + 1 T (o)	1	18 (p)			56 (q)
Burma	Buildings and Roads Branch	1	7 (5)	*63 (46) †		71 (65) †	..	..	237 (222) †
Assam	..	1	1 (r)	14 (s)		19 (t)	..	..	79 (u)

* The figures in columns (2), (3), (4), (6) and the figure 115 in column (9) show the actual strength. This strength is likely to be reduced considerably as a result of the re-organization of the department which is now under consideration.

† The figures in parentheses show contemplated permanent reduced strength.

(a) Excludes Engineer-in-Chief, Cauvery-Mettur Project.
(b) Includes two Upper Subordinate Subdivisional officers.
(c) Belong to Bengal Senior Service of Engineers.
(d) Includes three Upper Subordinate Subdivisional officers.
(e) Includes one Upper Subordinate Subdivisional officer.
(f) One Chief Engineer for both branches.
(g) Includes Under Secretary common to both branches.
(h) This number will be reduced gradually to 50 up to the year 1940.
(i) This number will be gradually reduced to 50.
(j) This will be gradually increased to 63.
(k) Of these 34 posts have been held in abeyance.
(l) Twelve posts have been held in abeyance.
(m) After retrenchment the charges in existence are 1 Chief Engineer, 3 Superintending Engineers, 11 Divisional charges, 1 Under Secretary and 27 Subdivision charges.
(n) Of this one post of Superintending Engineer is held in abeyance.
(o) Of this two posts of Executive Engineers are held in abeyance.
(p) There are 21 + 5 temporary Subdivision charges.
(q) There are 97 section charges.
(r) A post of temporary Superintending Engineer was recently abolished.
(s) Two divisional charges were abolished from 1st April 1932.
(t) There are now only 18 officers on the active list.
(u) There are now only 68 permanent and 9 temporary subordinates against this strength after retrenchment

APPENDIX VIII.

Comparative statement showing the average area irrigated annually during the triennium ending 1928 29 and the area irrigated per Superintending Engineer, Executive Engineer, Subdivision officer and section officer.

Name of Province.	Area.	Average area irrigated annually during triennium ending 1928 29.	Road mileage.	Average area irrigated annually during triennium ending 1928 29. Per Superintending Engineer.	Per Executive Engineer.	Per Subdivisional Officer.	Per Section Officer.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SQ.MILES.	ACS.		ACS.	ACS.	ACS.	ACS.
Madras	142,260	5,785,326	1,080	826,475	180,791	54,068	12,799
Bombay (including Sind)	123,621	3,894,942	8,280	649,157	97,374	18,547	8,655
Bengal	76,843	92,735	1,460	23,184	6,624	2,898	950
Bihar and Orissa.	83,161	927,085	1,580	463,543	144,514	28,971	10,077
Central Provinces.	99,876	406,901	6,870	406,901	81,380	22,606	1,942
United Provinces.	106,295	3,132,162	3,870	522,027	87,005	31,638	9,758
Punjab	99,846	10,402,255	2,700	1,040,226	283,674	105,982	25,161
Burma	233,707	1,904,708	9,940	651,903	178,810	75,560	20,250
Assam	53,015	..	3,670	..	..	..	..

Note.

The average area irrigated during triennium ending 1928 29 for **Madras** is **7,155,326 acres.** The area irrigated for **1930 31** under minor works (in charge of **Public Works** Department and Revenue Departments) for which **capital and revenue accounts** are not kept, is 2,597,972 acres. Exact figure as to the **area irrigated** under minor irrigation works in charge of the Revenue Department alone **is** not available. It may be taken as 1,370,000 acres. Deducting this figure from **the** total average area for Madras, the area in charge of the Public Works Department is 5,785,326 acres. This figure is given in column (3) against Madras. There are now 7 circles, 32 divisions, 107 subdivisions and 452 sections (supervisors and overseers—excluding section officers in Chief Engineer's offices, etc.). The **figures** in columns (5) to (8) have been arrived at with reference to the above **numbers of charges.**

In regard to the Punjab, information as to the area irrigated under open canals and the average area controlled by each **officer** is given in paragraphs 41 to **45** of the Report of the Punjab **Retrenchment Committee** This information **is** given in columns (3) and (5) to (8) **against the Punjab.**

In regard to the other provinces **information as to the** strength of staff in each **class,** is given in the statement showing **the strength** of Engineering staff in the major provinces of India; but **figures as** to the **actual number** of **charges** are not available for some of the provinces. **Assuming** that the number of charges **may** approximate to the strength in each **class of staff,** the figure for each **charge has** been arrived at.

The average area irrigated for each section officer in **Madras works** out to 12,799 **acres.** But it may be mentioned that in the **reorganization** of the conservancy **establishment** in 1905, 129 posts of **overseers** (then **called sub-overseers**) were **sanctioned** for conservancy duties on the basis of 20,000 acre charge. In connexion **with** the proposal for the formation of a single subordinate **service** in place of the **existing** lower subordinate and upper subordinate **establishments,** a suggestion **was** made that an increase in the size of the conservancy **overseer's** sections by **50 per cent** might be possible so as to reduce **the cost** of employing a more **expensive staff.** The scheme was however not **pushed** through on account of the **present financial stringency.**

APPENDIX IX.

Statement showing the average expenditure on maintenance and repairs and on original works for the five years ending 1931–32, for circles, divisions and subdivisions arranged in the order of the amount of expenditure.

APPENDIX IX.

Statement showing the average expenditure on maintenance and repairs and on original works for the five years ending 1931-32, for circles, divisions and subdivisions arranged in the order of the amount of expenditure.

Serial number and name of charge.		Average expenditure for five years ending 1931-32.		
		On maintenance and repairs.	On original works.	Total.
(1)		(2)	(3)	(4)
		RS.	RS.	RS.
Circles.				
1 Coimbatore		* 13,19,100	20,05,365	33,[illegible]4,46[illegible]
2 Madras		* 11,80,514	17,81,050	29,61,569
3 Bezwada		16,34,458	9,17,755	25,52,213
4 Tanjore		* 12,43,163	11,73,342	24,16,505
5 Trichinopoly		9,12,538	13,39,599	22,52,137
6 Dowlaishweram	T.	12,40,703	8,99,678	21,40,381
7 Waltair		6,97,680	10,91,125	17,88,805
Divisions.				
1 Coimbatore		4,69,380	5,65,580	10,34,960
2 North Presidency		2,12,142	6,25,239	8,37,381
3 Trichinopoly		2,81,525	4,93,769	7,75,294
4 River conservancy (Tanjore circle).		3,05,438	4,66,961	7,72,399
5 Kistna Western		5,74,637	1,57,895	7,32,532
6 South Presidency		2,83,869	4,18,446	7,02,315
7 West Coast		2,76,060	4,13,120	6,89,180
8 Cauvery		3,64,423	2,96,323	6,60,746
9 Godavari Headworks		5,21,109	1,07,737	6,28,846
10 Ganjam		2,22,673	3,75,118	5,97,791
11 Vizagapatam		2,66,191	3,31,335	5,97,526
12 Ramnad	T.	70,534	5,23,825	5,94,359
13 Chingleput		3,48,832	2,18,464	5,67,296
14 Vennar		3,17,981	1,82,434	5,00,415
15 Guntur		40,625	4,55,363	[illegible]
16 South Arcot		2,55,321	2,27,624	4,82,945
17 Periyar		2,65,530	2,11,109	4,77,689
18 Godavari Western		1,99,115	2,68,712	4,67,827
19 Kistna Central		[illegible]	1,12,702	4,38,801
20 Koraput		1,79,909	2,39,257	4,19,166
21 North Arcot		2,73,440	1,43,600	4,17,040
22 Salem		1,13,320	2,98,980	4,12,300
23 Kistna Eastern		3,28,178	80,338	4,08,516
24 Tinnevelly		2,93,949	1,10,896	4,04,845
25 Bellary		98,327	3,00,149	3,98,476
26 Godavari Northern		1,83,877	1,90,860	3,74,737
27 Godavari Central		1,57,547	2,02,677	3,60,224
28 Nellore		2,79,276	53,236	3,32,512
29 Godavari Eastern		1,79,055	1,29,691	3,08,746
30 Kurnool		1,40,708	1,31,429	2,72,137
31 Madanapalle		96,636	87,323	1,83,959
32 Kattalai	T.	..	..	..

* Figures taken from figures given for divisions. Consolidated figures for the whole circle not furnished.

Serial number and name of charge.		Average expenditure for five years ending 1931-32.		
		On maintenance and repairs.	On original works.	Total.
(1)		(2)	(2)	(4)
		RS.	RS.	RS.
Subdivisions.				
1 The Nilgiris		3,18,137	1,97,543	5,15,680
2 East Trichinopoly division		93,577	3,47,308	4,40,885
3 Lower anicut		94,711	2,76,243	3,70,954
4 Gowtami		2,95,833	30,937	3,26,770
5 Coimbatore		44,589	2,64,086	3,08,675
6 Tanjore		1,48,837	1,57,814	3,06,650
7 North-west, N.P. division		90,170	2,08,235	2,98,405
8 River conservancy, K.W. division.		2,92,037	1,909	2,93,946
9 Calicut		1,82,245	98,487	2,80,732
10 North-east. N.P. division		88,525	1,76,975	2,65,500
11 Salem		81,038	1,61,000	2,42,038
12 Ellore buildings	T.	187	2,39,385	2,39,572
13 Pollachi		1,43,371	93,425	2,36,796
14 Headquarter works, K.C. division.		1,64,617	72,159	2,36,776
15 South Trichinopoly division		1,05,421	1,29,716	2,35,137
16 Narasapatam	T.	46,857	1,85,646	2,32,503
17 Mayavaram		1,23,919	1,08,424	2,32,343
18 Trichinopoly River conservancy		1,36,964	92,235	2,29,199
19 South-west, S.P. division		88,352	1,38,456	2,26,808
20 South-east, S.P. division		77,158	1,47,725	2,24,883
21 Buckingham canal		1,82,600	13,695	1,96,295
22 Mangalore		54,789	1,29,978	1,84,767
23 Vellore		78,299	1,06,368	1,84,667
24 Western, K.W. division		1,51,206	24,077	1,75,283
25 Grand Anicut		73,763	98,482	1,72,245
26 Polur		1,33,837	36,958	1,70,795
27 Chingleput		71,826	98,112	1,69,938
28 Rajahmundry		70,463	98,141	1,68,604
29 Tinnevelly		1,17,303	44,451	1,61,754
30 Cuddalore		56,785	1,04,729	1,61,514
31 Undi		55,164	1,05,770	1,60,934
32 Bellary		31,244	1,24,819	1,56,063
33 Russellkonda		81,060	71,175	1,52,235
34 Government House		1,06,933	42,136	1,49,069
35 Cocanada		90,305	58,069	1,48,374
36 Guntur		21,800	1,23,701	1,45,501
37 Amalapur		81,972	61,898	1,43,870
38 Hospet		56,409	87,411	1,43,820
39 Divi		1,25,057	17,195	1,42,252
40 Negapatam		1,01,267	38,461	1,39,728
41 Rajahmundry water-works	T.	..	1,37,990 (average for 2 years.)	1,57,990
42 Vasista		1,33,723	3,589	1,37,312
43 Tiruvallur		65,032	70,068	1,35,100
44 Srivaikuntam		1,09,992	21,469	1,31,461
45 Polavaram	T.	58,448	69,994	1,28,442
46 Nellore		1,03,817	24,072	1,27,889
47 Nannilam		83,975	43,757	1,27,732
48 Tiruturaipundi		96,567	31,155	1,27,722
49 Koraput		61,961	64,260	1,26,221
50 Gunupur	T.	62,985	59,638	1,22,623
51 Bandar		81,872	38,873	1,20,745
52 Head works, G.H. division	T.	65,121	55,180	1,20,301
53 Berhampur		67,525	52,059	1,19,584
54 Yellamanchili		92,103	26,122	1,18,225
55 Kandukur		95,614	20,031	1,15,645
56 Anantapur		11,939	1,01,474	1,13,413

Serial number and name of charge.	Average expenditure for five years ending 1931–32. On maintenance and repairs.	On original works.	Total.
(1)	(2)	(3)	(4)
	RS.	RS.	RS.

Subdivisions—cont.

Serial number and name of charge.	On maintenance and repairs.	On original works.	Total.
57 Dindigul	83,791	28,385	1,12,17[illegible]
58 Uttamapalaiyam	57,359	54,228	1,11,58[illegible]
59 Mount .. T.	49,955	60,980	1,09,93[illegible]
60 Proddatur	69,142	38,139	1,07,281
61 Chicacole	70,859	34,549	1,05,408
62 West Subdivision, Trichinopoly	82,526	20,744	1,03,270
63 Rampet	87,162	15,069	1,02,231
64 Kurnool	35,058	66,418	1,01,476
65 Ellore	49,386	50,817	1,00,203
66 Tindivanam	76,254	22,622	98,876
67 Chidambaram	60,056	38,576	98,632
68 Madura	23,625	74,148	97,573
69 Erode	56,008	41,535	97,543
70 Vennar	79,828	17,115	96,943
71 Periyar	74,828	20,026	94,854
72 Cowtaram	88,126	6,727	94,853
73 Ramnad .. T.	40,073	54,071	94,144
74 Bezwada	70,801	20,311	91,112
75 Jeypore	26,735	64,116	90,851
76 Cuddapah	46,871	43,407	90,278
77 Sangam	79,844	9,132	88,976
78 Shermadevi	62,604	26,054	88,658
79 Gudivada	72,798	14,428	87,226
80 Eastern Subdivision, Kistna Western division	77,896	9,289	86,985
81 Ramachandrapur	70,490	16,406	86,896
82 Central Subdivision, Kistna Western division	67,122	18,065	85,187
83 M.S.P. .. T.	3,980	80,808	84,788
84 Indravati	41,165	34,821	75,986
85 Tanuku	40,304	34,916	75,220
86 Narasapur	54,261	20,670	74,931
87 Madanapalle	28,351	44,186	72,537
88 Tirupattur	32,209	35,141	67,440
89 Samalkota	41,939	25,232	67,171
90 Gannavaram	56,272	9,631	65,903
91 Nandyal	36,508	26,872	63,380
92 Vriddhachalam	50,053	8,439	58,492
93 Drainage Subdivision (Kistna Central division) .. T.	..	55,729	55,729
94 Dummagudam	32,217	18,706	50,923
95 Mannargudi	28,322	20,365	48,687
96 Parvatipuram	30,986	16,329	47,316
97 Tanks	18,358	28,778	47,136
98 Kumbakonam	15,871	20,783	36,654
99 Penukonda	21,414	12,801	34,315

APPENDIX X.

Statement showing the amount of working expenses per acre of irrigation, the percentage of capital value for maintenance of buildings, the maintenance expenditure per mile of road, average expenditure on maintenance and repairs and on original works, for six selected divisions and subdivisions included therein.

Name of charge	Area irrigated in acres.		Working expenses for the area irrigated in rupees.		Working expenses per acre irrigated in rupees.		Capital value of buildings in rupees.		Expenditure on maintenance and repairs of buildings in rupees.		Percentage of expenditure on maintenance and repairs to capital value of buildings.		Length of roads in miles.		Expenditure on maintenance and repairs of roads in rupees.		Expenditure on maintenance and repairs per mile of road in rupees.		Expenditure on original works in rupees. Irrigation.		Buildings.		Roads.		Total.	
	Average for the five years ending 1930–31.	1931–32.	Average for the five years ending 1930–31.	1931–32.	Average for the five years ending 1930–31.	1931–32.	Average for the five years ending 1930–31.	1931–32.	Average for the five years ending 1930–31.	1931–32.	Average for the five years ending 1930–31.	1931–32.	Average for the five years ending 1930–31.	1931–32.	Average for the five years ending 1930–31.	1931–32.	Average for the five years ending 1930–31.	1931–32.	Average for the five years ending 1930–31.	1931–32.	Average for the five years ending 1930–31.	1931–32.	Average for the five years ending 1930–31.	1931–32.	Average for the five years ending 1930–31.	1931–32.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	ACS.	ACS.	RS.	RS.	RS. A. P.	RS. A. P.	RS.	RS.	RS.	RS.	P.C.	P.C.	MLS.	MLS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Kistna Eastern Division.																										
Bezwada Subdivision	110,467	116,681	70,906	46,202	0 10 0	0 6 0	84,471	90,343	758	190	·90	·21	..	..	..	..	..	..	8,678	59,854	1,315	1,058	..	..	9,993	60,912
Gudivada Subdivision	113,725	118,368	73,963	45,329	0 10 0	0 6 0	2,22,823	2,51,511	1,386	1,119	·64	·44	..	..	..	..	..	..	5,688	3,478	9,062	5,039	..	..	14,750	8,517
Cowtaram Subdivision	142,477	147,533	85,692	68,043	0 10 0	0 7 0	1,56,023	1,60,145	746	1,124	·44	·70	..	..	..	..	..	..	7,652	4,263	261	104	..	..	7,913	4,367
Bandar Subdivision	97,734	102,496	78,867	50,514	0 13 0	0 8 0	4,88,500	5,81,403	7,702	5,943	1·6	1·02	..	..	..	..	..	..	6,223	999	39,108	40,699	..	..	45,331	41,698
Total for Kistna Eastern Division.	464,403	485,078	3,22,414	2,29,652	0 11 0	0 8 0	9,51,817	10,83,402	10,592	8,376	1·1	·78	..	..	..	..	..	..	28,241	68,594	40,746	46,900	..	..	77,987	1,15,494
Cauvery Division.																										
Tanjore Subdivision	27,773	26,206	1,21,474	80,296	4 5 5	3 0 11	60,77,244	65,50,207	36,467	41,370	·6	·6	..	..	..	..	..	..	67,102	75,744	95,493	67,727	..	..	1,62,595	1,43,471
Mayavaram Subdivision	245,385	242,375	1,25,679	1,05,374	0 8 1	0 6 11	3,57,791	3,57,618	3,438	3,297	·9	·9	..	..	..	..	..	..	1,16,413	67,801	4,992	1,684	..	..	1,21,405	69,485
Nannilam Subdivision.	176,717	178,812	81,029	73,777	0 9 4	0 6 7	8,67,497	8,71,664	4,906	4,052	·5	·4	..	..	..	..	..	..	25,377	23,426	16,295	26,586	..	..	41,672	50,012
Total for Cauvery Division	449,875	447,393	3,28,182	2,59,447	0 11 8	0 9 3	73,02,532	77,79,489	44,910	48,719	·6	·6	..	..	..	..	..	..	2,08,892	1,66,971	1,16,780	95,997	..	..	3,25,672	2,62,968
Godavari Northern Division.																										
Dummagudem Subdivision	374	374	7,555	5,738	20 6 0	15 5 6	2,03,327	3,48,619	3,472	1,170	1·7	0·47	75	75	18,436	18,177	246	242	882	467	6,964	1,121	11,871	9,797	19,717	11,385
Rajahmundry Subdivision	13,413	8,711	26,768	4,595	2 0 0	0 8 5	8,39,526	11,19,095	13,137	11,081	1·56	0·77	75	32	56,025	21,395	747	669	3,028	..	28,707	39,352	43,916	32,055	75,651	71,407
Samalcota Subdivision	13,485	13,485	22,070	14,823	1 10 2	1 1 7	2,07,068	3,10,379	3,145	1,171	1·51	0·37	22	22	16,172	21,005	735	955	1,596	1,628	11,526	5,713	13,742	14,747	26,864	22,088
Kunnavaram Subdivision	450	450	24	..	0 0 10	..	1,84,081	1,86,965	1,774	609	0·96	0·32	45	53	17,357	12,761	386	241	..	..	11,560	10,480	10,034	4,527	21,594	15,007
Polavaram Subdivision (temporary)	6,269	6,269	32,483	14,200	5 2 11	2 4 3	1,52,416	1,69,802	284	688	0·18	0·4	57	57	50,339	49,679	883	871	6,039	34,324	778	9	18,004	51,641	24,821	85,974
Total for Godavari Northern division	34,629	29,289	89,640	39,356	2 9 5	1 5 6	16,38,151	23,34,860	29,303	14,719	1·8	0·63	385	239	2,12,122	1,23,017	551	515	11,545	36,419	59,597	56,675	75,241	1,12,767	1 46,383	2,05,861
West Coast Division.																										
North Subdivision	..	..	..	..	..	..	30,02,059	35,41,366	15,811	13,363	0·48	0·45	32	32	52,673	43,011	1,646	1,344	..	..	1,27,528	1,05,333	51,258	1,85,131	1,78,786	2,90,464
Calicut Subdivision	..	..	..	..	..	..	17,72,309	14,70,006	16,554	12,351	0·9	0·8	71	57	1,58,199	1,11,187	2,239	2,012	..	..	77,360	14,597	14,755	2,316	92,115	16,913
M.S.P. Subdivision	..	..	..	..	..	..	1,814	2,909	79	30	4·4	1·00	19	26	3,477	4,132	183	159	..	..	20,069	99,004	21,220	77,368	41,289	1,76,392
Total for West Coast Division	..	..	..	..	..	..	47,76,182	50,14,281	32,444	28,744	0·68	0·57	122	115	2,14,439	1,58,330	1,758	1,376	..	..	2,24,957	2,18,934	87,233	2,64,815	3,12,190	4,83,769
Chingleput Division.																										
Tiruvellore Subdivision	134,246	110,596	56,301	73,007	0 6 9	0 10 7	6,86,781	7,61,740	7,510	8,749	1·1	1·15	2¼	2¼	574	531	209	193	14,461	22,421	53,260	9,336	..	..	67,721	31,757
Buckingham Canal Subdivision	3,807	3,807	6,410	1,474	1 10 11	0 6 2	44,623	44,623	2,589	2,508	5·8	5·6	..	..	..	..	..	..	13,424	2,832	..	..	..	..	13,424	2,832
Chingleput Subdivision	93,753	89,193	57,769	1,42,165	0 9 10	1 9 6	6,05,726	4,86,650	8,291	5,267	1·37	1·8	..	..	..	..	..	..	11,387	2,505	96,979	6,229	..	..	1,08,366	8,734
Water Works Subdivision, St. Thomas Mount	73,214	72,040	27,705	79,833	0 6 1	1 1 9	2,17,738	3,72,752	2,098	7,430	0·97	2·00	..	..	..	..	..	..	2,788	91	51,150	74,975	..	..	53,938	75,066
Total for Chingleput division.	261,092	275,636	1,27,715	2,96,479	0 7 10	1 1 3	14,24,226	16,65,765	19,220	23,951	1·35	1·44	2¼	2¼	574	531	209	193	40,386	27,849	1,70,699	90,540	..	..	2,11,085	1,18,389
North Presidency Division.																										
North East Subdivision	..	..	..	..	..	..	81,61,040	86,13,330	93,295	1,06,584	1·14	1·24	..	..	..	..	..	..	..	..	..	..	..	..	2,20,489	1,67,699
North West Subdivision	..	..	..	..	..	..	60,88,984	65,76,987	1,01,875	1,13,050	1·67	1·72	..	..	..	..	..	..	..	..	..	..	..	..	2,95,423	3,74,403
Government House	..	..	..	..	..	..	..	20,74,448	..	13,143	..	0·63	..	..	..	..	..	..	..	..	..	..	..	..	..	1,353
Total for North Presidency division.	..	..	..	..	..	..	1,42,22,761	1,72,64,765	1,95,170	2,32,777	1·37	1·35	..	..	..	..	..	..	..	..	..	..	..	..	5,15,912	5,43,455

APPENDIX XI.

(i) Statement showing the number of temporary men coming under temporary establishments continuously employed from year to year to meet normal requirements.

Year. (1)	Superintending Engineers. (2)	Executive Engineers. (3)	Assistant Engineers. (4)	Supervisors. (5)	Overseers. (6)	Draughtsmen. (7)	Clerk draughtsmen. (8)	Tracers. (9)	Divisional Accountants. (10)	Clerks. (11)	Store-keeper. (12)	Ledger verifier. (13)	Typists. (14)	Attenders. (15)	Peons. (16)	Telephone gumastahs. (17)	Irrigation conservancy subordinates. (18)	Blue printmen. (19)	Mechanical Foreman. (20)	Lorry drivers. (21)	Horticulturist. (22)	Conservancy sergeants. (23)	Maistris. (24)	Sub-Assistant Surgeons. (25)	Wharf Superintendents. (26)	Gate-keeper. (27)
Waltair Circle.																										
1927-28	..	1	11	27	1	5	..	2	1	31	..	..	1	..	44		..	..	..	..	..	..	2	..	..	..
1928-29	..	2	14	41	5	12	..	5	2	44	..	..	2	..	63		..	1	..	..	..	..	2	2	..	..
1929-30	..	2	14	44	5	11	..	5	2	55	..	..	2	..	82		..	1	..	..	..	..	2	3	..	..
1930-31	..	2	15	50	1	8	..	1	..	54	..	..	2	..	98	1	26	1	..	..	..	..	3	5	..	..
1931-32	..	2	14	55	2	9	..	5	2	61	..	..	2	..	95	1	26	1	1	3	..	..	3	5	..	..
On 1st January 1933	..	..	2	..	..	3	..	2	..	22	..	..	..	..	26	1	23	1	1	3	..	..	1	1	..	..
Dowlaishweram Circle.																										
1927-28	..	1	4	7	9	10	..	2	1	43	..	..	1	..	46		..			..	..	..	1	..	..	..
1928-29	..	1	4	7	7	10	..	2	1	42		..	1	..	39	1		..	..	..	..	..	4	..	..	..
1929-30	1	1	5	10	6	19	..	4	1	58		..	3	1	49	20	90	1		..	..	..	4	..	..	..
1930-31	1	..	2	6	2	11	..	3	..	38	..	..	2	1	25	10	93	1		..	..	..	4	..	..	..
1931-32	1	..	2	6	3	11	..	3	..	34	..	..	2	..	25	10	92	1		..	..	..	4	..	..	..
On 1st January 1933	1	..	3	..	3	10	..	2	..	29	..	..	2	1	27	10	48	1	..	..	..	..	3	..	..	..
Bezwada Circle.																										
1927-28	..	..	..	..	..	1	..	..	..	6	..	..	..	..	2		1	1		..	..	..	4	..	..	..
1928-29	..	..	1	1	..	1	..	..	..	5	..	..	..	..	1	..	1	1		..	..	..	4	..	1	..
1929-30	..	..	1	[illegible]	[illegible]	1	..	..	..	8	..	..	..	..	5	10	71	1		..	..	..	5	..	1	..
1930-31	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	61			..	..	..	5	..	1	..
1931-32	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	55			..	..	..	5	..	1	..
On 1st January 1933	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	9	92			..	..	..	5	..	1	..
Madras Circle.																										
1927-28	..	1	3	11	..	16	..	3	..	42	..	1	1	..	24	..	..	2	..	..	1	1	..	..	..	..
1928-29	..	1	3	11	..	10	..	2	..	46	..	1	1	..	24		..	2	..	..	1	1	..	..	..	..
1929-30	..	..	1	11	1	9	..	2	..	41	..	1	..	..	22	1	..	..	..	..	1	1	..	..	..	..
1930-31	..	..	1	11	1	4	..	1	..	22	..	..	..	1	10	1	5	..	..	..	1	1	..	..	..	..
1931-32	..	..	1	11	..	4	..	1	..	21	..	..	..	1	10	1	5	..	..	..	..	1	..	..	..	..
On 1st January 1933	..	..	..	4	..	2	..	..	..	10	..	..	..	1	1	1	5	..	..	..	..	1	..	..	..	..

Year. (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
1927-28	..	..	2	7	2	2						..	..	..	16	..	..	..	..	..	..	..	1	..	..	..
1928-29	..	..	1	5	3	2	1		..	31	..	..	..	..	16	..	..	..	..	..	..	..	2	..	..	..
1929-30	..	..	2	9	3	1	1	..	..	38	..	..	..	..	23	..	4	..	..	..	..	..	2	..	..	..
1930-31	..	..	3	8	3	1	1	1	..	31	..	..	2	..	18	..	4	..	..	..	..	..	2	..	..	..
1931-32	..	..	2	7	2	2	1	..	..	30	..	..	2	..	18	..	4	..	..	..	..	..	2	..	..	..
On 1st January 1933	..	..	..	5	..	2	1	..	..	17	..	..	..	..	5	..	6	..	..	..	..	..	3	..	..	..
Trichinopoly Circle.																										
1927-28	..	1	3	9	4	3	..	1	1	20	1	..	1	..	20	..	..	..	..	..	..	..	..	..	..	..
1928-29	..	1	2	11	3	4	..	1	1	19	2	..	1	..	23	..	..	..	..	..	..	..	..	..	..	..
1929-30	..	1	3	8	2	4	..	1	1	19	2	..	1	..	20	6	5	..	..	..	..	..	23	..	..	..
1930-31	..	1	3	7	4	3	..	1	1	20	2	..	1	..	24	6	5	..	..	..	..	..	23	..	..	..
1931-32	..	1	3	8	1	3	..	1	1	19	2	..	1	..	24	6	5	..	..	..	..	..	23	..	..	..
On 1st January 1933	..	1	1	2	1	3	..	1	1	12	..	..	1	..	11	7	24	..	..	..	..	..	..	..	..	..
Tanjore Circle.																										
1927-28	..	..	..	..	..	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1928-29	..	..	..	..	..	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1929-30	..	..	..	..	..	..	..	..	..	5	..	..	..	..	..	37	15	..	..	..	..	..	..	..	..	..
1930-31	..	..	..	..	..	1	..	..	..	6	..	..	1	..	..	37	127	..	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	1	..	..	..	5	..	..	1	..	..	37	136	..	..	..	..	..	..	..	..	..
On 1st January 1933	..	..	..	1	..	..	..	..	..	4	..	..	..	..	1	30	116	..	..	..	..	..	..	..	..	..
Total.																										
1927-28	..	4	23	61	17	31	..	9	3	178	1	1	4	..	152	0	1	3	..	..	1	1	11	..	..	5
1928-29	..	5	25	76	18	39	1	12	4	195	2	1	5	..	169	1	1	4	..	..	1	1	12	2	1	5
1929-30	1	4	26	83	17	45	1	13	4	222	2	1	6	1	200	64	185	3	..	..	1	1	36	3	1	5
1930-31	1	3	24	82	10	28	1	10	1	171	2	..	8	2	173	65	336	2	..	..	1	1	37	5	1	..
1931-32	1	3	22	87	9	30	1	10	3	170	2	..	8	2	172	65	363	2	1	3	..	1	37	5	1	..
On 1st January 1933	1	1	6	13	4	21	1	5	1	94	..	..	3	2	72	58	354	2	1	3	..	1	15	1	1	..

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(ii) Statement showing the number of temporary men coming under temporary establishments required for investigation of big projects which are sanctioned for the minimum period for which the work is expected to last.

Years. (1)	Superintending Engineers. (2)	Executive Engineers. (3)	Assistant Engineers. (4)	Supervisors. (5)	Overseers. (6)	Draughtsmen. (7)	Tracers. (8)	Divisional Accountants. (9)	Clerks. (10)	Storekeepers. (11)	Typist. (12)	Attenders. (13)	Peons. (14)	Telephone Gumastahs. (15)	Survey Lascars. (16)	Irrigation Gumastahs. (17)	Maistris. (18)
Waltair Circle.																	
1927-28	..	..	..	..	6	3	1	..	2	..	..	..	6	..	22	..	..
1928-29	..	..	..	..	6	3	1	..	2	..	..	..	6	..	22	..	..
1929-30	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	3	..
1930-31	..	..	..	..	12	7	2	..	7	1	..	..	17	..	..	..	..
1931-32	..	..	..	..	12	7	2	..	7	1	..	..	5	..	..	..	..
On 1st January 1933	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Doulaishweram Circle.																	
1927-28	..	..	4	7	8	..	..	..	8	..	..	..	18	..	..	..	..
1928-29	..	..	4	7	10	..	1	..	8	..	..	..	20	..	..	..	..
1929-30	..	..	5	11	11	..	2	..	9	..	..	..	24	..	..	..	..
1930-31	..	..	6	17	13	..	1	..	12	..	..	..	30	..	..	..	..
1931-32	..	..	4	14	10	..	1	..	8	..	..	..	25	..			
On 1st January 1933	..	..	2	6	10	7	10	..	8	..	..	..	11	8			
Bezwada Circle.																	
1927-28	..	..	6	9	12	2	1	..	9	..	..	..	22	..			
1928-29	..	..	5	9	10	5	3	..	7	..	..	..	23	..			
1929-30	..	..	3	8	6	6	3	..	6	..	..	..	16	..			
1930-31	..	..	5	8	11	4	4	..	8	..	..	..	20	..			
1931-32	..	..	5	10	10	4	4	..	7	..	..	..	24	..			
On 1st January 1933	..	..	4	7	6	1	1	..	6	..	1	..	16	..			
Madras Circle.																	
1927-28	..	..	3	14	..	1	..	..	6	..	..	..	17	.			
1928-29	..	3	7	32	1	10	3	..	26	..	3	..	61	.			
1929-30	..	3	7	28	1	10	3	..	25	..	3	..	60	.			
1930-31	..	2	4	22	1	8	3	..	24	..	2	..	41	.			
1931-32	..	2	4	19	1	8	3	..	23	..	2	..	37	.			
On 1st January 1933	..	..	8	7	1	1	..	..	8	..	..	..	15	..			
Coimbatore Circle.																	
1927-28	..	1	2	5	..	1	1	1	9	..	1	..	19	..	..	..	..
1928-29	..	1	2	7	..	1	1	1	10	..	1	..	16	..	..	..	..
1929-30	..	1	3	16	..	5	1	1	20	..	1	..	30	..	..	..	..
1930-31	..	1	5	22	..	5	1	1	25	..	1	..	41	..	..	..	..
1931-32	..	1	5	24	..	7	3	1	27	..	2	..	42	..	..	..	..
On 1st January 1933	..	1	3	10	..	4	1	..	6	..	1	..	22	..	..	..	..
Trichinopoly Circle.																	
1927-28	..	..	..	..	..	..	8	..	4	..	..	..	6	..	..	..	..
On 1st January 1933	..	1	2	8	..	3	2	1	7	..	1	..	19	..	..	..	..
Tanjore Circle.																	
1927-28	..	1	3	11	..	4	1	..	10	..	1	..	32	..	..	..	..
1928-29	..	..	1	4	3	1	1	..	1	..	..	..	7	..	..	..	..
1929-30	..	2	7	20	3	..	3	..	11	..	2	..	51	..	..	..	..
1930-31	..	1	5	16	3	6	1	..	9	..	1	..	30	..	..	..	..
1931-32	..	1	3	10	..	5	1	..	7	..	1	..	25	..	..	..	..
On 1st January 1933	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total.																	
1927-28	..	2	18	46	26	11	7	1	48	..	2	..	116	..	22	..	..
1928-29	..	4	19	59	30	20	10	1	54	..	4	..	133	..	22	..	..
1929-30	..	5	25	84	21	21	12	1	72	..	6	..	182	..	..	3	
1930-31	..	4	25	65	40	30	12	1	85	1	4	..	208	..	..	..	
1931-32	..	4	21	77	33	31	14	1	79	1	5	..	161	..	..	..	
On 1st January 1933	..	2	14	38	17	16	14	1	30	..	3	..	83	8	..	..	

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(iii) Statement showing the number of temporary men coming under temporary establishments of a purely temporary nature which are required for short periods of less than a year.

Years. (1)	Superintending Engineers. (2)	Executive Engineers. (3)	Assistant Engineers. (4)	Resident Engineers. (5)	Supervisors. (6)	Overseers. (7)	Draughtsmen. (8)	Clerk draughtsmen. (9)	Tracers. (10)	Divisional Accountants. (11)	Clerks. (12)	Storekeeper. (13)	Typist. (14)	Attenders. (15)	Peons. (16)	Shroff. (17)	Telephone Gumastahs. (18)	Irrigation Gumastahs. (19)
Waltair Circle.																		
1927-28	..	..	..	..	1	5	1	..	..	..	3	..	..	..	1	..	..	..
1928-29	..	..	..	..	1	3	..	..	..	..	..	..	..	..	3	..	..	..
1929-30	..	..	..	..	..	1	..	..	..	..	3	..	..	..	16	..	..	..
1930-31	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
On 1st January 1933	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Doulaishweram Circle.																		
1927-28	..	..	..	..	2	2	..	..	..	..	3	..	..	..	2	..	..	..
1928-29	..	..	..	..	2	2	..	..	..	..	2	..	..	..	3	..	..	..
1929-30	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..
1930-31	..	..	..	..	..	3	..	..	..	..	4	..	..	..	..	..	..	..
1931-32	..	..	..	..	2	2	..	..	..	..	4	..	..	..	1	..	..	..
On 1st January 1933	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..
Bezwada Circle.																		
927-28	..	..	3	..	6	2	4	..	2	..	..	..	1	..	4	1	..	..
928-29	..	..	3	..	6	3	1	..	2	..	..	..	1	..	11	..	..	..
929-30	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..
930-31	..	..	..	..	2	1	..	..	..	..	..	..	..	..	2	..	..	..
-32	..	..	..	..	1	2	..	..	..	..	..	..	..	..	2	..	..	..
Jan	..	..	..	..	1	1	4	..	..	2	1	..	..	..	1	..	..	..
Madras Circle.																		
	..	..	1	..	6	..	..	..	..	..	3	..	..	..	2	1	..	..
	..	..	..	..	8	..	2	..	..	..	6	..	..	..	3	1	..	..
	..	..	1	..	5	..	1	..	..	1	4	..	..	..	5	1	..	..
	..	..	..	..	4	..	..	..	..	..	2	..	..	..	4	1	..	..
	..	..	..	..	7	..	..	..	..	..	1	..	..	..	6	1	..	..
January 1933	..	..	1	..	4	..	..	..	..	4	1	..	..	..	6	1	..	..
Coimbatore Circle.																		
1927-28	..	..	..	..	2	2	..	..	..	..	5	..	2	..	1	..	..	..
1928-29	..	..	..	..	4	1	..	..	..	..	2	..	1	..	1	..	..	..
1929-30	..	..	..	..	1	..	..	..	..	..	1	..	..	..	2	..	..	..
1930-31	..	..	..	1	4	..	..	..	..	..	..	..	..	..	7	..	..	..
1931-32	..	..	1	1	6	1	..	..	..	1	4	..	..	..	..	..	..	..
On 1st January 1933	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Trichinopoly Circle.																		
1927-28	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
1928-29	..	..	2	..	7	3	1	..	..	3	6	..	..	..	15	..	..	..
1929-30	..	..	1	..	3	2	1	..	..	3	10	..	..	..	16	..	..	..
1930-31	..	..	1	..	6	2	1	..	..	[illegible]	10	..	..	..	22	..	..	..
1931-32	..	..	3	..	10	..	2	..	..	9	9	..	..	..	23	..	..	..
On 1st January 1933	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2	..	..	..
Tanjore Circle.																		
1927-28	..	..	..	..	7	..	..	..	..	..	..	..	..	..	7	..	..	..
1928-29	..	..	..	..	17	..	..	..	..	..	1	..	..	..	17	..	..	..
1929-30	..	..	..	..	16	..	..	..	..	..	..	..	..	..	16	..	2	..
1930-31	..	..	..	..	24	..	..	..	..	..	5	..	..	..	24	..	2	..
1931-32	..	..	..	..	12	..	..	..	..	..	..	..	..	..	12	..	2	..
On 1st January 1933	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total.																		
1927-28	..	..	4	..	24	11	5	..	..	2	14	..	1	..	18	2	..	..
1928-29	..	..	5	..	45	12	4	..	..	5	17	..	3	..	42	1	..	..
1929-30	..	..	2	..	27	4	2	..	..	4	19	..	1	..	58	1	2	..
1930-31	..	..	1	1	40	7	2	..	..	1	21	..	..	..	54	1	2	..
1931-32	..	..	4	1	38	6	2	..	..	3	18	..	..	..	51	1	2	..
On 1st January 1933	..	..	2	..	8	1	4	..	..	6	6	..	..	..	9	1	..	1

APPENDIX XII.

Statement showing the number of temporary supervisor sections which the Chief Engineer, General, Buildings and Roads, has recommended to be made permanent.

Division.	Subdivision.	Section.
	Waltair Circle.	
Koraput	Koraput	1 Rallagedda.
		2 Padwa.
	Jeypore	3 Kolab.
	Indravati	4 Umercota.
	Gunupur	5 Elwinpeta.
		6 Narayapatnam.
		7 Rayagada.
		8 Bissemcuttack.
Vizagapatam	Narasapatam	9 Lammasinghi.
		10 Chintapallo.
		11 Krishnadevipetta and Koyyur.
Ganjam	Russellkonda	12 Ballipodoro.
		13 Combined G. Udayagiri and Kalingia.
		14 Balligada.
	Dowlaishweram Circle.	
Godavari Northern ..	Rajahmundry ..	15 Chodavaram.
	Polavaram	16 Polavaram.
	Samalkota	17 Yerravaram.
		18 Yellavaram.
	Bezwada Circle.	
Kistna Central ..	Headquarters Sub-division.	19 Bezwada.
	Madras Circle.	
North Presidency ..	Government House ..	20 Government House.
South Presidency ..	South East	21 Chepauk.
	South West	22 Brick fields.
		23 Guindy.
	Coimbatore Circle.	
West Coast	Central	24 Tirur.
		25 Moppadi.
	North	26 Puthur.
Coimbatore	[illegible]chi	27 Kottur.
	Trichinopoly Circle.	
Ramnad	Ramnad	28 Sivaganga.

தமிழ்நாடு ஆவணக்காப்பக நூலகம்,
எழும்பூர், சென்னை-600 008.

தவணைத்தாள்.

பெ. எண் : ப. எண் :

வழங்கிய நாள். (1)	திரும்பிய நாள். (2)	வழங்கிய நாள். (1)	திரும்பிய நாள். (2)
4.11.94	28/11		

S.C. 259A-6 1,00,000—30-1-84