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Public Works DEPARTMENT.

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*Proceedings of the Madras Government, Public Works Department,
18th June 1863.*

Read the following papers:—

No. 435. From the Committee appointed to report on the re-organization of the Department of Public Works, to His Excellency the Governor in Council.

HONORABLE SIR,

1. In our letter of the 10th ultimo we submitted, for the consideration of your Excellency in Council, our opinion as to the changes requisite in the organization of the Directing and Superintending Agency in the Department of Public Works. Our recommendations, which have received the sanction of Government, involved the abolition of the offices of Chief Engineer, Deputy Chief Engineer, and District Engineer, and the apportionment of the duties now performed by these Officers, between the Secretary to Government in the Department of Public Works, aided by a Deputy Secretary and eight Superintending Engineers residing in their several divisions. We now proceed to report on the other points referred for our consideration in the Proceedings of Government under date the 17th March last, No. 659, which may be classed under the following heads:—

- (a)—The expediency or otherwise of re-transferring the execution of all minor works and repairs to the Revenue authorities.
- (b)—The cost of the Establishment required.
- (c)—The duties and responsibilities which should be imposed on the several grades of Officers employed in the Department.

2. On the first question, the conclusion at which we have arrived is, that it is not possible, save at a considerable increase of expense, to make any thing like a general re-transfer of the execution of repairs and minor works to the Revenue authorities. In stating this conclusion, we deem it right to observe that we entered upon our inquiry with a very different impression. We were all (including the Engineer Member of our Committee) disposed to think that the only satisfactory plan for ensuring the execution of minor works and repairs, especially those connected with Irrigation, was to re-transfer it to the Collectors and their Subordinates. Of the Officers whom we consulted, Messrs. Cunliffe and Ellis, the late and present Collectors of the Madras District, and Colonel Ludlow, now Deputy Secretary to Government in the Department of Public Works, were of the same opinion; (the latter, mainly on the ground of the relief which the arrangement would give to the Superintending Engineers). We had before us the strongly expressed opinions of two experienced Members of the Government, who had had ample opportunities of observing the administration of this branch of the Public Works Department both before and after the organization of the present Department in 1855; and lastly, the decision of the Secretary of State on a full review of the arguments adduced on either side of the question, that the former system under which the execution of those works was entrusted to the Revenue authorities, should be reverted to. In these circumstances, notwithstanding the changes which recent measures have effected in the position of the Revenue Officials, and especially the Tahsildars, and in their ability to give time and attention to the works in their respective ranges, we should have considered it our duty to recommend that the experiment should be tried, at all events, in a few of the Districts, if it had been in our power to devise any means of bringing it into operation without largely exceeding the limit of expenditure to which we have been restricted, or crippling the efficiency of what we may designate as the Engineering branch of the Department. This, we find, is impossible. The establishments of the Collectors and Tahsildars have been so much reduced of late years; while, in the case of the latter, partly owing to the increased size of their Talooks, and partly to the introduction of the Indian Penal Code and Code of Criminal Procedure, which have considerably added to their labors as Magistrates, the increase of work has been so great, that, if they are to be held responsible for keeping in order the irrigation works and cross roads in their Districts, they will need an addition to their present establishments, the aggregate of which, at the lowest computation, would involve a charge of Rupees 80,000 in salaries of Accountants and Gumstahs, which it would be impossible to meet by any corresponding reduction in the establishments of the Executive Officers of the Engineer Department. Moreover, and this is the more

serious objection, the necessary staff of Overseers and Maistries could not be furnished to the Collectors without either unduly crippling the Engineer Establishment, or again entailing a considerable increase of charge in the salaries of additional Overseers to aid the Executive Engineers in those works, which, under the proposed change, would still be reserved to them; and, here, it would often happen that, with the two classes of work under distinct Departments, two Officers would be employed on duties which might easily be done by one. Take, as an example, the District of North Arcot. In the scheme of establishments annexed to this letter, the establishment assigned to this District consists of two Executive Officers, three upper Subordinates (1 Sub Engineer and 2 Supervisors), and 9 Talook Overseers at the rate of one to each Talook. Looking to the size of the Talooks, the number of Talook Overseers is not more than will be needed for the effective supervision of the minor works; but most of these men will have other works within their Talooks, on which, if they are at the disposal of the Executive Officer in charge of the Range, they may be occasionally employed without prejudice to their special duty of looking after the minor works; while, if they were not available for such works, the proposed Staff of two Executive Officers, and three upper Subordinates, would be obviously inadequate for a District containing 300 miles of metalled roads, and works connected with two important Anicuts actually in progress. The Chandragiri Talook constitutes a range. In it there are four metalled roads 111 miles in length. Most of the irrigation works in this Talook lie along the valley of the Soornamooky river, no where far from the road from Pootulpett to Trivision of which he will not be available, if the transfer of the minor works to the Collectors should be carried out. Again there is a section of the western trunk road, 48 miles in length from the junction of the Palar and Poiney rivers to Vaniambaddy through Vellore. This road follows the valley of the Palar. Irrigation works are dotted along, no where distant from the road, to the south of which runs a chain of hills. So, in this case, if the proposed transfer of the minor works be carried out, one man will have to inspect the road, while another will be going over the same ground to inspect the tanks.

3. It is not proposed to make over to the Revenue authorities any masonry works, whether new works or repairs, the cost of which may exceed Rupees 1,000. Suppose, therefore, a calingula has to be built at a cost of Rupees 1,200, the work must be entrusted to the Engineer Department. In the same tank a small upper calingula has to be built at a cost of Rupees 350 and other stone and earth-work costing Rupees 2,000. The two latter would come under the head of minor works, and, if the latter are to be placed under the Collector, would have to be executed under the orders of the Talook Overseer. There would thus be two men independently superintending the execution of work on the same tank. Take again the case of a stone dam over a surplus channel. The partial restoration of such a work would be classed as new work, and might cost, say, Rupees 1,500. It would therefore be executed by the Engineer Department; and supposing the channel, half a mile long, leading as a branch from this dam, to be in need of repair, the repair, which might cost Rupees 800, would be treated as a minor work, and executed under the orders of the Collector; so that one man would be superintending the work at the dam, and another at the channel; thus entailing a needless waste of superintendence. There would also be a waste of office work, inasmuch as two separate estimates would have to be prepared for what, under the present system, would be included in a single estimate. Moreover, with two separate agencies competing for labor in the same locality, the price of labor must necessarily rise, and the cost of the works must be proportionately enhanced. This is forcibly urged by the Collector of Trichinopoly in one of the reports which have been placed before us. In short, it is impossible to provide two separate establishments for objects nearly identical and working side by side, without entailing a considerable increase of charge. And, on the whole, we think it is very questionable whether, irrespectively of the cost of Establishments, the proposed re-transfer of the repairs and earth-works to the Revenue Department would be followed by the advantages which are expected. Admitting that the Public Works Department has not hitherto answered expectations, it appears to us that much that is defective in its working is attributable to defects in the

organization of the Department, which the changes recently sanctioned, and others which we are about to propose, will go far to remove. Among the chief of these defects are the attempt at over-centralization; a needless multiplicity of accounts and returns; inadequacy of local supervision by experienced officers; want of defined responsibility; and, what is rather a fault in the practice than in the theory of the system, a want of constant and unreserved communication between the local Officers of the two Departments; and lastly, the want of a sufficiently stringent law to compel the villagers to furnish labor for the execution of what are essentially village works. All these are defects which we think are susceptible of being remedied without removing the superintendence of the minor works and repairs from the Department at present entrusted with it. And here it must be borne in mind that, under the old system, complaints of the inefficiency of the Executive were not unfrequent. It is shown in the Report of the Public Works Commissioners, and so far as we are aware, their statements on this point have not been contradicted, that numbers of tanks were continually out of repair; that there was much delay in the execution of work; that the accounts were often garbled; that the labor employed was more or less compulsory, the rates of wages being too low, and the payment by no means prompt; that the laborers were constantly defrauded of a portion of their hire; and that the Maistries who had the superintendence of the work, were, as a class, very inefficient.

4. But, though we question the expediency of making any general re-transfer of the duty of superintending the minor works and repairs to the Revenue authorities, we think it of great importance that the two Departments should work together more closely than they do at present, and that every advantage should be taken of the opportunities which the Revenue Officers unquestionably possess, of discovering and giving timely notice of defects or delays in the execution of necessary works. The course of action we would advocate, is pretty fully laid down in Chapter XI of the new Code; but from the inquiries we have made, it seems doubtful whether it is sufficiently observed in practice, and whether there is that free inter-communication and co-operation between the Officials of the two Departments which the Code prescribes. Moreover, we think the Revenue authorities should have greater powers of interference; to the extent, at all events, of bringing to notice defects in the execution of work which may have come under their observation than the Code gives, or is understood to give them. The following is not an uncommon complaint against the present system. A Collector, or Tahsildar, in going through his District, comes upon a work, say the repair of a tank bund, in course of execution. The Overseer or other Officer under whose orders the work is being carried out, is absent on some other duty. The work people are using bad materials—sand, for instance, instead of clay. The Maistry or other foreman in immediate charge, when remonstrated with, says there is nothing better to be got, or that the material which is being used, is that ordered by the Overseer. The Revenue Officer is powerless, for he is expressly prohibited from interfering in matters of professional or departmental detail; and the work goes on, and has to be done over again, probably in the following year. It has been suggested to us that, in such a case, the Revenue Officer, or, at all events, the Collector, should be empowered to stop the work, pending a reference to the Officer in charge of the Range, or, if necessary, to the Superintending Engineer. This, we apprehend, would tend to create ill-feeling and antagonism between the two Departments; but it should not only be permitted, but should be the duty of every Revenue Officer, down to the Tahsildar, to draw immediate attention to any defective work which may come under his observation; and we doubt not that the mere fact of the Revenue Official being invested with this power, will often serve as a preventive against bad work. The members of the Public Works Department, on their part, should give ready attention to all such representations.

5. Our scheme provides for the appointment of a comparatively well paid Overseer to each Talook, who, being entrusted with a comparatively limited range, will be able to see that the minor works, and particularly the irrigation works in the Talook, are kept in proper repair; but who will also be available for looking after other works within his Talook, under the orders of the Range Officer. It will occasionally happen that there are no works in a Talook or Division, the execution of which the Talook Overseers are not competent to superintend: none in fact, requiring any considerable degree of professional skill. In such a case, if the Collector were desirous to take charge

of the works in that particular Talook or Division, we think it should be open to the Superintending Engineer to make them over to him, placing the Talook Overseer, and perhaps one of the Clerks on his Establishment, at the Collector's disposal. This probably might be done in parts of Malabar, where the present Collector is anxious and, we believe, competent to undertake the duty. It is a matter in which much must depend on the personal inclinations and aptitude of the Officers concerned. Some Collectors have a taste for Maramut; others have none, and it should be left to the Superintending Engineer to satisfy himself, before making the transfer, that there is a reasonable prospect of the work being properly attended to. Where this is the case, it is desirable that the transfer should be made, so that more of the time of the scientific Officers of the Department may be available for work requiring professional skill.

6. But, for the reasons we have given against any general transfer of the works to the Revenue authorities, we do not anticipate that such an arrangement as that we have just suggested, will be found practicable to any great extent; and we should be more disposed to look to another mode of supplementing the Agency of the Public Works Department, somewhat similar to that suggested by His Excellency the Governor, in his Minute of the 30th July 1861, paragraphs 25 to 38, viz., to impose upon the Ryots the duty of keeping in repair what may be called village tanks in contra-distinction to those which supply water to a considerable number of villages, and perhaps also the village roads. Act I of 1858 appears to have been enacted partly with this view. Provision is made in Section 6 for enforcing the execution, by the joint labor of a village community, of any work for the purpose of irrigation or of drainage, which, according to local custom, is annually executed by such joint labor; and in the Chapter of the Public Works Code before referred to, (Section 25.) a description is given of the various classes of work to which the above provisions of the law are considered applicable. In some Districts, where there is no doubt as to the existence of the custom to which this Act gives a legal sanction, much may be done by the proper enforcement of its provisions; but in others the custom has so long fallen into desuetude, that the Act, as it now stands, could not be applied. This, we understand, is the case in the Madras District. Moreover, the duties which this Act imposes, are rather those of conservancy and the execution of petty repairs, and would hardly include more important repairs, such as that of a breach in a tank bund or in a bank of the channel which, in the case of village tanks and channels, ought to be left to local agency; what we would suggest is, that an Act should be introduced into the local Legislature, either amending or supplementing Section 6, Act I of 1858, giving power to the Government to declare from time to time what irrigation and other works shall be kept in repair by the village community, and to enforce their execution by imposing a fine on such of the Ryots as may fail to contribute their proper share of labor, double the estimated value of such labor. The Act should not be enforced in any village until the irrigation works have been put into good repair; and in each case, on the transfer of the work, a portion of the Land Revenue should be remitted in consideration of the State being saved the cost of putting it in repair. This could be readily settled by taking the average expenditure on such works for a series of years. It should be the duty both of the Tahsildar and of the Talook Overseer, to bring to notice any negligence on the part of the villagers and to see that the work is properly done. In case of failure on their part, the work would be done by the Talook Overseer under the authority of the Collector, and its cost recovered from the villagers by withholding the usual remission and by a fine.

7. We now proceed to advert to the scheme of District Establishments which will be found appended to this letter. The proposals made in our former letter, provide for the abolition of the District Engineers, and the appointment, in their stead, of eight Superintending Engineers. We propose, for the present, at all events, to retain the present number of Ranges, placing the Officer in charge of each Range under the immediate orders of the Superintending Engineer. Our scheme assigns, on an average, about two Officers of the grade of Executive or Assistant Engineer to each District, on salaries ranging from Rupees 250 to Rupees 900 per mensem, in addition to travelling allowance; the number in each case varying with the requirements of the District. These Officers

will be placed in charge of the more important ranges, the others being entrusted to Sub-Engineers or Supervisors on salaries ranging from Rupees 150 to Rupees 400; and for each Talook, there will be a Talook Overseer on a salary of Rupees 60 per mensem, with travelling allowance at Rupees 20, who will be held specially responsible for the repair and conservancy of the minor works, and particularly the minor irrigation works; but will be available, when required, for other works in progress within the Talook under the orders of the Range Officer. It is of great importance that the duty of superintending the repairs and conservancy of the minor works, should form the special charge of a particular set of Officers, with ranges sufficiently limited to admit of their doing the work effectively. This should be the primary duty of the Talook Overseers; but it need not prevent their being available for the superintendence of other works in the immediate neighbourhood of the irrigation works. No Talook Overseer should be employed on work beyond the limits of his Talook except on an emergency, and then only with the special sanction of the Superintending Engineer.

8. The following is the numerical strength of the several grades:—

Executive Officers.....	24
Assistant Engineers.....	24
Sub-Engineers.....	14
Supervisors.....	37
Taluk Overseers.....	167
	266

This establishment includes two Officers of the grade of Executive Engineer, and two of the grade of Assistant Engineer, one Sub-Engineer, five Supervisors, and thirteen Overseers, who will not be in charge of Ranges or Talooks, but will be employed on special works or projects; as, for instance, the building the Lawrence Asylum; the project for supplying Madras with water; the erection of Central Jails, &c. It is obviously of great importance that a certain number of well qualified Engineers should be constantly employed on the duty of investigating projects for the construction of great works calculated to develop the resources of the country. So far back as 1849, the Board of Revenue in the Department of Public Works, recommended the immediate appointment of four Officers for the examination of irrigation projects. The Public Works Commissioners, in their First Report, expressed their full concurrence as to the necessity of appointing Officers for this special object, and gave a list of large and important projects, some of which have been since carried out, on which such Officers might be usefully employed. We have no doubt that there would be little difficulty in preparing a list of equally important works, on which a small body of projecting Engineers might be usefully employed for some years. For the present, we have provided for two such Officers on salaries equal to those assigned to 1st Class Executive Engineers. These projecting Engineers should be placed either under the Superintending Engineer of the Division in which their projects lie, or under the immediate orders of Government, at the discretion of the Governor in Council. Where the project extends beyond the limits of one Division, it will be necessary that the projecting Engineer should report direct to Government in the Department of Public Works; and even where it is otherwise, it may be desirable, for special reasons, to adopt this course. It is a point which should be determined by the circumstances of each case.

9. The office establishments for the several grades of Officers are entered* in the margin. They have been fixed in communication with those Officers whom we have had an opportunity of consulting, and we have reason to believe that they are sufficient. The projecting Engineers will require larger establishments, the strength of which must depend, in each case, upon the character of the work to be done; and which should be charged as part of the cost of the project.

10. We recommend that each Officer whose duties involve locomotion, shall be allowed a fixed monthly sum, in addition to his pay, as travelling allowance. This, we think, is preferable

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to the present system, under which there is a temptation to move constantly, whether the public service requires it or not. In a Department where travelling is only occasional, a daily and mileage allowance to be drawn only when absent from head quarters, is probably the best arrangement; but in a Department like the Public Works, where travelling is, or ought to be, the normal condition of nearly every Officer employed in it, it is preferable, we think, that a fixed monthly sum should be allotted for the permanent maintenance of a travelling establishment, and to cover its attendant expenses. We annex in the margin

Superintending Engineer.....	Rs. 150
Executive Engineer.....	100
Assistant Engineer.....	80
Sub-Engineer.....	60
Supervisor.....	40
Talook Overseer.....	20

the allowances we would assign to each grade. These allowances should be in lieu of all charges for travelling, the carriage of office records, &c. If due supervision be exercised over their subordinates by the superior Officers, from the Secretary to Government downwards, there ought to be little or no scope for abuse; and much time and labor will be saved in the preparation and examination of bills.

11. On further consideration, we think it right to recommend that the Civil salaries of all the Superintending Engineers, when Military Officers, should be fixed at Rupees 800, the higher of the two rates now sanctioned. The duties that will devolve on these Officers differ little, if at all, in extent and responsibility, and we are satisfied that this scale of salary is not more than sufficient in any case.

12. We have put down the Lithographic establishment at the sum to which it has been recently reduced by Colonel Birdwood. We think it, however, very questionable whether the time has not come for abolishing this establishment and transferring the work to private establishments, and with this view we would suggest that a notification should be issued to the effect that the abolition of the Government Lithographic establishment is under consideration, and inviting tenders from persons willing to undertake the work at fixed rates. We have omitted a sum of Rupees 25,000 which has been entered in a statement of the present establishment furnished to us by the Secretary on account of the freight, &c., of English stores. Such a charge, it appears to us, should not be debited to the permanent establishment, but should be added to the cost of the stores, and debited eventually to the works on which they are used.

Salary of Secretary to Government...	Rs. 27,000
Do. of Deputy Secretary...	14,400
Secretariat Establishment...	27,891
Deduct amount now charged to salaries and expenses of Public Department, Budget head F II.	25,752
Salaries of eight Superintending Engineers...	1,15,200
Establishments for do.	91,008
Controller of Public Works Accounts...	14,400
Establishment for do.	22,992
48 Executive Officers...	3,10,800
51 Upper Subordinates...	1,21,800
Office Establishment for Executive Officers and Upper Subordinates...	90,324
Taluk Overseers and Establishments...	1,74,348
Travelling allowance...	1,49,292
Military allowance...	1,23,000
Special allowance for three Officers at the Presidency...	3,240
Contingencies...	16,320
Lithographic Establishment...	12,216
Store Establishment...	8,884
Total Rs...	12,97,336

Works establishment will be Rupees 12,53,794, or, in round numbers, twelve lacs and a half.

14. We have not made any provision in our scheme for the extra temporary establishments hitherto charged to works, to which reference is made in the Chief Engineer's letter of the 18th ultimo, recorded in the Proceedings of Government under date the 4th instant. It is impossible to provide for these charges without considerably exceeding the limits prescribed to us; and it appears to us to be altogether erroneous in principle that establishments of the character of those adverted to,

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should be charged for otherwise than as a part of the expenses of the works on which, from time to time, they may be engaged. It must be borne in mind that in this country, wherever the contract system has not been introduced, the Professional Department is its own supplier; and the Officers belonging to it have to make their own arrangements for providing themselves with every thing required for the works. For example; if bricks are wanted, an Executive Officer must enter into an agreement with one set of people to mould them; with others, to cut and cart fuel; and with others to stack and burn the bricks. All this requires a numerous petty agency, which is manifestly chargeable to the price of materials, and ought, therefore, to be provided for in the estimates. In the same way, Gumastahs and Conicopolies are required to keep accounts of the receipts and expenditure of materials and labor; and Maistries to direct the workmen. When work is done on contract, all petty superintendence is paid by the Contractor; and its cost is, as a matter of course, included in that of the work; or, in other words, in the estimate. If the cost of all local and petty superintendence is to be excluded from the estimates, it will be impossible to induce Contractors to execute work on estimates so prepared, as, under such circumstances, the Contractor would have to meet charges not provided for in the rates on which the estimates were framed. We trust that the Governor in Council will object to any change in the practice which has hitherto obtained in regard to these charges.

15. Reverting to the scheme of permanent establishments, we would briefly define the duties and responsibilities of the several grades of Officers as follows:—The Secretary to Government should continue to perform all the duties heretofore performed by the Secretary when the office was held by a Civilian. He should further recommend to Government all appointments, promotions and transfers to offices above the grade of Sub-Engineer, previously obtaining from the Superintending Engineers lists of the most deserving Officers in their respective Divisions. It will be his duty to prepare the Annual Budget Estimates and the Administration Reports; to attend to the allotment of funds; to exercise a careful supervision over the proceedings of the Superintending Engineers, and to bring to the notice of Government any neglect of duty on their part. He should see that they move about their Divisions as much as is necessary, and should satisfy himself, as far as it is possible to do so from written statements, that their inspecting duties are thoroughly performed.

16. In regard to projects, plans, estimates, &c., submitted to Government for sanction, it should be the duty of the Secretary to make himself acquainted with the general bearings and leading features of the project or plan, trusting to the Superintending Engineers for the correctness of the details; and he should then advise Government as to the expediency or otherwise of sanctioning the project. Before submitting any matter for orders, the Secretary should see that the case is ready for decision, and, if additional information be needed, either from the Superintending Engineer, or from the Revenue authorities, he should procure it. No papers involving any question of a professional character, or of departmental practice, should be submitted by the Secretary without a statement of his own opinion; and, as a general rule, all papers circulated by the Secretary in the Public Works Department should be accompanied either by a Memorandum stating the Secretary's opinion, or by a draft of the order which in his opinion ought to be passed. The Secretary, in fact, should consider himself the responsible adviser, as well as the organ and chief Ministerial Officer of the Government in all matters relating to the Public Works Department. He should maintain frequent personal communication with the Board of Revenue and Secretary to Government in the Revenue Department on the many questions affecting the Revenue which come before him, and should do his utmost to insure cordial co-operation between the Officers of the Public Works Department and the Revenue Officials in the Provinces.

17. The Deputy Secretary should aid the Secretary in the performance of the duties above described, taking his share of the correspondence and in the examination of plans and projects. In the allotment of funds and preparation of the Budget, the Deputy will be able to render the Secretary material aid.

18. It should be the duty of Superintending Engineers to direct and control all the transactions of the Department within their respective Divisions; and entrusted, as they will be, with nearly all the powers hitherto vested in the Chief and Deputy Chief Engineers, as well as with those of the District Engineers, as described in detail in Chapter IV of the Public Works Code, they should be held responsible for the satisfactory arrangement of executive operations of every description throughout their Divisions. They should make proper dispositions for the due executive supervision of each Range, and for the effective management of such works as may be of a character to require special supervision. Vested with the powers of sanction conferred by the Code, they should take care that the rules under which those powers are exercised, are strictly adhered to; but, in case of emergency, they should have authority to take immediate action, pending a reference to Government. They should furnish the Secretary to Government, from time to time, with such information as may enable him to allot the funds sanctioned in the Budget to each District and Range or special work, and will be responsible for the money being laid out to the best advantage. It will be the duty of Superintending Engineers to scrutinize all plans, estimates and designs; and they will be responsible for the appropriateness of the

latter, for the correctness of their structural proportions, and, generally, for the suitability* of the constructive details, as well as for the correctness of the estimate. Superintending Engineers should have power to authorize such deviations from sanctioned designs, while a work is in progress, as may appear to be desirable, provided those deviations do not involve an increase of cost beyond 5 per cent on the estimate.

19. Superintending Engineers will visit each Range or executive charge at irregular intervals, and will make tours as frequently as possible through their Divisions, when it will be their duty personally to look closely into the working of the Department; to inspect all works of importance that may be in progress; to examine the records and accounts of each Executive Officer or Subordinate Agent, and to enforce regularity in their preparation; and to examine the Books and Cash Chests of those who may be entrusted with the custody and disbursement of funds; and, in short, to exercise that full and direct supervision and control that are essential to the successful management of the operations of the Department in every branch of its administration.

20. Superintending Engineers should communicate freely, and as much as possible, personally, with their subordinates of all grades, and should, at all times afford their advice and assistance to them. They should, in conjunction with their subordinates, or with the local Civil functionaries, suggest improvements, and project and design such works as may appear to be advantageous to the inhabitants or to the public revenue.

21. All Bills will be prepared in the Superintending Engineer's Office from the Cash and Station Books of the Subordinate Officers, and the Superintending Engineers will be responsible for the punctual submission as well as for the correctness of those Bills. It will be their duty to afford full explanation to the Controller in cases of excess or saving, and in the event of the outlay on a work exceeding the estimate beyond the limits of sanction hitherto assigned to the Chief Engineer, they will submit such Bills, with full explanations of the causes of excess, to Government, and, having obtained its sanction, should forward the Bills to the Controller for audit and final adjustment. They will follow the same course with Bills which on account of frauds or irregularities require to be specially brought before Government. In all matters requiring the orders of Government they will correspond direct with the Secretary to Government in the Department of Public Works.

22. Executive Officers, whether entrusted with the charge of a Range or of a special work, should be under the direct control of the Superintending Engineer, unless by his authority they have been placed under the orders of another Executive. Their duties should consist of the immediate management of all executive operations within their respective Ranges, or if the special work to which they may be appointed. Executive Officers of every grade will be responsible for the proper execution of all work entrusted to them.

They should see that it is executed strictly in accordance with the plans and specifications, and they should be held responsible for the goodness of materials and workmanship and generally for the execution of the details of construction. They should take care that accounts are kept and rendered with accuracy and punctuality, and that the prices paid for labor and materials are those prevailing in the open market.

23. Each Executive Officer in charge of a Range should be answerable for the conservancy and timely repair of all public works within his Range, and he should prepare, with the aid of the Talook Overseers, such Estimates as may be necessary, and forward them without delay to the Superintending Engineer. They should also take up projects for new works by direction of the Superintending Engineer, and it should be their duty to bring to notice any such work as in their opinion may be required.

24. Executive Officers, whether in charge of Ranges or otherwise, should be entirely at the disposal of the Superintending Engineers, who may, in case of necessity, make them available for the inspection and measurement of works in all parts of the Division.

25. Executive Officers should exercise strict control over the cash transactions of their Ranges or the works on which they may be engaged, and they should be responsible for any losses that may be sustained through negligence or want of proper precautions.

26. Overseers in charge of Talooks should be under the immediate orders of the Officer in charge of the Range in which the Taluk is situated, and their duties should be to keep a watchful eye on the state of all public works in their Talooks; to make immediate arrangements to prevent damage; to prepare and submit with regularity and despatch through the Range Officer estimates for such repairs as may be required; and to superintend the progress of works generally being carried on within the Talook. They should be available for duty on an emergency beyond the limits of the Talook under the order of the Superintending Engineer.

27. To summarize. The Secretary to Government in the Public Works Department should, in our opinion, be not only the organ, but the responsible adviser of the Government in all matters connected with the Department, turning to account his acquirements as an Engineer to the extent of satisfying himself as to the general bearings and main features of all projects or plans submitted to Government, but, as a general rule, leaving the examination of details to the Superintending Engineers. The Superintending Engineers should exercise an effective personal supervision over the working of the Department in all its branches in their respective Divisions. They should be held responsible for the correctness and sufficiency of all plans, estimates and designs, and in their Offices all Bills should be prepared. The Executive Officers should be held responsible for the proper execution of the work, and for the safe custody and disposal of all cash entrusted to them. The Talook Overseers working under the orders of the Range Officers will be responsible for the conservancy and repair of the minor irrigation works and District roads, and for such other work as may be entrusted to them by the Range Officer.

28. Since our first report was written, it has been represented to us, from more than one quarter, that the duties which we propose to assign to the Superintending Engineers are more than these Officers can effectively perform. This impression, we feel sure, is based on a mistaken notion as to the nature of the duties which will devolve on the Superintending Engineers consequent on the abolition of the grade of District Engineers. We do not contemplate these Officers inspecting every work in progress in their Divisions, or, at stated times, examining the cash and accounts of each of their subordinates. Much that has been hitherto prescribed for the District Engineers must necessarily be omitted by the Superintending Engineers, who will not only have larger ranges, but larger powers and responsibilities than have been entrusted to the District Engineers. Greater confidence must be reposed in the Executive Officers, and the system of minute checks, based upon the theory that every man is a rogue, must be abandoned; but the supervision which the Superintending Engineer will be able to exercise ought to be quite sufficient to prevent abuses, and to ensure efficiency in the execution of the

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works. Much too will be gained by the saving of time, from having an Officer on the spot vested with authority to dispose of the many matters which hitherto have had to be referred to the Central Office at Madras. If, however, it should prove, contrary to our expectations, that the work in any one or more of the Divisions is more than the Superintending Engineers can get through, material relief might be afforded to them, either by increasing the number of divisions, or by adding to the strength of the Executive grades to such an extent as would admit of an Officer of that grade being attached to each Superintending Engineer, as an Assistant, to aid him in his inspection work; or, if the additional funds requisite for such an augmentation of the Superintending Staff cannot be given, the difficulty, should it arise, might be met by reducing slightly the number of District ranges; as, for instance, in the District of North Arcot where the five ranges provided for in our scheme might be reduced to four, thus setting free an Executive Officer for the duty to which we refer. This, of course, would be a make-shift; and, for the reasons we have given, we see little cause to apprehend that the duties of the Superintending Engineers will prove more than eight well selected Officers can efficiently discharge.

29. We would observe, in conclusion, that the changes we have proposed will necessitate alterations in parts of the Code, which should be revised without loss of time. We would suggest that this duty should be entrusted to the Deputy Secretary, Lieutenant-Colonel Ludlow, who should, at the same time, be instructed to revise, and, as far as possible, to simplify, the system of accounts and returns now in force. We learn that the Supreme Government have recently ordered the introduction of the Bengal system of Public Works Accounts, which is much more complicated than the system in force in this Presidency. We would urge, in the strongest terms, the great expediency of introducing any system of accounts or returns which, by adding needlessly to the office work of the Superintending Engineers, would have the effect of withdrawing them from their more important duties of inspection and supervision.

We have the honor to be,

Honorable Sir,

Your most obedient humble servants,

(Signed) A. J. ARBUTHNOT.

" J. D. SIM.

" CHARLES A. ORR.

FORT SAINT GEORGE,
15th May 1863.

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APPENDIX.

Statement of Establishments proposed in the Public Works Department.

No.	Secretariat.	Salary.		
		Rs.	A.	P.
1	Secretary to Government...	2,250	0	0
1	Deputy Secretary...	1,200	0	0
1	Chief Assistant and Registrar...	500	0	0
1	Uncovenanted Assistant	300	0	0
1	Do. ...	200	0	0
1	Do. ...	100	0	0
1	Budget Clerk...	40	0	0
1	Accountant...	40	0	0
1	Do. ...	40	0	0
1	Superintendent (of the Record Department)	80	0	0
1	Deputy do. ...	40	0	0
1	Reference Picker...	35	0	0
1	Do. at 20 Rupees...	40	0	0
2	Do. ...	15	0	0
1	Attender...	150	0	0
1	Superintendent (Collection, Despatch, &c., Departments)	60	0	0
1	Collection Overseer and Cash-keeper...	40	0	0
2	Copyists at 20 Rupees...	30	0	0
1	Circulation Writer...	25	0	0
1	Despatcher...	40	0	0
1	Unanswered Reference Clerk...	80	0	0
2	Copyists at 40 Rupees...	25	0	0
1	Do. ...	20	0	0
1	Do. ...	25	0	0
1	Register-keeper...	120	0	0
1	Indexer...	80	0	0
1	Examiner and Superintendent of the Current Department	20	0	0
1	Reader...	60	0	0
1	Assistant Indexer...	20	0	0
1	Clerk for do. ...	10	0	0
1	Attender...	10	0	0
1	Duffadar...	10	0	0
	6 Peons at 7 Rupees, 7 Peons at 6 Rupees ...	116	0	0
	1 Moochee at 12 Rupees, 2 Moochees at 10 Rupees each } ...	3	8	0
	1 Sweeper*			
Total Secretariat per mensem...		5,774	8	0
Per annum...		69,294	0	0

* This charge was inadvertently omitted from the scheme of Establishments submitted with our letter of the 10th ultimo.

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SUPERINTENDING ESTABLISHMENT.

No.	For each Division.	Salary.
1	Superintending Engineer at 1,200* ...	RS. 1,200
1	Manager and Accountant...	200
1	Accountant...	75
1	Do. ...	60
1	Do. ...	40
1	Do. ...	30
1	Do. ...	25
1	Draughtsman	20
1	Estimate Maker	60
1	Do. ...	60
1	Clerk and Examiner ...	50
1	Clerk to keep Registers	70
1	Copyist..	40
1	Do. ...	30
1	Do. ...	25
1	Record-keeper...	20
1	Moochee...	30
2	Peons at 7 Rupees ...	8
6	Lascars at 6 Rupees...	14
1	Sweeper...	36
	House rent...	5
27	For 1 Division	50
216	For 8 Divisions	Monthly... 2,148
	Do. ...	17,184
	Per annum...	2,06,208

* If the Superintending Engineer be a Military Officer, his Staff salary will be Rupees 500. If a Civilian his salary will be Rupees 1,200.

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AUDIT ESTABLISHMENT.

No.	Designation of appointment.	Salary.
		RS. A. P.
1	Controller and Auditor* ...	1,200 0 0
1	Head Auditor and Chief Accountant...	300 0 0
1	Compiling Clerk and Accountant...	60 0 0
1	Do. do. ...	50 0 0
1	Do. do. ...	40 0 0
1	Do. do. ...	50 0 0
2	Copyists at Rupees 25	
2	1 Auditor Rupees 100 } First Circle	130 0 0
2	1 Sub do. " 30	130 0 0
2	Do. do. 2nd "	130 0 0
2	Do. do. 3rd "	130 0 0
2	Do. do. 4th "	130 0 0
2	Do. do. 5th "	130 0 0
2	Do. do. 6th "	130 0 0
2	Do. do. 7th "	130 0 0
2	Do. do. 8th "	100 0 0
1	Examiner and Auditor...	60 0 0
1	Do. ...	50 0 0
1	Do. ...	50 0 0
1	Record-keeper	7 0 0
1	Attender	40 0 0
1	Register-keeper	15 0 0
2	Moochee at 8 Rupees and Stamper 7 Rupees.	48 0 0
8	Peons at 6 Rupees each	3 8 0
1	Sweeper	
	Monthly.....	3,113 8 0
	Annually...	37,362 0 0

* The salary will be Rupees 800 (Staff) for a Military Officer, and Rupees 1,200 for a Civilian.

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Districts.	No. of Executive Officer's Establishment.	Cost.	No. of Upper Subordinates in charge of Ranges.	Cost.	No. of Upper Subordinates not in charge of Ranges.	Cost.	Total Office Establishment.
		Rs.		Rs.		Rs.	
Rates of pay.....		103	.....	42	.....	27	.....
Ganjam.....	1	103	2	84	.....	..	187
Vizagapatam.....	1	103	2	84	.....	..	187
Godavery.....	4	412	2	84	.....	..	496
Kistnah.....	4	412	3	126	.....	..	538
Nellore.....	2	206	2	84	.....	..	290
Cuddapah.....	2	206	2	84	.....	..	290
Bellary.....	2	206	4	168	.....	..	374
Kurnool.....	1	103	3	126	.....	..	229
Coimbatore.....	3	454	3	126	.....	..	580
Malabar.....	2	206	2	84	.....	..	290
South Canara.....	1	103	2	84	.....	..	187
Madura.....	2	206	1	42	.....	..	248
Tinnevely.....	2	206	3	126	.....	..	332
Tanjore.....	3	309	3	126	.....	..	435
Trichinopoly.....	2	206	2	84	.....	..	290
South Arcot.....	2	206	2	84	.....	..	290
Salem.....	2	206	1	42	.....	..	248
Bangalore.....	1	192	.....	..	.....	..	192
North Arcot.....	2	206	3	126	.....	..	332
Madras.....	2	206	2	84	.....	..	290
Presidency.....	3	621	.....	..	1	27	648
For Cantonments.....	..	..		..		..	
Special.....	4	412		..	6	162	574
Monthly	48	5,490	44	1,848	7	189	7,527
Annually.....	...	...		...		...	90,324

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Details of Executive Office Establishments.

<i>Executive Engineer's Office.</i>				RS.	A.	P.	RS.
1	Writer and Accountant...	...	...	35	0	0	103
1	Draughtsman and Estimator...	...	...	40	0	0	
4	Lascars...	...	...	28	0	0	
<i>Establishment for Upper Subordinates in charge of Ranges.</i>							
1	Writer and Accountant...	...	...	30	0	0	42
2	Lascars...	...	...	12	0	0	
<i>Establishment for Upper Subordinates not in charge of Ranges and for Talook Overseers.</i>							
1	Writer and Accountant...	...	...	15	0	0	27
2	Lascars...	...	...	12	0	0	
<i>Establishment for each Executive Officer at the Presidency.</i>							
1	Writer...	...	...	30	0	0	207
1	Draughtsman...	...	...	50	0	0	
1	Estimate-maker and Accountant...	...	...	50	0	0	
1	Do. do.	...	...	40	0	0	
1	Do. do.	...	...	25	0	0	
2	Peons...	...	...	12	0	0	
<i>For Bangalore.</i>							
1	Writer and Accountant...	...	...	50	0	0	192
1	Do. do.	...	...	40	0	0	
1	Draughtsman and Estimator...	...	...	50	0	0	
1	Store-keeper...	...	...	40	0	0	
2	Peons...	...	...	12	0	0	
<i>For Neilgherries.</i>							
1	Writer and Accountant...	...	...	60	0	0	248
1	Do. do.	...	...	40	0	0	
1	Draughtsman and Estimator...	...	...	80	0	0	
1	Store-keeper...	...	...	40	0	0	
4	Lascars...	...	...	28	0	0	
<i>Establishment for Stores.</i>							
1	Mechanical Engineer...	...	...	200	0	0	740 5 4
1	Instrument Maker...	...	...	278	5	4	
2	Apprentices...	...	...	50	0	0	
1	Superintendent...	...	...	70	0	0	
1	Deputy do. and Writer...	...	...	40	0	0	
1	Do. do.	...	...	30	0	0	
12	Lascars...	...	...	72	0	0	
<i>Lithographic Department.</i>							
Annually.....							8,884 0 0
Annually.....							1,018
Annually.....							12,216
Annually.....							270
Annually.....							3,240

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Estimate of Travelling Allowances, &c.

8	Superintending Engineers at 150 Rupees per month.....	14,400
22	Executive do. (exclusive of 2 for the Presidency and Bangalore) at 100 Rupees per month.....	26,400
22	Assistant Engineer (do. 2 for do.) at 80 Rs. per month.....	21,120
13	Sub do. (do. 1 for do.) at 60 Rs. per month.....	9,360
1	Do. do. for Presidency.....	...
37	Supervisors at 40 Rupees per month.....	17,760
154	Talook Overseers (exclusive of 2 for Bangalore, 4 for Presidency and 7 for Cantonments) at 20 Rupees.....	36,960
2	Overseers for Bangalore.....	...
4	Do. for Presidency.....	...
7	Do. for Cantonments.....	...
		1,26,000
<i>Batta for Establishments.</i>		
Superintending Engineers.	1 Accountant at 75 Rs. per month. 1 Head Clerk at 70 do. 1 Draughtsman at 60 do.	$205 \times \frac{3}{10} = 61\frac{1}{2} \times 8 \times 12 = 5,904$
Executive Engineers.....	1 Writer and Accountant at 35 Rs. per month. 1 Draughtsman and Estimate-maker at 40 Rs. do.	$75 \times \frac{3}{10} = 22\frac{1}{2} \times 43 \times 12 = 11,610$
Upper Subordinate in charge of Ranges.....	1 Writer and Accountant at 30 Rs. per month.....	$30 \times \frac{3}{10} = 9 \times 44 \times 12 = 4,752$
Upper Subordinate not in charge of Ranges.....	1 Writer and Accountant at 15 Rs. per month.....	$15 \times \frac{3}{10} = 4\frac{1}{2} \times 7 \times 12 = 378$
Neilgherry Range.....	1 Writer and Accountant at 60 Rs. per month..... 1 Do at 40 Rupees per month... 1 Draughtsman and Estimate-maker at 80 Rupees per month.....	$180 \times \frac{3}{10} = 54 \times 1 \times 12 = 648$
		23,292
		1,49,292
<i>Estimate of Contingent charges.</i>		
Secretary to Government at 100 Rupees a month.....		1,200
8 Superintending Engineers at 30 Rupees a month.....		2,880
Controller at 50 Rupees a month.....		600
92 Executive Officers and Upper Subordinates at 10 Rs. a month.....		11,040
Lithographic Establishment at 50 Rupees.....		600
		16,320

ABSTRACT.

Salary of Secretary to Government...	Rs. 27,000
Do. of Deputy Secretary	14,400
Secretariat Establishment...	27,894
Deduct amount now charged to salaries and expenses of Public Department, Budget head F II...	25,752
	2,142
Salaries of eight Superintending Engineers...	1,15,200
Establishments for do.	91,008
Controller of Public Works Accounts	14,400
Establishment for do.	22,962
43 Executive Officers...	3,10,800
51 Upper Subordinates	1,21,800
Office Establishment for Executive Officers and Upper Subordinates	90,324
Talook Overseers and Establishments	1,74,348
Travelling allowance...	1,49,292
Military allowance	1,23,000
Special allowance for three Officers at the Presidency	3,240
Contingencies...	16,320
Lithographic Establishment	12,216
Store Establishment	8,884

Total Rs. 12,97,336

(Signed) A. J. ARBUTHNOT.

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No. 436.

MINUTE BY THE HONORABLE THE PRESIDENT.

1. I approve, generally, of the scheme herein detailed. I think it provides for the due execution of all the works which *ought* to be thrown upon the Public Works Department. It will be the duty of the Government to organize, if possible, such a local or municipal system, as may throw the responsibility of executing the trifling repairs to tanks and village roads upon those for whose benefit they were constructed and by whom they are used.

2. I quite agree with the Committee that the Government ought to have at its disposal Officers, not attached to any particular District, who might be employed in working out the details of any important suggestions with reference to irrigation or other works, whether emanating from the Superintending Engineer or from any other source. It is perfectly evident that the District Officers will have their hands much too full of routine work to be able to pay the attention which would be required to scheme out the plan and, more especially, the details of any large work; and when such a work has to be carried into two or more districts or even ranges it is a matter of necessity that it should be the product of one mind. There are many projects of this kind which have been necessarily postponed, because the Government had not at its disposal Officers with Assistants who could be spared from the ordinary routine of Departmental duty, and I believe that results most valuable to this country will be produced when the Government is in a position to turn the undivided attention of a qualified Officer to one particular work.

3. The point, however, upon which I lay the greatest stress is the enforcement of the individual responsibility of Officers.

4. Hitherto such responsibility has been altogether nominal. Under the scheme as proposed each Officer will have his definite line of responsibility; and I wish it to be distinctly understood by the Officers that the Government is fully prepared to enforce this responsibility; that it will not admit of the flimsy excuses for estimates exceeded, or for failure, of works which have hitherto passed current.

5. It would, therefore, be but fair that each Officer in the Department, from the Secretary downwards, should be warned that any wilful neglect of duty, any exhibition of carelessness, will be visited with its proper punishment, and that removal from office will be a simple and effective remedy for such conduct, which the Government will not hesitate to apply.

6. I have had, and I have still doubts as to the working of that part of the scheme which places the Secretary in rather an anomalous relation to the Government; he is to be the responsible adviser of the Government with reference to all projects and plans submitted; but he is to leave the examination of details to the Superintending Engineers. It is difficult, if not impossible, to split up responsibility in this way. The Secretary should be able to speak authoritatively on the plans, so authoritatively as to send them back for revision to the Superintending Engineer, or his inspection is a mere matter of opinion, in which case that of the Superintending Engineer who has looked into all details is probably the best of the two. Should he speak so authoritatively he lifts the responsibility off the shoulders of the Superintending Engineer. I think it by no means improbable that it may eventually be necessary to revert to the former system which made the *Chief Engineer* the responsible adviser of the Government, the duties of the Secretariat being performed by an unprofessional Officer.

7. The principal want in the Department is that of an Officer similar to what are called in England Clerks of Works—men thoroughly acquainted with every species of professional detail, and capable of examining into all the items of an estimate—to such a man could be entrusted with full and entire confidence the analysis of plans and estimates submitted; and if the Secretary is to be looked upon as the adviser of the Government it is well worth considera-

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tion whether an Officer of this stamp should not be attached to the Secretariat. Such a man, however, cannot be found in India, we must go to England for him; the present class of *Estimators* are altogether useless except as computers.

8. The proposed scheme is in every way preferable to that under which the Department has been hitherto conducted, and I am disposed to give it a fair trial; any improvements may be easily grafted upon it hereafter.

(Signed) W. T. DENISON.

June 1863.

No. 437. MINUTE BY THE HONORABLE T. PYCROFT.

1. I concur generally in the proposals of the Committee as detailed in the above Report, and would give their scheme a fair trial.

Report, paragraphs 2, 3.

2. The Committee have arrived at the conclusion that "it is not possible, save at a considerable increase of expense to make any-

"thing like a general re-transfer of the execution of repairs and minor works to the Revenue authorities." They give at large in paragraphs 2, 3 of their Report the reasons which have led them to this conclusion, which has been forced upon them in despite of their original prepossession to the contrary.

Recorded in Proceedings Public Works Department, 17th March 1863.

3. In my Minute of January last, I intimated that I saw very great difficulty in reverting in any degree to the former system, whereby

the execution of works of irrigation and communication was carried out by the Local Revenue Officers, but said that the experiment must be made, although it should at the first be confined to two or three Districts.

4. In thus writing, I, however, assumed that the change would be attended with a saving of expense, or at the least would involve no increase. The Committee who have gone carefully into the question, show that such will not be the case. Indeed *prima facie* it could not but seem very doubtful whether a system under which two distinct agencies would have to be maintained for the performance of similar duties in the same localities could possibly be economical.

5. Under these circumstances, the present state of things whereby the execution of all public works great and small, original and repairs, is entrusted to one Department specially organized for the purpose must be adhered to, unless the Secretary of State, on these proceedings being laid before him, should deem the advantage of the opposite course to be such as to outweigh the enhanced expenditure which would be caused by it.

6. For myself, I cannot but doubt whether even if that course was not the most costly it would be desirable to adopt it. The arguments in favor of it have not been conclusive to my mind. The merits of the old system and the demerits of the new have both been exaggerated. Sufficient allowance has scarcely been made for the difficulties incident to a state of transition from the one system to the other, to defects rather of administration, than of the system itself,

NOTE.—The Public Works expenditure for 1850-51, the year in which the Public Works Commission was appointed, was 24½ lacs, and this was very much above the average of preceding years. See Report para. 208, and Appendix V, page 370. Of late years the expenditure has ranged from Rupees 63,74,000 1856-57, to Rupees 68,60,000 1860-61.

to the great and sudden increase of work to be done falling upon a new Department hastily, and of necessity imperfectly organized, and to the very great difficulties attendant on the carrying out public works at all in a country like this. On the other hand, time has shed its softening influence on the shortcomings of the old Maramut system. My own belief founded on my acquaintance with it during the earlier years of my service is much that of the Public Works Commissioners, viz., that nothing could

See their Report paragraph 55, et sequentes.

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have been much worse. The construction and repair of works for the development of the country was confided, as regards their execution, to a class of men without any professional education acting under corrupt Native Revenue servants, the whole of them being practically under but little check. In no Department under Government, save perhaps in the Salt, was there greater roguery. Some Collectors took no trouble whatever about their Maramut, and those who did could give it but a limited portion of their time. The supposed advantage of having works executed by one Department and inspected by another is more specious than real. The Civil Engineers were obliged to trust largely to their Subordinates, who soon found their interest to lie in collusion with the Native Revenue officers rather than in exposing their fraudulent practices.

7. Moreover, times have changed. The ranges of Tahsildars and their duties (as well as the duties of their Covenanted superiors) have been greatly enlarged, their establishments have been reduced to a minimum, they no longer possess Police authority, the value of labor has risen, the people know their rights, forced labor so extensively resorted to in the execution of works in the olden time can no longer be exacted. Were we to fall back in part upon the former system it would have to be re-introduced under very different circumstances from those under which it originally obtained.

8. I quite agree with the Committee, paragraph 4, "that the two Departments, the Revenue and Public Works, should work together more closely than they do at present, and that every advantage should be taken of the opportunities which the Revenue Officers unquestionably possess of discovering and giving timely notice of defects or delays in the execution of necessary works. . . . It should not only be permitted, but should be the duty of every Revenue Officer down to the Tahsildar, to draw immediate attention to any defective work which may come under his observation; the members of the Public Works Department on their part giving ready attention to all such representations." This should be made fully known to all Revenue and Public Works Officers.

9. I should be glad if any such mode as that suggested by the Committee in paragraph 6 could be adopted for the repair of village tanks and roads, but I doubt it. My view is very much that expressed by the Honorable Mr. Maltby* in his Minute of the 23rd September 1861, to which I would refer.

* In Procs. D. P. W., 31st Dec. 1861.

Report, paragraphs 7, 8.

10. The scheme of District Establishments adverted to in these paragraphs, seems judicious, and especially the allotment to each Talook of a Talook Overseer, who will be held directly responsible for the repair and conservancy of a minor works, particularly irrigation works of his Talook, but will be available when required under the orders of the Range Officer for other works in progress within the Talook. I entirely approve, too, the design that there shall be a small Establishment of Officers of various grades who will not be in charge of Ranges or Talooks, but will be employed on special works or projects. I presume that these Officers will be engaged not only in devising wholly new projects, but in developing and utilizing to their full extent projects already only partially carried out. To this last I attach great importance. It is truly melancholy to reflect how far the results of the greatest public works in this Presidency fall short of what they should be. From returns just received it appears that the extent of land irrigated

	Godavery.	Kistna.	Pennair.	Total.
	Acres.	Acres.	Acres.	Acres.
† Area now irrigated	6,50,000	2,00,000	30,000	8,80,000
Unirrigated but capable of irrigation	4,50,000	3,00,000	7,000	7,57,000

from the Godavery, Kistna and Pennair Anicuts is not much more than half that capable of irrigation. Of 16,37,000 Acres which might be watered

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from these great works, 7,57,000 at present derive no benefit from them. The more difficult and expensive part of these works has been executed. It remains only to carry out the subsidiary arrangements for the full distribution of the water provided by such an expenditure of money and engineering skill. The estimated cost of completing these works is Rupees 51½ lacs which, supposing the additional tax on the land brought by them under irrigation to be only Rupees 3 per Acre, would be re-paid in less than three years.

The extension of Cochrane's, or rather the Northern Canal, from Doogarazapatam to Kistnapatam is another project well deserving special consideration. At present the Canal north of Ennore leads, so to say, to nothing. Were it prolonged to the backwater, which runs from Kistnapatam inland, it would convey to the Madras market the produce of the land in Nellore to the south of the Pennair river of which a part is now under the irrigation of the Nellore Anicut, and still more will be brought under that to be built by the Canal and Irrigation Company at Somaishwarum. The estimate I believe is about two lacs, and the interest on that amount with all charges could be met by tolls. The Collector of the District whom I have lately seen has strongly pressed this upon me.

11. The proposal to allow each Officer whose duties involve locomotion a fixed monthly sum, in addition to his pay, as travelling allowance seems to me good. The arrangement is appropriate in the case of Departments whose members should be constantly on the move. It prevents disingenuous practices which discredit the Department and tend to demoralize its inferior servants, and it will lead to a considerable saving of time and trouble in the preparation of bills.

12. Means should, as proposed in paragraph 12, be taken for transferring the Lithographic work of the Department to private establishments. There are but few things which Government should do for itself if it can get them done by others, and lithographing is not one of them.

13. If the salaries of the Secretary to Government, Public Works Department, of his Deputy and of his Establishment be charged, as they should be, to the head of salaries and expenses of the Public Department, the aggregate cost of the revised Public Works Establishment will be, in round numbers, twelve lacs and a half Rupees per annum. The Committee have very attentively examined this part of the subject referred to them, and their conclusions may safely be accepted. Considering the extent of this Presidency and the peculiar character of its irrigation and revenue system, I do not think that the establishment for the execution and maintenance of public works could be fixed at a lower scale either as respects numbers, grades or salaries.

14. I concur with the Committee in their views regarding extra temporary Establishments contained in paragraph 14 of their Report, and think that the present practice, which has been carefully guarded against abuse, should be maintained.

15. In paragraphs 15 to 27 the Committee define the duties and responsibilities which should devolve on the several grades of servants in the Public Works Department, from the Secretary to Government to the Talook Overseer. This part of the Report seems to have been very carefully considered, and I see nothing to add to it. It is very difficult to lay down such definitions with such exactness as to provide for every thing that should be required, neither less nor more. Should any alterations or additions hereafter seem called for they may be made. In principle and in their general views the Committee appear to me quite correct. It should of course, as observed by His Excellency the President, be impressed on all concerned that all that has been defined will be rigorously exacted, nothing less will be admitted, and that responsibility to the full extent stated will henceforward be real and not nominal.

16. The revision of the Public Works Code and simplification of the present system of accounts and returns will be in good hands if made over to Colonel Ludlow. I do not recollect any order from the Supreme Government directing the introduction of the Bengal system of Public Works Accounts in this

Paragraph 29.

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Presidency. If there be such an order, I should much regret it, and think that we should show cause against it. I observe that in his Despatch of the 8th April 1862, Public Works Department, No. 9, the Secretary of State writes as follows, paragraph 14:—

“The multiplicity and complexity of the accounts here referred to, are matters of general complaint. They prevent Executive Officers from attending properly to the most important of their duties, while, as has been shown by Mr. Maltby, they present no obstacle to gross fraud and peculation on the part of Subordinates in the Department. A system of account and audit equally strict, but of a more simple and intelligible character than the one at present in use, is evidently one of the essentials to a really efficacious and complete reform of the Department, and I am anxious that your immediate attention should be given to the best means of introducing such a system.”

These remarks it is evident apply with greater force to the Bengal system of accounts than to ours, as the former, it is understood, is much more complicated, and enters much more into detail.

17. The thanks of Government are due to the Committee for the manner in which they have dealt with an extensive and difficult subject, the inquiry being in addition to their own proper duties, of themselves sufficiently onerous.

22nd May 1863.

(Signed) T. PYCROFT.

No. 438. MEMORANDUM BY HIS EXCELLENCY THE COMMANDER-IN-CHIEF.

1. The proposal of the Commissioners appears to me to be a great improvement upon the old system, inasmuch as it lessens the number of channels of communication, and remedies those faults of the old system more particularly noted in the 3rd paragraph.

2. The proposal in paragraph 5, that a Collector who may be fit for the work should have the power of carrying out repairs, whilst in other Districts it should be left entirely to the Engineers, is, I think, objectionable. Every Engineer ought to be fit to execute any work in his District, and placing it in other hands would be dividing the responsibility.

3. I regret, however, the Commissioners have not deemed it necessary to recommend a division of the Civil and Military Departments, and in fact have not gone into the question at all. As long as they remain amalgamated the efficiency of the Military Department must suffer.

4. The work of the Public Works Department is divided into two main branches: Civil and Military. The first contains most important work affecting the Revenue Department, viz., the tanks and irrigation of the country, which is a branch of engineering requiring special and undivided attention. The most important work of the Military branch is that connected with the building and repair of Barracks, also requiring special attention, and quite a distinct branch of engineering from that required in the Revenue Department.

5. At present the same man conducts both duties, to the disadvantage of both, but more particularly of the latter, because it does not appear to be of such immediate pecuniary importance as the former and is proportionately neglected. For instance, Soldiers' Married Quarters were ordered to be built at a station. The District Engineer was so engaged in his irrigation duties, out in the District, that great delay ensued. At last he came in for a day or two, hastily passed the plans, and the work was at last completed. When finished it was found that the ventilation had been neglected; the doors and windows being panelled and not venetianed; admitted no daylight when closed; the floors being chunamed broke up almost immediately; the wash-houses were open on one side, and facing the quarters, were exposed to the view of the whole Barracks, so that no person could use them.

6. These mistakes then had to be remedied by subsequent plans and estimates when they ought never to have occurred in the original plans.

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7. Again, the enormous increase of Public Works of late years has been almost entirely in the Civil branch, and consequently there has been a large admission of Civilians into the Department. In most countries where large Public Works are carried out by the State, there is a Minister of Public Works who superintends that Department, whilst all Military Engineering is under Military Department, and they are quite independent of each other. Yet in no country probably are the Public Works on so large a scale as in India, which tends to place the Military works on a still lower relative footing and makes them suffer accordingly.

Madras, 25th May 1863.

(Signed) J. H. GRANT.

No. 439. MEMORANDUM BY HIS EXCELLENCY THE COMMANDER-IN-CHIEF.

1. With reference to the remarks of the Honorable the President on my last Minute, I do not conceive that there will be any great additional expense by separating the Military work from the Civil, in the Public Works Department.

2. The amount of work will remain the same and it will therefore merely be a re-organization of the Department. A Commanding Engineer would be required, and supposing he were put on the same footing as a Superintending Engineer, this will cause an extra expense, but it might be met by reducing the present number of Public Works (Divisions) to seven. The number of Engineer Officers required for Military purposes would be regulated by the amount of work required to be done, and they would be distributed accordingly amongst the Divisions of the Army.

3. By relieving the Public Works Department of the charge of Military works a corresponding diminution would be made in its staff.

4. Moreover, nothing is so expensive as inefficiency; and even if the Public Works Department were more efficient than it is, it cannot be expected that sufficient attention can be paid to the Military works, when the same man has to superintend more expensive Civil works at a distance.

5. Thus at Bangalore a new Barrack for the Dragoons was begun in November 1857; it is yet uncompleted; two of the ranges are not even roofed; it will cost £40,000 to finish them. At Trichinopoly, new Barracks have been sanctioned by the Court of Directors since 1844; they are not yet begun. At Wellington, two Barracks were left unfinished and had a chopper roof put on; consequently having been set on fire, it could not be extinguished, and a loss of 35 or 40,000 Rupees occurred to Government thereby.

6. The number of small matters omitted in Barrack building in this country is very marked, and not creditable to any organized service.

7. With regard to Sir William Denison's remark on the “competition for labor and materials between the two branches,” I would only observe that if there is a great demand for labor in any place, wages must rise whether the work is carried out by one Department or by several, and it is certainly more economical to finish a work outright than to let it hang on, and in all probability be damaged by the great rains before it is completed.

8. As the Department is now undergoing a certain re-organization, the time is more appropriate for bringing this subject to notice.

Madras, 2nd June 1863.

(Signed) J. H. GRANT, Lieutenant-General.

No. 440. MINUTE BY THE HONORABLE E. MALTBY.

1. I have read with attention the Report of the Committee on the re-organization of the Public Works Department, dated 14th May 1863, and although unable to concur in all its suggestions do not the less appreciate the attention which has been given to an intricate and difficult subject. The duty assigned to the Committee was the more onerous in consequence of the Members having the heavy business of their own Offices still to perform and little time being allowed them owing to the peremptory orders of the Government of India to reduce the cost of the Establishment from the commencement of the present official year.

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2. The Report is to be considered under two aspects:—

(1.) As it suggests reforms in the Department on its present basis of undertaking the execution of all repairs great and small, as well as all original works.

(2.) As it deals with the question of restoring the conservancy and repair of the minor irrigation works and roads to the Revenue Officers under the instructions given in the Despatch of the Secretary of State, dated 8th April 1862.

3. In respect to the first point of view, I should concur generally in the suggestions of the Committee, if it were decided that the executive business of the Department was to continue as at present. The arrangements proposed by the Committee would I am satisfied place the Department on a more satisfactory footing both as to economy and efficiency. While, however, the total cost of the proposed Establishment does not seem to me greater than is necessary for the work to be done, if entrusted to a separate professional Department, its distribution as respects the Tálucs requires, in my opinion, re-consideration. The chief duty devolving on the District Officers will consist of the repair of the minor irrigation works, and while this duty is heavy in some localities, in others it cannot be said to exist at all, as in the Districts of Malabar and Canara, or in a very slight degree as in the dry Tálucs of Tinnevely, Trichinopoly, Salem, South Arcot, &c., and the black soil Tálucs of Cuddapah, Bellary and other Districts. Yet the scheme of the Committee provides the same Establishment for every Táluc throughout the Presidency, and the result would be that in some places the Táluc servants would be overwhelmed with work and in others be left comparatively idle and unremunerative. It is probably intended that the Superintending Engineers should remedy this within their Divisions by employing the lower subordinate servants wherever most wanted, but Malabar and Canara are in the same Division, and the anomaly of their having the same Táluc Establishments as Districts abounding in small irrigation works seems more especially to require attention.

4. I observe that under the proposed scheme, Range Officers are to correspond with and be directly subordinate to the Superintending Engineer. The District Engineers are thus done away with, and the Superintending Engineer will exercise on one hand the former functions of the District Engineer and on the other be vested with most of the powers of the late Chief Engineer. As this arrangement will both lessen and expedite business and is facilitated by the Superintending Engineers having been increased to eight, it seems to me to merit a practical trial; but I would suggest that the Departmental rules should authorise the Superintending Engineer to hand over charges against the subordinate servants to the Executive or Assistant Engineer for inquiry or report, so that in most instances such cases would come before himself in review. This course would tend to diminish the number of embarrassing appeals which would otherwise reach the Office of the Secretary to Government in the Public Works Department from the original decisions passed by the Superintending Engineer against subordinates accused of misconduct. It is always advisable, as a general rule that whenever possible the officer who prefers such charges and the officer who tries them should be distinct.

5. I concur in the Committee's proposals to give all Officers from the Superintending Engineers to Táluc Overseers a permanent travelling allowance, and to entertain the special Establishment detailed in paragraph 8 for projecting new works and for employment in executive duties when large and important new works, which are beyond the strength of the local Officers, have to be carried out. An important want will thus be supplied.

6. The second point has now to be considered, and I feel unable to join in the opinion at which the Committee have arrived against the transfer of the minor irrigation works to the Revenue Officers. Their reasons are given in paragraphs 2 and 3 of their Report, and the conclusion at which they have arrived is based almost entirely upon the argument that such a course would add to the costliness of Establishments. If I understand the Committee rightly, and I am anxious to do so, I gather that in their opinion Rupees 80,000 per annum would be at least required in addition to that Establishment which they have recommended at an annual cost of Rupees 12,93,360.

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7. In the absence of more specific detail, I can only point out that in proportion as the professional Department is relieved of work so ought its Establishment to be reduced. Relieved of the laborious occupation of superintending and repairing thousands of petty and scattered irrigation works,* the professional Department would have absolutely nothing to do throughout a large area of the Presidency, and it was never intended, by me at least, that

* See my Minute of 26th February 1863, paragraphs 3 to 6.

under these circumstances it should continue to have an Establishment for every Táluc of every District. Such a course would, in my opinion, be as inconsistent with economy as with the requirements of the service, and my idea was that after the transfer of the minor works to the Collector, each District Engineer should have an Establishment regulated by the ascertained wants of his particular District. He should have the means of maintaining the roads and works which still remained in his charge and of constructing any new bridge, building, &c., which might be required, while new works of extraordinary size were to be provided for by extra means, such as the general special Establishment which the Committee have now recommended in paragraph 8.

8. It appears, however, that the Committee's opinion of the necessity of double Establishments throughout each Táluc of every District in the event of the transfer taking place has been influenced by the assumption they make in paragraph 3. They there observe, "It is not proposed to make over to the Revenue authorities any masonry works, whether new works or repairs, the cost of which may exceed Rupees 1,000. Suppose therefore a Calingulah has to be built at a cost of Rupees 1,200, the work must be entrusted to the Engineer Department. In the same tank a small upper calingulah has to be built at a cost of Rupees 350 and other stone and earth-work costing Rupees 2,000. The two latter would come under the head of Minor Works, and if the latter are to be placed under the Collector would have to be executed under the orders of the Táluc Overseer. There would thus be two men independently superintending the execution of work on the same tank, * * * * *. In short it is impossible to provide two separate Establishments for objects nearly identical and working side by side without entailing a considerable increase of charge."

If the premises of this argument were admitted, I should concur in the conclusion at which the Committee have arrived, but I am not aware of any determination to carry out the transfer in the manner here described. A suggestion to such an effect may have been made, but it is one to which I should not have assented had it been formally brought forward.

9. The necessity of keeping the two branches of the Department distinct has always struck me, and I suggested that as a preliminary step towards the transfer Government should obtain from each District a list of the more important tanks and other works which required skill and a large expenditure for their maintenance, in order that they might be continued under the care of the Engineer, while the smaller works were made over *entirely* to the Collector. This arrangement would have prevented collision and seemed to me the natural and fitting mode of dividing the business of repairs. When the work which would devolve on each functionary had been thus ascertained, I proposed that these Establishments should be fixed, after comparing the lists of servants asked for by the local Officers with former Establishments and those which were found sufficient in other places. Our Districts,* and even parts of the same District vary so very materially in the number of these irrigation works, that I believe the only safe course to pursue is to arrange Establishments according to local wants, and until the process thus indicated has been

* Contrast, for instance, Canara with any district on the Coromandel Coast; and the Goolcurn Táluc with Anantapore, or any other Southern Táluc of the Bellary District.

tested, I am not prepared to admit that transferring the minor works to Collectors will increase the expense of superintendence. One of the objections which I made to the Establishments proposed by the Revenue Board (see my Minute of 26th February 1863 paragraphs 17 and 18) was that local peculiarities and requirements had not been sufficiently attended to, and the same cause has led to my remarks regarding the newly proposed Táluc Establishments in paragraph 3 of this Minute.

10. To illustrate the mode in which I have advocated the restriction of the minor works to the Revenue Officers I make the following extract from my Minute of 23rd September 1861:—

Paragraph 13. "But to carry out the principle which I urge, the smaller irrigation works, or those which are spoken of by the President as local or municipal, should be given over *entirely* to the Collector, who should have as before an Establishment to aid him in effecting their prompt repair. The District Engineer would then be relieved from so much detail that a smaller number of servants would suffice to enable him to carry on his own peculiar duties, and by this arrangement neither Department need clash with the other. Wherever public money is expended an account must be rendered, and the Collectors would of course have to explain their expenditure, but the forms for this purpose might be made few and concise."

Paragraph 14. "The papers which are now before Government do not enable the opinions of the local authorities to be seen on the arrangement which I suggest. They were consulted regarding the plans proposed by Colonels Lawford and Pears, viz., to assign petty repairs under a certain amount (Rupees 50) to the Revenue Officers, and it was justly objected that such a plan would entail increased expense and a risk of confusion, since both Departments would require Establishments to look after the numerous scattered works of petty size, and the same tank might be receiving repair from the Collectors and Engineer's servants at the same time. I quite agree that such a half measure would not succeed and never contemplated it. If my scheme is to be tried, and this seems desired by the Secretary of State, the Collectors should be required to report what establishments they would require to carry on the *entire* control of the tanks and channels, excepting any of great size which should be detailed in a list, and the District Engineers should state what servants they require for the comparatively few but important duties which remained to them."

It will thus be seen that the two great principles advocated by me have not yet been tested, viz., the *entire* restoration of the smaller works to the Collector, and the distribution of establishments according to the local peculiarities and wants of each District instead of on any uniform and average scale.

11. The various arguments for replacing under the Collector's care the minor irrigation works which are so closely connected with the Revenue interests of which he is the guardian, have been detailed in my former Minutes and need not now be repeated. I wish, however, to make a brief allusion to some observations which I find in the present papers.

12. The Committee, for instance, speak disparagingly of the old Marammut system at the close of paragraph 3 of their Report, and Mr. Pycroft does the same in paragraph 6 of his Minute. Now undoubtedly that system had great defects and imperfections, but it is to be considered how far this is attributable to the wretched and deficient agency at the Collector's command. His establishment consisted of a Marammut Superintendent on a salary of about Rs. 50, of an uneducated Maistry on Rs. 10 or 12 in each second or third Taluq, and a few Native clerks on petty salaries. When this Establishment is contrasted with the expensive one allowed under the new system, the soundness of the principle of placing the Village Irrigation Works under the Collector is shown in the fact that with such imperfect means the work was done in a way which makes the landholders, the most interested parties, prefer the old system to the new. Had the Public Works Commissioners improved the Collector's establishment and given him an Assistant in the Marammut Department, instead of creating within his district a separate and independent agency to perform the duties hitherto entrusted to him, the public interests would, I believe, have been better advanced and at a far cheaper cost.

13. I will only further allude to two points in the present papers which tend to strengthen my preference for the old system. One is the Committee's allusion (paragraph 3) to "the want of a sufficiently stringent law to compel the villagers to furnish labor for the execution of what are essentially village works." It is significant and instructive that under the old system when those who were regarded as the natural custodians of the village works worked with the people for their repair no such compulsory legislation was necessary. Nor can it be said that this result was due to more than the legitimate influence of the Revenue Officers, since the people have petitioned for the restoration of the old

system, and we have recently seen the Trichinopoly landholders tax themselves to provide funds for the maintenance of some river channels, but only on the stipulation (to which Government assented) that the channels were to be restored to the custody of the Collector. In a former Minute I have quoted the views of an experienced Engineer Officer, Colonel Pears, on this important point. As Chief Engineer of Mysore he found it necessary to advocate the restoration of petty repairs to the Revenue Officers, and his most cogent argument was that they commanded the co-operation of the villagers, which an entirely separate agency could not do. (See my Minute of 23rd September 1861, paragraph 12.)

14. The remaining point relates to that want of a more free intercommunication and co-operation between the officials of the two Departments to which the Committee allude in paragraph 4 of their Report, and which is endorsed by Mr. Pycroft in paragraph 8 of his Minute. This is attributed mainly to a supposed prohibition against Revenue Officers interfering in matters of professional detail, and it is suggested as a remedy that Revenue Officers should be permitted to draw the Engineer's attention to any defective work or any use of bad materials which comes under their observation. Such a suggestion appearing necessary indicates that the Department cannot be on a sound and healthy basis, but I would ascribe the alleged want of co-operation to a deeper cause. Collectors have certainly been forbid to interfere with the details of Plans and Estimates, or with the internal arrangements of the Engineer's Establishment, but a Collector's right and his duty to bring to notice any cases of fraud or negligence by which the public interests were injured, has always, it appears to me, been acknowledged. Chapter XI of the Revised Code, which was framed on the old Standing Rules is clear on the point (see more especially Sections 5 and 10), and the Collector's acknowledged position as head of the District and the authority to whom the Government itself looks for information regarding this and other Departments, imply his right to bring to the Engineer's notice any neglect or misconduct of his subordinates in the execution of works. I ascribe therefore the rareness of intercommunication to the anomalous position in which the Collector and Engineer are placed regarding the village irrigation works. These works are intimately connected with the Collector's duties and inter-

Circular and Standing Orders of Department Public Works, page 265.

ests, and he is still nominally their "protective Superintendent" yet in reality their management has been taken from him and placed under a separate and independent Department.

He is thus powerless except to suggest, and this is a part which he cannot be often inclined to take, especially when such interference is apt to be resented and lead to controversy. Even the Government orders have lately had a tendency to discourage Revenue Officers from interfering with the Department, and as matters now stand we must expect to see an increased inclination on the part of Collectors to leave all responsibility regarding irrigation works with that separate and independent Department to which they have been transferred.

15. As a majority of the members of Government have decided against restoring the minor irrigation works to the Collectors, the question is, for the present at least, at an end. It has however been my duty to record my views on the subject, and strong as my own opinion is on the advisability of the measure, I feel bound to add that its introduction would be hazardous without the strong concurrence and support of Government, on account of the conflicting interests, opinions and prejudices with which it is surrounded. It is not sufficient for a measure to be good in itself, the means and the time for carrying it out must be favorable.

5th June 1863.

(Signed) E. MALTBY.

No. 441.

ORDER THEREON, 18th June 1863, No. 1,599.

1. The foregoing letter contains the final Report of the Committee appointed, under date the 17th March last, to submit a scheme for reducing the cost of the Public Works Establishment in this Presidency and to consider and report on certain other points connected with the working of the Department. The points embraced in their present letter are:—

(a) The expediency, or otherwise, of re-transferring the execution of all minor works and repairs to the Revenue authorities.

(b) The cost of the Establishment required.

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(c) The duties and responsibilities which should be imposed on the several grades of Officers employed in the Department.

2. On the first question the conclusion at which the Committee have arrived is, that it is not possible, save at a large increase of expense, to make any thing like a general re-transfer of repairs and minor works to the Revenue authorities. The reasons which have led them to form this conclusion are stated at length in the second and third paragraphs of their letter. They show that it is impossible to provide for two separate Establishments for objects nearly identical and working side by side without entailing a considerable increase of charge; and setting aside the question of cost, they think it doubtful whether the proposed re-transfer would be followed by the advantages which are expected. Admitting that the Public Works Department has not hitherto answered expectation, it is the opinion of the Committee that much that is defective in its work is attributable to defects in the organization of the Department, which the changes recently sanctioned and others which they propose will go far to remove. "Among the chief of these defects are the attempt at over-centralization; a needless multiplicity of accounts and returns; inadequacy of local supervision by experienced Officers; want of defined responsibility; and, what is rather a fault in the practice than in the theory of the system, a want of constant and unreserved communication between the local Officers of the two Departments; and, lastly, the want of a sufficiently stringent law to compel the villagers to furnish labor for the execution of what are essentially village works." All these are faults which the Committee think are susceptible of being remedied without removing the superintendence of the minor works and repairs from the Department at present entrusted with it.

3. His Excellency the Governor in Council concurs in this opinion. [He is satisfied that the proposed re-transfer of the minor works to the Revenue authorities, even if it did not involve any increase of cost, would not be desirable. It appears to him that, by the advocates of this measure, the merits of the old system and the demerits of the new system have both been somewhat exaggerated. Sufficient allowance has scarcely been made for the difficulties incident to a state of transition from the one system to the other; to defects of administration rather than of the system itself; to the great and sudden increase of work to be done, falling upon a new Department, hastily and, of necessity, imperfectly organized; and to the very great difficulties attendant on the carrying out Public Works at all in a country like this. On the other hand, time has shed its softening influence on the shortcomings of the old Maramut system, the defects of which have been repeatedly denounced by experienced Officers in both Departments (Revenue and Public Works), and which are clearly exposed in the Report of the Public Works Commissioners appointed in 1851. Moreover, the circumstances of the country and the position of the Revenue Department have greatly changed since that Department was relieved of the execution of Public Works. The ranges of Tahsildars and their duties, as well as the duties of their Commanded superiors, have been greatly enlarged; their Establishments have been reduced to a minimum; they no longer possess Police authority; the value of labor has risen; forced labor, formerly so extensively resorted to in the execution of Public Works, can no longer be exacted; and, consequently, if the Government were to fall back in part upon the former system, it would have to be re-introduced under very different circumstances from those which originally obtained. It may be added that some of the ablest and most experienced Collectors are opposed to the re-transfer. That part of the present system which provides for the execution of all Public Works being entrusted to one Department specially organized for the purpose, will accordingly be retained, subject to such orders as the Secretary of State may pass, on these Proceedings being laid before him.

• Paragraph 4.

4. The Governor in Council quite agrees with the Committee that the two Departments (the Revenue and Public Works) should work together more closely than they do at present; and that every advantage should be taken of the opportunities which the Revenue Officers unquestionably possess of discovering and giving timely notice of defects or delays in the execution of necessary works. "It should," as the Committee observe, "not only be permitted, but should be the duty of every Revenue Officer, down to the Tahsildar, to

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"draw immediate attention to any defective work which may come under his observation; the members of the Public Works Department, on their part, giving ready attention to all such representations." This should be fully made known to all Revenue and Public Works Officers.

5. The Governor in Council thinks it very desirable that some such plan as that suggested by the Committee in paragraph 6 of their Report should be adopted for the repair of village tanks and roads; but before passing orders on this point, he would wish to have before him the views of the Board of Revenue and of the Officers named in the margin, as to the feasibility of working such an Act as that proposed by the Committee.

Mr. P. Grant, Collector of Coimbatore.
Mr. A. Wedderburn, Acting Collector of Bellary.
Mr. G. L. Morris, Acting Collector of Canara.
Mr. G. A. Ballard, Collector of Malabar.
Mr. V. H. Levinge, Collector of Madura.
Lieut.-Col. S. O. E. Ludlow, Dy. Secy. to Govt. D. P. W.
Capt. O. W. S. Chambers, Supg. Engr. 1st Division.
Major J. C. Anderson, Supg. Engr. 2nd Division.
Lieut.-Col. G. W. Walker, Supg. Engr. 7th Division.
Capt. E. A. Food, Supg. Engr. 6th Division.

6. The scheme of District Establishments adverted to in paragraphs 7 and 8 of the Report appears to the Governor in Council to be judicious, and will be carried into effect from the 1st proximo. It assigns on an average about two Officers of the grade of Executive or Assistant Engineer to each District, who will be placed in charge of the more important ranges; the other ranges being entrusted to Sub-Engineers or Supervisors, with a Talook Overseer for each Talook, who will be held specially responsible for the minor works and, especially, for the minor irrigation works, but will be available, when required, under the orders of the Range Officer, for other works in progress within the Talook. On an emergency, and with the sanction of the Superintending Engineer, these Officers may be employed on works beyond the limits of their Talooks. In some cases it will probably be necessary to employ more than one Overseer in a single Talook, while in others where there are few or no irrigation works, as in Canara and Malabar, two Talooks may be placed under a single Overseer. This is a matter which should engage the immediate attention of the Superintending Engineers. The Superintending Engineer of the 7th Division will probably be able to spare a few of the Talook Overseers allotted to his Division, for employment in other Districts. The new scheme involves the abolition of the office of District Engineer, all the Officers in charge of ranges being placed under the immediate orders of the Superintending Engineer of the Division. The Talook Overseers will be under the orders of the Officer or Upper Subordinate in charge of the range to which the Talook belongs.

7. The Governor in Council agrees with the Committee that the Government ought to have at its disposal a small Establishment of Officers of various grades not attached to any particular District, but who may be employed in working out the details of any important projects with reference to irrigation or other works whether emanating from the Superintending Engineers or from any other source. The District Officers have their hands too full of routine work to be able to pay the attention which is requisite for working out the plan, and especially the details of many of the large works which are necessary to develop the resources of the country; and when such a work has to be carried into two or more divisions, it is the more necessary that a single Officer should be specially employed on it. There are many very useful projects which have been necessarily postponed, because the Government have not had at their disposal Officers who could be spared from the ordinary routine of Departmental duty. Much, moreover, has to be done in developing and utilizing to their full extent projects already only partially carried out. It is manifest from the returns before Government that the results of some of the greatest public works in this Presidency fall far short of what they should be. The extent of land irrigated from the Godavery, Kistna, and Pennair Anicuts is not much more than half that capable of irrigation. Of 16,37,000 acres which might be watered from these great works, 7,57,000 at present derive no benefit from them. The more difficult and expensive part of these works has been executed. It remains only to carry out the subsidiary arrangements for the full distribution of the water provided by a vast expenditure of money and engineering skill.

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8. Among other projects well deserving of special consideration are, the extension of the Northern Canal from Doogarāzapatam to Kistnapatam, the construction of additional Anicuts in the upper parts of the Godavery and Kistna, which would serve to utilize vast quantities of water that now flows annually over the present Anicuts into the sea, and would bring under cultivation large tracts now uncultivated; the storage of water for the arid District of Coimbatore by forming reservoirs of the mountain streams which flow down from the Neilgherries, and various other projects equally important which demand the undivided attention of special Officers.

9. The proposal to allow each Officer whose duties involve locomotion a fixed monthly sum in addition to his pay, as travelling allowance, is approved and sanctioned. This arrangement appears to His Excellency in Council to be appropriate in the case of a Department whose members should be constantly on the move. It prevents disingenuous practices which discredit the Department and tend to demoralize the inferior servants, and it will lead to a considerable saving of time and trouble in the preparation of bills. It will be the duty of the Secretary to Government and of the Superintending Engineers to see that their Subordinates do not neglect their duties by remaining stationary when they ought to be on the move.

10. The suggestion in paragraph 12, that means be taken for transferring the Lithographic work of the Department to private establishments, is approved. A notification inviting tenders from persons willing to undertake the work will be issued immediately.

11. In paragraphs 15 to 27 the Committee define the duties and responsibilities which should devolve on the several grades of servants in the Public Works Department, from the Secretary to Government to the Talook Overseer. The Governor in Council concurs generally in the Committee's recommendations on this point, which appear to have been very carefully considered. The enforcement of the individual responsibility of Officers is a matter to which His Excellency in Council attaches the greatest importance. Hitherto such responsibility has been in many cases little more than nominal. Under the rules proposed by the Committee, each Officer will have his definite line of responsibility; and it must be distinctly understood that this responsibility will be rigorously enforced, and that henceforth the Government will not admit the excuses for Estimates exceeded, or for failure of works, which have hitherto passed current. In future, whenever it shall appear that there has been neglect of duty or wilful carelessness, removal from office will be the remedy which the Government will not hesitate to apply.

12. The changes now sanctioned will necessitate an immediate revision of the Public Works Code; and this duty, as the Committee suggest, will be entrusted to the Deputy Secretary, Lieutenant-Colonel Ludlow, who will at the same time revise and simplify the present system of Accounts and Returns.

13. If the salaries of the Secretary to Government Public Works Department and of his Deputy and Office Establishment be charged, as they should be, like the other Departments of the Secretariat, to the head of "Salaries and expenses of Public Departments," the aggregate cost of the revised Public Works Establishment will be in round numbers twelve lacs and a half of Rupees per annum; and considering the extent of this Presidency and the peculiar character of its irrigation and revenue system, the Governor in Council is satisfied that the Establishment for the execution and maintenance of Public Works could not be fixed at a lower rate, either as respects numbers, grades, or salaries. The Governor in Council concurs with the Committee in their views regarding extra temporary Establishments, as set forth in paragraph 14 of their Report. The Government of India will be requested to permit the continuance of the present arrangement in regard to these Establishments, which in this Presidency has been carefully guarded against abuse.

14. A list of the Officers and Subordinates who will be retained in the Department is subjoined.

Mr. Wait, Paumben...	Rs. 300
" Thompson, Presidency...	310
" Drummond, Kistna...	300
Boiler-maker Nolan, Dowlaiswaram.	250

15. It is observed that the salaries of the Mechanical Engineers specified in the margin have been omitted from the Committee's scheme. The Superintending Engineers of the Divisions in which the Mechanical Engineers in question are at present employed, will report without

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delay whether their services are still required for the purposes for which they were engaged; and if not, whether for such of them as were engaged under covenant, provision can be made in the grade of Sub-Engineer or Supervisor, personal allowance being granted to them if the salary attached to the grades in which they may be employed be lower than those which they now draw.

16. The Apprentices at present employed in the various Divisions will be discharged when their Indentures expire, except such as may be considered qualified for employment as Talook Overseers, and for whom vacancies in that grade may be available.

17. The Governor in Council does not perceive any necessity for retaining Medical Establishments for the Public Works Department at Dowlaiswaram and Bezwarah. That employed on the Tambercherry Ghât must be retained and charged to the Estimate.

(Signed) W. I. BIRDWOOD, Colonel, R. E.,
Secretary to Government.

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1863 Department
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TO

HIS EXCELLENCY THE GOVERNOR
IN COUNCIL.

HONORABLE SIR,

In our letter of the 10th ultimo we submitted, for the consideration of your Excellency in Council, our opinion as to the changes requisite in the organization of the Directing and Superintending Agency in the Department of Public Works. Our recommendations, which have received the sanction of Government, involved the abolition of the offices of Chief Engineer, Deputy Chief Engineer, and District Engineer, and the apportionment of the duties now performed by these Officers, between the Secretary to Government in the Department of Public Works, aided by a Deputy Secretary and eight Superintending Engineers residing in their several divisions. We now proceed to report on the other points referred for our consideration in the Proceedings of Government under date the 17th March last, No. 659, which may be classed under the following heads:—

(a)—The expediency or otherwise of re-transferring the execution of all minor works and repairs to the Revenue authorities.

(b)—The cost of the Establishment required.

(c)—The duties and responsibilities which should be imposed on the several grades of Officers employed in the Department.

2. On the first question, the conclusion at which we have arrived is, that it is not possible, save at a considerable increase of expense, to make any thing like a general re-transfer of the execution of repairs and minor works to the Revenue authorities. In stating this conclusion, we deem it right to observe that we entered upon our inquiry with a very different impression. We were all (including the Engineer Member of our Committee,) disposed to think, that the only satisfactory plan for ensuring the execution of minor works and repairs, especially those connected with Irrigation, was to re-transfer it to the Collectors and their Subordinates. Of the Officers whom we consulted, Messrs. Cunliffe and Ellis, the late and present Collectors of the Madras District, and Colonel Ludlow, now Deputy Secretary to Government in the Department of Public Works were of the same opinion; (the latter, mainly on the ground of the relief which the arrangement would give to the Superintending Engineers). We had before us the strongly expressed opinions of two experienced Members of the Government, who had had ample opportunities of observing the administration of this branch of the Public Works Department both before and after the organization of the present Department in 1855; and lastly, the decision of the Secretary of State on a full review of the arguments adduced on either side of the question, that the former system under which the execution of those works was entrusted to the Revenue authorities, should be reverted to. In these circumstances, notwithstanding the changes which recent measures have effected in the position of the Revenue Officials, and especially the Tahsildars, and in their ability to give time and attention to the works in their respective ranges, we should have considered it our duty to recommend that the experiment should be tried, at all events, in a few of the Districts, if it had been in our power to devise any means of bringing it into operation without largely exceeding the limit of expenditure to which we have been restricted, or crippling the efficiency of what we may designate as the Engineering branch of the Department. This, we find, is impossible. The establishments of the Collectors and Tahsildars have been so much reduced of late years; while, in the case of the latter, partly owing to the increased size of their Talooks, and partly to the introduction of the Indian Penal Code and Code of Criminal Procedure, which have considerably added to their labors as Magistrates, the increase of work has been so great, that, if they are to be held responsible for keeping in order the irrigation works and cross roads in their Districts, they will need an addition to their present establishments, the aggregate of which, at the lowest computation, would involve a charge of Rupees £0,000 in salaries of Accountants and Gumastahs, which it would be impossible to meet by any corresponding reduction in the establish-

ments of the Executive Officers of the Engineer Department. Moreover, and this is the more serious objection, the necessary staff of Overseers and Maistries could not be furnished to the Collectors without either unduly crippling the Engineer Establishment, or again entailing a considerable increase of charge in the salaries of additional Overseers to aid the Executive Engineers in those works, which, under the proposed change, would still be reserved to them; and, here, it would often happen that, with the two classes of work under distinct Departments, two Officers would be employed on duties which might easily be done by one. Take, as an example, the District of North Arcot. In the scheme of establishments annexed to this letter, the establishment assigned to this District consists of two Executive Officers, three upper Subordinates (1 Sub Engineer and 2 Supervisors), and 9 Talook Overseers at the rate of one to each Talook. Looking to the size of the Talooks, the number of Talook Overseers is not more than will be needed for the effective supervision of the minor works; but most of these men will have other works within their Talooks, on which, if they are at the disposal of the Executive Officer in charge of the Range, they may be occasionally employed without prejudice to their special duty of looking after the minor works; while, if they were not available for such works, the proposed Staff of two Executive Officers, and three upper Subordinates, would be obviously inadequate for a District containing 300 miles of metalled roads, and works connected with two important Anicuts actually in progress. The Chandragiri Talook constitutes a range. In it there are four metalled roads 111 miles in length. Most of the irrigation works in this Talook lie along the valley of the Soornamooky river, no where far from the road from Pootulpett to Tripetty; so that the Talook Overseer will have to travel along 40 or 50 miles of road, for the supervision of which he will not be available, if the transfer of the minor works to the Collectors should be carried out. Again there is a section of the western trunk road, 48 miles in length from the junction of the Palar and Poiney rivers to Vaniambaddy through Vellore. This road follows the valley of the Palar. Irrigation works are dotted along, no where distant from the road, to the south of which runs a chain of hills. So, in this case, if the proposed transfer of the minor works be carried out, one man will have to inspect the road, while another will be going over the same ground to inspect the Tanks.

3. It is not proposed to make over to the Revenue authorities any masonry works, whether new works or repairs, the cost of which may exceed Rupees 1,000. Suppose, therefore, a Calingula has to be built at a cost of Rupees 1,200, the work must be entrusted to the Engineer Department. In the same tank a small upper Calingula has to be built at a cost of Rupees 350, and other stone and earth work costing Rupees 2,000. The two latter would come under the head of Minor works, and, if the latter are to be placed under the Collector, would have to be executed under the orders of the Talook Overseer. There would thus be two men independently superintending the execution of work on the same tank. Take again the case of a stone dam over a surplus channel. The partial restoration of such a work would be classed as new work, and might cost, say, Rupees 1,500. It would therefore be executed by the Engineer Department; and supposing the channel, half a mile long, leading as a branch from this dam, to be in need of repair, the repair, which might cost Rupees 800, would be treated as a minor work, and executed under the orders of the Collector; so that one man would be superintending the work at the dam, and another at the channel; thus entailing a needless waste of superintendence. There would also be a waste of Office work, inasmuch as two separate Estimates would have to be prepared for what, under the present system, would be included in a single Estimate. Moreover, with two separate agencies competing for labor in the same locality, the price of labor must necessarily rise, and the cost of the works must be proportionately enhanced. This is forcibly urged by the Collector of Trichinopoly in one of the reports which have been placed before us. In short, it is impossible to provide two separate Establishments for objects nearly identical and working side by side, without entailing a considerable increase of charge. And, on the whole, we think it is very questionable whether, irrespectively of the cost of Establishments, the proposed re-transfer of the repairs and earth works to the Revenue Department would be followed by the advantages which are expected. Admitting that the Public Works Department has not hitherto answered expectations, it appears to us that much that is defective in its working is attributable to defects in the

organization of the Department, which the changes recently sanctioned, and others which we are about to propose, will go far to remove. Among the chief of these defects are the attempt at over-centralization, a needless multiplicity of accounts and returns; inadequacy of local supervision by experienced officers; want of defined responsibility; and, what is rather a fault in the practice than in the theory of the system, a want of constant and unpreserved communication between the local Officers of the two Departments; and lastly, the want of a sufficiently stringent law to compel the villagers to furnish labor for the execution of what are essentially village works. All these are defects which we think are susceptible of being remedied without removing the superintendence of the minor works and repairs from the Department at present entrusted with them. And here it must be borne in mind that, under the old system, complaints of the inefficiency of the Executive were not unfrequent. It is shown in the Reports of the Public Works Commissioners, and so far as we are aware, their statements on this point have not been contradicted, that numbers of tanks were continually out of repair; that there was much delay in the execution of work; that the accounts were often garbled; that the labor employed was more or less compulsory, the rates of wages being too low, and the payment by no means prompt; that the laborers were constantly defrauded of a portion of their hire; and that the Maistries who had the superintendence of the work, were, as a class, very inefficient.

4. But, though we question the expediency of making any general re-transfer of the duty of superintending the minor works and repairs to the Revenue authorities, we think it of great importance that the two Departments should work together more closely than they do at present, and that every advantage should be taken of the opportunities which the Revenue Officers unquestionably possess, of discovering and giving timely notice of defects or delays in the execution of necessary works. The course of action we would advocate, is pretty fully laid down in Chapter XI of the new Code; but from the inquiries we have made, it seems doubtful whether it is sufficiently observed in practice, and whether there is that free intercommunication and co-operation between the Officials of the two Departments which the Code prescribes. Moreover, we think the Revenue authorities should have greater powers of interference to the extent, at all events, of bringing to notice defects in the execution of work which may have come under their observation than the Code gives, or is understood to give them. The following is not an uncommon complaint against the present system. A Collector, or Tahsildar, in going through his District, comes upon a work, say the repair of a tank bund, in course of execution. The Overseer or other Officer under whose orders the work is being carried out, is absent on some other duty. The work people are using bad materials—sand, for instance, instead of clay. The Maistry or other foreman in immediate charge, when remonstrated with, says there is nothing better to be got, or that the material which is being used, is that ordered by the Overseer. The Revenue Officer is powerless, for he is expressly prohibited from interfering in matters of professional or departmental detail; and the work goes on, and has to be done over again, probably in the following year. It has been suggested to us that, in such a case, the Revenue Officer, or, at all events, the Collector, should be empowered to stop the work, pending a reference to the Officer in charge of the Range, or, if necessary, to the Superintending Engineer. This, we apprehend, would tend to create ill-feeling and antagonism between the two Departments; but it should not only be permitted, but should be the duty of every Revenue Officer, down to the Tahsildar, to draw immediate attention to any defective work which may come under his observation; and we doubt not that the mere fact of the Revenue Official being invested with this power, will often serve as a preventive against bad work. The members of the Public Works Department on their part should give ready attention to all such representations.

5. Our scheme provides for the appointment of a comparatively well paid Overseer to each Talook, who, being entrusted with a comparatively limited range, will be able to see that the minor works, and particularly the irrigation works in the Talook are kept in proper repair, but who will also be available for looking after other works within his Talook, under the orders of the Range Officer. It will occasionally happen that there are no works in a Talook or Division, the execution of which the Talook Overseers are not competent to superintend: none in fact, requiring any considerable degree of professional skill. In such a case, if the Collector were desirous to take charge

of the works in that particular Talook or Division, we think it should be open to the Superintending Engineer to make them over to him, placing the Talook Overseer, and perhaps one of the Clerks on his Establishment, at the Collector's disposal. This probably might be done in parts of Malabar, where the present Collector is anxious and, we believe, competent to undertake the duty. It is a matter in which much must depend on the personal inclinations and aptitude of the Officers concerned. Some Collectors have a taste for Maramut; others have none, and it should be left to the Superintending Engineer to satisfy himself, before making the transfer, that there is a reasonable prospect of the work being properly attended to. Where this is the case, it is desirable that the transfer should be made, so that more of the time of the scientific Officers of the Department may be available for work requiring professional skill.

6. But, for the reasons we have given against any general transfer of the works to the Revenue authorities, we do not anticipate that such an arrangement as that we have just suggested, will be found practicable to any great extent; and we should be more disposed to look to another mode of supplementing the Agency of the Public Works Department, somewhat similar to that suggested by His Excellency the Governor, in his Minute of the 30th July 1861, paragraphs 25 to 33, viz., to impose upon the Ryots the duty of keeping in repair what may be called village tanks in contra-distinction to those which supply water to a considerable number of villages, and perhaps also the village roads. Act I of 1858 appears to have been enacted partly with this view. Provision is made in Section 6 for enforcing the execution, by the joint labor of a village community, of any work for the purpose of irrigation or of drainage, which, according to local custom, is annually executed by such joint labor; and in the Chapter of the Public Works Code before referred to, Section 25, a description is given of the various classes of work to which the above provisions of the law are considered applicable. In some Districts, where there is no doubt as to the existence of the custom to which this Act gives a legal sanction, much may be done by the proper enforcement of its provisions; but in others the custom has so long fallen into desuetude, that the Act, as it now stands, could not be applied. This, we understand, is the case in the Madras District. Moreover, the duties which this Act imposes, are rather those of conservancy and the execution of petty repairs, and would hardly include more important repairs, such as that of a breach in a tank bund or in a bank of the channel which, in the case of village tanks and channels, ought to be left to local agency; what we would suggest is, that an Act should be introduced into the local Legislature, either amending or supplementing Section 6, Act I of 1858, giving power to the Government to declare from time to time what Irrigation and other works shall be kept in repair by the village community, and to enforce their execution by imposing a fine on such of the Ryots as may fail to contribute their proper share of labor, double the estimated value of such labor. The Act should not be enforced in any village until the irrigation works have been put into good repair; and in each case, on the transfer of the work, a portion of the Land Revenue should be remitted in consideration of the State being saved the cost of putting it in repair. This could be readily settled by taking the average expenditure on such works for a series of years. It should be the duty both of the Tahsildar and of the Talook Overseer, to bring to notice any negligence on the part of the villagers and to see that the work is properly done. In case of failure on their part, the work would be done by the Talook Overseer under the authority of the Collector, and its cost recovered from the villagers by withholding the usual remission and by a fine.

7. We now proceed to advert to the scheme of District Establishments which will be found appended to this letter. The proposals made in our former letter, provide for the abolition of the District Engineers and the appointment, in their stead, of eight Superintending Engineers. We propose, for the present, at all events, to retain the present number of Ranges, placing the Officer in charge of each Range under the immediate orders of the Superintending Engineer. Our scheme assigns, on an average, about two Officers of the grade of Executive or Asst. Engineer to each District, on salaries ranging from Rupees 250 to Rupees 900 per mensem, in addition to travelling allowance; the number in each case varying with the requirements of the District. These Officers

will be placed in charge of the more important ranges, the others being entrusted to Sub-Engineers or Supervisors on salaries ranging from Rupees 150 to Rupees 400; and for each Talook, there will be a Talook Overseer on a salary of Rupees 60 per mensem, with travelling allowance at Rupees 20, who will be held specially responsible for the repair and conservancy of the minor works, and particularly the minor irrigation works; but will be available, when required, for other works in progress within the Talook under the orders of the Range Officer. It is of great importance that the duty of superintending the repairs and conservancy of the minor works, should form the special charge of a particular set of Officers with ranges sufficiently limited to admit of their doing the work effectively. This should be the primary duty of the Talook Overseers; but it need not prevent their being available for the superintendence of other works in the immediate neighbourhood of the irrigation works. No Talook Overseer should be employed on work beyond the limits of his Talook except on an emergency, and then only with the special sanction of the Superintending Engineer.

8. The following is the numerical strength of the several grades:—

Executive Officers.....	24
Assistant Engineers.....	24
Sub Engineers.....	14
Supervisors.....	37
Taluk Overseers.....	167

£66

This Establishment includes two Officers of the grade of Executive Engineer, and two of the grade of Assistant Engineer, one Sub-Engineer, five Supervisors and thirteen Overseers, who will not be in charge of Ranges or Talooks, but will be employed on special works or projects, as, for instance, the building the Lawrence Asylum, the project for supplying Madras with water, the erection of Central Jails, &c. It is obviously of great importance that a certain number of well qualified Engineers should be constantly employed on the duty of investigating projects for the construction of great works calculated to develop the resources of the country. So far back as 1849, the Board of Revenue in the Department of Public Works, recommended the immediate appointment of four Officers for the examination of irrigation projects. The Public Works Commissioners, in their First Report, expressed their full concurrence as to the necessity of appointing Officers for this special object, and gave a list of large and important projects, some of which have been since carried out, on which such Officers might be usefully employed. We have no doubt that there would be little difficulty in preparing a list of equally important works, on which a small body of projecting Engineers might be usefully employed for some years. For the present, we have provided for two such Officers on salaries equal to those assigned to 1st Class Executive Engineers. These projecting Engineers should be placed either under the Superintending Engineer of the Division in which their projects lie, or under the immediate orders of Government, at the discretion of the Governor in Council. Where the project extends beyond the limits of one Division, it will be necessary that the projecting Engineer should report direct to Government in the Department of Public Works; and even where it is otherwise, it may be desirable, for special reasons, to adopt this course. It is a point which should be determined by the circumstances of each case.

Executive or Assistant Engineer.....	Rs. 103	9. The Office Establishments for the several grades of Officers are entered* in the margin. They have been fixed in communication with those Officers whom we have had an opportunity of consulting, and we have reason to believe that they are sufficient. The projecting Engineers will require larger Establishments, the strength of which must depend, in each case, upon the character of the work to be done; and which should be charged as part of the cost of the project.
Upper Subordinates in charge of ranges.....	42	
Upper Subordinates not in charge of ranges and Taluk Overseers.....	27	
Executive Officers at the Presidency each.....	207	
At Bangalore.....	192	
On Neilgherry Hills.....	248	

* For details see the annexed Statement.

10. We recommend that each Officer whose duties involve locomotion, shall be allowed a fixed monthly sum, in addition to his pay, as travelling allowance. This, we think, is preferable

to the present system, under which there is a temptation to move constantly, whether the public service requires it or not. In a Department where travelling is only occasional, a daily and mileage allowance to be drawn only when absent from head quarters, is probably the best arrangement; but in a Department like the Public Works, where travelling is, or ought to be, the normal condition of nearly every Officer employed in it, it is preferable, we think, that a fixed monthly sum should be allotted for the permanent maintenance of a travelling establishment and to cover its attendant expenses. We annex in the margin

Superintending Engineer.....	Rs. 150
Executive Engineer.....	100
Assistant Engineer.....	80
Sub-Engineer.....	60
Supervisor.....	40
Acting Overseer.....	20

the Secretary to Government downwards, there ought to be little or no scope for abuse; and much time and labor will be saved in the preparation and examination of bills.

11. On further consideration, we think it right to recommend that the Civil salaries of all the Superintending Engineers, when Military Officers, should be fixed at Rupees 800, the higher of the two rates now sanctioned. The duties that will devolve on these Officers differ little, if at all, in extent and responsibility, and we are satisfied that this scale of salary is not more than sufficient in any case.

12. We have put down the Lithographic establishment at the sum to which it has been recently reduced by Colonel Birdwood. We think it however very questionable whether the time has not come for abolishing this establishment and transferring the work to private establishments, and with this view we would suggest that a notification should be issued to the effect that the abolition of the Government Lithographic establishment is under consideration, and inviting tenders from persons willing to undertake the work at fixed rates. We have omitted a sum of Rupees 25,000 which has been entered in a statement of the present establishment furnished to us by the Secretary on account of the freight, &c., of English stores. Such a charge it appears to us should not be debited to the permanent establishment, but should be ~~added~~ to the cost of the stores, and debited eventually to the works on which they are used.

27,874	Salary of Secretary to Government.....	Rs. 27,000
2,142	Do. of Deputy Secretary.....	14,400
91,008	Secretariat Establishment.....	27,774
22,962	Deduct amount now charged to salaries and expenses of Public Department, Budget head F II.	95,752
3,10,800	Salaries of eight Superintending Engineers.....	1,15,200
1,49,292	Establishments for do. Controller of Public Works Accounts.....	4,400
3,240	Establishment for do. 48 Executive Officers.....	14,400
16,320	51 Upper Subordinates.....	2,70,000
8,884	Office Establishment for executive Officers and Upper Subordinates.....	1,21,500
12,97,336	Taluk Overseers and Establishments.....	90,324
	Travelling allowance.....	1,74,348
	Military allowance.....	1,48,512
	Special allowance for three Officers at the Presidency.....	1,23,000
	Contingencies.....	1,500
	Lithographic Establishment.....	11,200
	Store Establishment.....	12,216
	Total Rs..	12,97,336

13. The aggregate cost of the establishments provided for in the annexed Statements, is Rupees 12,97,336, or Rupees 12,97,336 in excess of the limit prescribed in the Order of Government of the 17th March last. The several heads of charge are entered in the margin. We do not think it possible that, with a due regard to efficiency, the charge can be reduced. An apparent reduction may be effected by transferring the salaries of the Secretary and his Deputy and that portion of his Office Establishment which is entered in the Statement, to the same Budget head in which the greater part of his Office establishment, as well as the salaries and Office establishments of the other Secretaries to Government, are included; and, for the sake of uniformity, we would recommend that this transfer should be made in next year's Budget. Excluding the charge for the Secretariat, the annual cost of the Public

Works establishment will be Rupees 12,10,080, or, in round numbers, twelve lacs and a half. 14. We have not made any provision in our scheme for the extra temporary establishments hitherto charged to works, to which reference is made in the Chief Engineer's letter of the 18th ultimo, recorded in the Proceedings of Government under date the 4th instant. It is impossible to provide for these charges without considerably exceeding the limits prescribed to us; and it appears to us to be altogether erroneous in principle that establishments of the character of those adverted to,

should be charged for otherwise than as a part of the expenses of the works on which, from time to time, they may be engaged. It must be borne in mind that in this country, wherever the contract system has not been introduced, the Professional Department is its own supplier; and the Officers belonging to it have to make their own arrangements for providing themselves with every thing required for the works. For example; if bricks are wanted, an Executive Officer must enter into an agreement with one set of people to mould them; with others, to cut and cart fuel; and with others to stack and burn the bricks. All this requires a numerous petty agency, which is manifestly chargeable to the price of materials, and ought therefore to be provided for in the estimates. In the same way, Gumastahs and Conicopolies are required to keep accounts of the receipts and expenditure of materials and labor; and Maistries to direct the workmen. When work is done on contract, all petty superintendence is paid by the Contractor; and its cost is, as a matter of course, included in that of the work, or, in other words, in the estimate. If the cost of all local and petty superintendence is to be excluded from the estimates, it will be impossible to induce contractors to execute work on estimates so prepared, as, under such circumstances, the contractor would have to meet charges not provided for in the rates on which the estimates were framed. We trust that the Governor in Council will object to any change in the practice which has hitherto obtained in regard to these charges.

15. Reverting to the scheme of permanent establishments, we would briefly define the duties and responsibilities of the several grades of Officers as follows:—The Secretary to Government should continue to perform all the duties heretofore performed by the Secretary when the office was held by a Civilian. He should further recommend to Government all appointments, promotions and transfers to offices above the grade of Sub Engineer, previously obtaining from the Superintending Engineers lists of the most deserving Officers in their respective Divisions. It will be his duty to prepare the Annual Budget Estimates and the Administration Reports; to attend to the allotment of funds; to exercise a careful supervision over the proceedings of the Superintending Engineers, and to bring to the notice of Government any neglect of duty on their part. He should see that they move about their Divisions as much as is necessary, and should satisfy himself, as far as it is possible to do so from written statements, that their inspecting duties are thoroughly performed.

16. In regard to projects, plans, estimates, &c., submitted to Government for sanction, it should be the duty of the Secretary to make himself acquainted with the general bearings and leading features of the project or plan, trusting to the Superintending Engineers for the correctness of the details; and he should then advise Government as to the expediency or otherwise of sanctioning the project. Before submitting any matter for orders, the Secretary should see that the case is ready for decision, and, if additional information be needed, either from the Superintending Engineer, or from the Revenue authorities, he should procure it. No papers involving any question of a professional character, or of departmental practice, should be submitted by the Secretary without a statement of his own opinion; and, as a general rule, all papers circulated by the Secretary in the Public Works Department should be accompanied either by a Memorandum stating the Secretary's opinion, or by a draft of the order which in his opinion ought to be passed. The Secretary, in fact, should consider himself the responsible adviser, as well as the organ and chief Ministerial Officer of the Government in all matters relating to the Public Works Department. He should maintain frequent personal communication with the Board of Revenue and Secretary to Government in the Revenue Department on the many questions affecting the Revenue which come before him, and should do his utmost to insure cordial co-operation between the Officers of the Public Works Department and the Revenue Officials in the Provinces.

17. The Deputy Secretary should aid the Secretary in the performance of the duties above described, taking his share of the correspondence and in the examination of plans and projects. In the allotment of funds and preparation of the Budget, the Deputy will be able to render the Secretary material aid.

18. It should be the duty of Superintending Engineers to direct and control all the transactions of the Department within their respective Divisions; and entrusted, as they will

12,53,794

12,97,336

17,336

The Superintending Engineer should be held responsible for the character of the plans, the correctness of the Estimates, and for the general arrangements for the execution of the work, but it must rest with the executive officer to see to, and be responsible for the proper execution of the work.

be, with nearly all the powers hitherto vested in the Chief and Deputy Chief Engineers, as well as with those of the District Engineers, as described in detail in Chapter IV of the Public Works Code, they should be held responsible for the satisfactory arrangement of executive operations of every description throughout their Divisions. They should make proper dispositions for the due executive supervision of each Range, and for the effective management of such works as may be of a character to require special supervision. Vested with the powers of sanction conferred by the Code, they should take care that the rules under which those powers are exercised, are strictly adhered to; but, in case of emergency, they should have authority to take immediate action, pending a reference to Government. They should furnish the Secretary to Government from time to time, with such information as may enable him to allot the funds sanctioned in the Budget to each District and Range or special work, and will be responsible for the ~~same~~ being laid out to the best advantage. It ~~will be~~ ^{shall be} the duty of Superintending Engineers to scrutinize all plans, estimates and designs; and they ~~shall be~~ ^{will be} responsible for the appropriateness of the

It must be clearly understood that this responsibility will be made real & effective and that the Govt will not hesitate to remove any officer who may not exhibit that energy and activity which the importance of the work demands.

* For example, that the depth and width of foundations are adapted to the nature of the soil, and the character of the proposed superstructure.

latter, for the correctness of their structural proportions and, generally, for the suitability* of the constructive details, as well as for the correctness of the estimate. Superintending Engineers should have power to authorize such deviations from sanctioned designs, while a work is in progress, as may appear to be desirable, provided those deviations do not involve an increase of cost beyond 5 per cent on the estimate.

19. Superintending Engineers ~~should not be expected to~~ ^{will} visit each Range or executive charge at ~~regular~~ ^{intervals}, and ~~should~~ ^{will} make tours as frequently as possible through their Divisions, when it ~~shall~~ ^{will} be their duty personally to look closely into the working of the Department; to inspect all works of importance that may be in progress; to examine the records and accounts of each Executive Officer or Subordinate Agent, and to enforce regularity in their preparation; and to examine the Books and Cash Chest of those who may be entrusted with the custody and disbursement of funds; and, in short, to exercise that full and direct supervision and control that are essential to the successful management of the operations of the Department in every branch of its administration.

20. Superintending Engineers should communicate freely and as much as possible personally with their subordinates of all grades, and should ~~when necessary~~ ^{will} at all times afford their advice and assistance to them. They should in conjunction with their subordinates, or with the local Civil functionaries, suggest improvements, and project and design such works as may appear to be advantageous to the inhabitants or to the public revenue.

21. All Bills ~~shall~~ ^{will} be prepared in the Superintending Engineer's Office from the Cash and Station Books of the Subordinate Officers, and the Superintending Engineers ~~shall~~ ^{will} be responsible for the punctual submission as well as for the correctness of those Bills. It ~~shall~~ ^{will} be their duty to afford full explanation to the Controller in cases of excess or saving, and in the event of the outlay on a work exceeding the estimate beyond the limits of sanction hitherto assigned to the Chief Engineer, they ~~shall~~ ^{will} submit such Bills, with full explanations of the causes of excess, to Government, and having obtained its sanction should forward the Bills to the Controller for audit and final adjustment. They ~~shall~~ ^{will} follow the same course with Bills which on account of frauds or irregularities require to be specially brought before Government. In all matters requiring the orders of Government they ~~shall~~ ^{will} correspond direct with the Secretary to Government in the Department of Public Works.

22. Executive Officers, whether entrusted with the charge of a Range or of a special work, should be under the direct control of the Superintending Engineer, unless by his authority they have been placed under the orders of another Executive. Their duties should consist of the immediate management of all executive operations within their respective Ranges, or of the special work to which they may be appointed. Executive Officers of every grade will be responsible for the proper execution of all work entrusted to them. They should see that it is executed strictly in accordance with the plans and specifications, and they should be held responsible for the goodness of materials and workmanship,

and generally for the execution of the details of construction. They should take care that accounts are kept and rendered with accuracy and punctuality, and that the prices paid for labor and materials are those prevailing in the open market.

23. Each Executive Officer in charge of a Range should be answerable for the conservancy and timely repair of all public works within his Range, and he should prepare, with the aid of the Talook Overseers, such Estimates as may be necessary, and forward them without delay to the Superintending Engineer. They should also take up projects for new works by direction of the Superintending Engineer, and it should be their duty to bring to notice any such work as in their opinion may be required.

24. Executive Officers whether in charge of Ranges or otherwise should be entirely at the disposal of the Superintending Engineers, who may in case of necessity make them available for the inspection and measurement of works in all parts of the Division.

25. Executive Officers should exercise strict control over the cash transactions of their Ranges or the works on which they may be engaged, and they should be responsible for any losses that may be sustained through negligence or want of proper precautions.

26. Overseers in charge of Talooks should be under the immediate orders of the Officer in charge of the Range in which the Taluk is situated, and their duties should be to keep a watchful eye on the state of all public works in their Talooks, to make immediate arrangements to prevent damage; to prepare and submit with regularity and despatch through the Range Officer estimates for such repairs as may be required; and to superintend the progress of works generally being carried on within the Talook. They should be available for duty on an emergency beyond the limits of the Talook under the order of the Superintending Engineer.

27. To summarize. The Secretary to Government in the Public Works Department should, in our opinion, be not only the organ, but the responsible adviser of the Government in all matters connected with the Department, turning to account his acquirements as an Engineer to the extent of satisfying himself as to the general bearings and main features of all projects or plans submitted to Government, but as a general rule leaving the examination of details to the Superintending Engineers. The Superintending Engineers should exercise an effective personal supervision over the working of the Department in all its branches in their respective Divisions. They should be held responsible for the correctness and sufficiency of all plans, estimates and designs, and in their Offices all Bills should be prepared. The Executive Officers should be held responsible for the proper execution of the work, and for the safe custody and disposal of all cash entrusted to them. The Talook Overseers working under the orders of the Range Officers will be responsible for the conservancy and repair of the minor irrigation works and District roads and for such other work as may be entrusted to them by the Range Officer.

28. Since our first report was written, it has been represented to us, from more than one quarter that the duties which we propose to assign to the Superintending Engineers are more than these Officers can effectively perform. This impression, we feel sure, is based on a mistaken notion as to the nature of the duties which will devolve on the Superintending Engineers consequent on the abolition of the grade of District Engineers. We do not contemplate these Officers inspecting every work in progress in their Divisions, or at stated times examining the cash and accounts of each of their subordinates. Much that has been hitherto prescribed for the District Engineers must necessarily be omitted by the Superintending Engineers, who will not only have larger ranges, but larger powers and responsibilities than have been entrusted to the District Engineers. Greater confidence must be reposed in the Executive Officers, and the system of minute checks, based upon the theory that every man is a rogue, must be abandoned; but the supervision which the Superintending Engineer will be able to exercise ought to be quite sufficient to prevent abuses, and to ensure efficiency in the execution of the works. Much too will be gained by the saving of time, from having an Officer on the spot vested with authority to dispose of the many matters which hitherto have had to be referred to the Central Office at Madras. If however it should prove, contrary to our expectations, that the work

many of them are not carried out by doing them in a proper manner

but only in emergency

he should be in our opinion, be not only the organ, but the responsible adviser of the Government in all matters connected with the Department, turning to account his acquirements as an Engineer to the extent of satisfying himself as to the general bearings and main features of all projects or plans submitted to Government, but as a general rule leaving the examination of details to the Superintending Engineers.

5
better allow the mood it should be imperative

in any one or more of the Divisions is more than the Superintending Engineers can get through, material relief might be afforded to them, either by increasing the number of divisions, or by adding to the strength of the Executive grades to such an extent as would admit of an Officer of that grade being attached to each Superintending Engineer, as an Assistant, to aid him in his inspection work; or, if the additional funds requisite for such an augmentation of the Superintending Staff cannot be given, the difficulty, should it arise, might be met by reducing slightly the number of District ranges; as, for instance, in the District of North Arcot where the five ranges provided for in our scheme might be reduced to four, thus setting free an Executive Officer for the duty to which we refer. This of course would be a make-shift, and for the reasons we have given we see little cause to apprehend that the duties of the Superintending Engineers will prove more than eight well selected Officers can efficiently discharge.

29. We would observe in conclusion that the changes we have proposed will necessitate alterations in parts of the Code, which should be revised without loss of time. We would suggest that this duty should be entrusted to the Deputy Secretary, Lieutenant-Colonel Ludlow, who should at the same time be instructed to revise, and as far as possible to simplify, the system of accounts and returns now in force. We learn that the Supreme Government have recently ordered the introduction of the Bengal system of Public Works Accounts, which is much more complicated than the system in force in this Presidency. We would urge in the strongest terms the great inexpediency of introducing any system of accounts or returns which, by adding needlessly to the Office work of the Superintending Engineers, would have the effect of withdrawing them from their more important duties of inspection and supervision.

FORT SAINT GEORGE,
15th May 1863.

We have the honor to be,
Honorable Sir,
Your most obedient humble servants,

H. J. Cunningham
J. D. Lewis
Arthur D. Orr

APPENDIX.

Statement of Establishments proposed in the Public Works Department.

No.	Secretariat.	Salary.
		Rs. A. P.
1	Secretary to Government...	22 50 0
1	Deputy Secretary...	12 00 0
1	~~Unassisted Assistant~~ <i>Chief Asst. & Registrar</i> ...	500 0 0
1	~~Do. Asst. Asst.~~ <i>do do</i> ...	300 0 0
1	~~Do. do~~ <i>do do</i> ...	200 0 0
1	Budget Clerk...	100 0 0
1	Accountant...	40 0 0
1	Do. ...	40 0 0
1	Superintendent (of the Record Department)	80 0 0
1	Deputy do. ...	40 0 0
1	Reference Picker...	35 0 0
2	Do. at 20 Rupees...	40 0 0
1	Attender...	15 0 0
1	Superintendent (Collection, Despatch, &c., Departments)	150 0 0
1	Collection Overseer and Cash-keeper...	60 0 0
2	Copyists at 20 Rupees...	40 0 0
1	Circulation Writer...	30 0 0
1	Despatcher...	25 0 0
1	Unanswered Reference Clerk...	40 0 0
2	Copyists at 40 Rupees...	80 0 0
1	Do. ...	25 0 0
1	Do. ...	20 0 0
1	Register-keeper...	25 0 0
1	Indexer...	120 0 0
1	Examiner and Superintendent of the Current Department	80 0 0
1	Reader...	20 0 0
1	Assistant Indexer...	60 0 0
1	Clerk for do. ...	20 0 0
1	Attender...	10 0 0
7	6 Peons at 7 Rupees, 7 Peons at 6 Rupees ...	116 0 0
1	Moochee at 12 Rupees, 2 Moochees at 10 Rupees each }	38 0 0
*1	Sweeper ...	3 8 0
Total Secretariat...		5774 80 0

* This charge was inadvertently omitted from the scheme of Establishments submitted with our letter of the 10th ultimo.

1/ Buffadar - - - -

225-0-0
1200
1314-8
5774-8

10/0/0
69294-0-0 Per an

based on lowest estimate

SUPERINTENDING ESTABLISHMENT.

No.	For each Division.	Salary.
1	Superintending Engineer at 1,200*...	Rs. 1,200
1	Manager and Accountant...	200
1	Accountant...	75
1	Do. ...	60
1	Do. ...	40
1	Do. ...	30
1	Do. ...	25
1	Draughtsman	20
1	Estimate Maker	60
1	Do. ...	60
1	Clerk and Examiner ...	50
1	Clerk to keep Registers	70
1	Copyist..	40
1	Do. ...	30
1	Do. ...	25
1	Record-keeper...	20
2	Peons at 7 Rupees	30
6	Lascars at 6 Rupees...	14
1	Sweeper...	36
	House rent...	5
		50
25	For 1 Division	2,145
258	For 8 Divisions	17,120
	Total.....	206208

* Note.—If the Superintending Engineer be a Military Officer, his Staff salary will be Rs. 800.
If a Civilian his salary will be Rupees 1,200.

1. Mochee

8

AUDIT ESTABLISHMENT.

No.	Designation of appointment.	Salary.
		RS. A. P.
1	Controller and Auditor* ...	1,200 0 0
1	Head Auditor and Chief Accountant...	300 0 0
1	Compiling Clerk and Accountant...	60 0 0
1	Do. do. ...	50 0 0
1	Do. do. ...	40 0 0
1	Do. do. ...	50 0 0
2	Copyists at Rupees 25	
2	1 Auditor Rupees 100 } First Circle	130 0 0
2	1 Sub do. " 30	130 0 0
2	Do. do. 2nd "	130 0 0
2	Do. do. 3rd "	130 0 0
2	Do. do. 4th "	130 0 0
2	Do. do. 5th "	130 0 0
2	Do. do. 6th "	130 0 0
2	Do. do. 7th "	130 0 0
2	Do. do. 8th "	100 0 0
1	Examiner and Auditor...	60 0 0
1	Do. ...	50 0 0
1	Do. ...	50 0 0
1	Record-keeper	7 0 0
1	Attender	40 0 0
1	Register-keeper	15 0 0
2	Moochee at 8 Rupees and Stamper 7 Rupees.	48 0 0
8	Peons at 6 Rupees each	
	Monthly Total.....	3,115 0 0

* The salary will be Rupees 800 (Staff) for a Military Officer, and Rupees 1,200 for a Civilian.

Annually. 37362/0/0

1 Sweeper - - - - - 3.8.0

Executive Establishments:

[illegible]

Executive Office Establishments.

Districts.	No. of Executive Officer's Establishment.	Cost.	No. of Upper Subordinates in charge of Ranges.	Cost.	No. of Upper Subordinates not in charge of Ranges.	Cost.	Total Office Establishment.
		Rs.		Rs.		Rs.	
Rates of pay.....	103		42		27		
Ganjam.....	1	103	2	84			187
Vizagapatam.....	1	103	2	84			187
Godavery.....	4	412	2	84			496
Kistnah.....	4	412	3	126			538
Nellore.....	2	206	2	84			290
Cuddapah.....	2	206	2	84			290
Bellary.....	2	206	4	168			374
Kurnool.....	1	103	3	126			229
Coimbatore.....	3	454	3	126			580
Malabar.....	2	206	2	84			290
South Canara.....	1	103	2	84			187
Madura.....	2	206	1	42			248
Tinnevely.....	2	206	3	126			332
Tanjore.....	3	309	3	126			435
Trichinopoly.....	2	206	2	84			290
South Arcot.....	2	206	2	84			290
Salem.....	2	206	1	42			248
Bangalore.....	1	192					192
North Arcot.....	2	206	3	126			332
Madras.....	2	206	2	84			290
Presidency.....	3	621			1	27	648
For Cantonments.....							
Special.....	4	412			6	162	574
Monthly.....	48	5,490	44	1,848	7	189	7,527
Annually.....							90,324

Details of Executive Office Establishments.

Executive Engineer's Office.						Rs.	A.	P.	Rs.
1	Writer and Accountant...					35	0	0	
1	Draughtsman and Estimator...					40	0	0	
4	Lascars...					28	0	0	103
Establishment for Upper Subordinates in charge of Ranges.									
1	Writer and Accountant...					30	0	0	
2	Lascars...					12	0	0	42
Establishment for Upper Subordinates not in charge of Ranges and for Talook Overseers.									
1	Writer and Accountant...					15	0	0	
2	Lascars...					12	0	0	27
Establishment for each Executive Officer at the Presidency.									
1	Writer...					30	0	0	
1	Draughtsman...					50	0	0	
1	Estimate-maker and Accountant...					50	0	0	
1	Do. do.					40	0	0	
1	Do. do.					25	0	0	
2	Peons...					12	0	0	207
For Bangalore.									
1	Writer and Accountant...					50	0	0	
1	Do. do.					40	0	0	
1	Draughtsman and Estimator...					50	0	0	
1	Store-keeper...					40	0	0	
2	Peons...					12	0	0	192
For Neilgherries.									
1	Writer and Accountant...					60	0	0	
1	Do. do.					40	0	0	
1	Draughtsman and Estimator...					80	0	0	
1	Store-keeper...					40	0	0	
4	Lascars...					28	0	0	248
Establishment for Stores.									
1	Mechanical Engineer...					166	10	8	
1	Instrument Maker...					222	5	4	
2	Apprentices...					50	0	0	
1	Superintendent...					70	0	0	
1	Deputy do. and Writer...					40	0	0	
1	Do. do.					30	0	0	
12	Lascars...					72	0	0	
Annually.....									662
Lithograph Department.									
Annually.....									1,018
Special Conveyance allowance for three Officers at the Presidency at 50 Rupees each...									150
Annually.....									1,800

200. 0. 0
278. 5. 4740. 5. 4
884. 0. 0

Estimate of Travelling Allowances, &c.

22	8	Superintending Engineers at 150 Rupees per month.....	14,400
	20	Executive do. (omitting 2 for the Presidency and Bangalore) at 100 Rupees per month.....	26,400
22	24	Assistant Engineers (do. 2 for do.) at 80 Rs. per month.....	21,120
	13	Sub do. (do. 1 for do.) at 60 Rs. per month.....	9,360
	1	Do. do. for Presidency.....	17,760
	37	Supervisors at 40 Rupees per month.....	36,960
154		Talook Overseers (omitting 2 for Bangalore, 4 for Presidency and 7 for Cantonments) at 20 Rupees.....	1,25,520
	2	Overseers for Bangalore.....	126,000
	4	Do. for Presidency.....	
	7	Do. for Cantonments.....	
<i>Batta for Establishments.</i>			
Superintending Engineers.	1	Accountant at 75 Rs. per month.	$205 \times \frac{3}{10} = 61\frac{1}{2} \times 8 \times 12 = 5,904$
	1	Head Clerk at 70 do.	
	1	Draughtsman at 60 do.	
Executive Engineers.....	1	Writer and Accountant at 35 Rs. per month.	$75 \times \frac{3}{10} = 22\frac{1}{2} \times 43 \times 12 = 11,610$
	1	Draughtsman and Estimate-maker at 40 Rs. do.	
Upper Subordinate in charge of Ranges.....	1	Writer and Accountant at 30 Rs. per month.....	$30 \times \frac{3}{10} = 9 \times 44 \times 12 = 4,752$
Upper Subordinate not in charge of Ranges.....	1	Writer and Accountant at 15 Rs. per month.....	$15 \times \frac{3}{10} = 4\frac{1}{2} \times 7 \times 12 = 378$
Neilgherry Range.....	1	Writer and Accountant at 60 Rs. per month.....	$180 \times \frac{3}{10} = 54 \times 1 \times 12 = 648$
	1	Do at 40 Rupees per month.....	
	1	Draughtsman and Estimate-maker at 80 Rupees per month.....	
			23,292
<i>Estimate of Contingent charges.</i>			
		Secretary to Government at 100 Rupees a month.....	1,200
	8	Superintending Engineers at 30 Rupees a month.....	2,880
		Controller at 50 Rupees a month.....	600
	40	Executive Officers at 25 Rupees a month.....	11,040
			16,720

6 Upper Subordinate in charge of Ranges at 50 Rs. F
Lithographic Establishment at 50 Rs. F

Salary of Secretary to Government...	Rs.	
Do. of Deputy Secretary	27,000	
Secretariat Establishment...	14,400	
Deduct amount now charged to salaries and expenses of Public Department, Budget head F II...	27,774	27,894
	25,752	
Salaries of eight Superintending Engineers...	2,032	2142
Establishments for do.	1,15,200	
Controller of Public Works Accounts	90,240	91,008
Establishment for do.	14,400	
48 Executive Officers...	82,840	22,962
51 Upper Subordinates	3,80,800	3,10,500
Office Establishment for Executive Officers and Upper Subordinates	1,21,800	
Taluk Overseers and Establishments...	90,324	
Travelling allowance...	1,74,348	
Military allowance	1,48,810	149,292
Special allowance for three Officers at the Presidency	1,23,000	
Contingencies...	1,000	3240
Lithographic Establishment	11,200	16,320
Store Establishment	12,216	
	7,044	8884
Total Rs ..	12,97,336	

G. J. Lubbock

Copy in a Letter to England
H/10th July N^o 52 of 1863

W. 1863 Dep^t
P^{ro}: of Gov^t for June
N^o 1950.

From

The Committee for the
re-organization of the
Public Works Dept^t

To

His Excellency the
Governor in Council.
Fort St. George

D/ 15th May 1863.
Recd. 16 June "

Further report on
the re-organization of the
Public Works Department.

N^o 438.

N^o 1599

Chapman
18th June 1863

I have read with attention
the report of the Committee
on the re-organization of the
Public Works Dept, dated 14th May
1863, & although unable to
concur in all its suggestions,
do not the less appreciate the
^{attention} careful consideration which
has been given to an interesting
& difficult subject. The duty
assigned to the Committee by
the more numerous in consequence
of the Members having the
heavy business of their own
offices, ^{still} to ^{perform} attend to, and little
time being allowed them
owing to the ^{presumptory} orders of the
Gov^t of India to reduce the
cost of the Establishment
from the commencement
of the present official year.
~~I am therefore~~
~~calling for the re-organization~~

The Report is to be consid-
ered under two aspects -
1st - as it suggests reforms
in the Dept on its present
basis of undertaking the
execution of all repairs

great & small, as well as
all original works
2nd. - as it deals with the
question of restoring the
concreteness & repair of
the ^{2nd} ~~major~~ Irrigation
works, to the Revenue Officer
under the instructions given
in the Despatch of the Secy
of State, dated 8 April 1862.

3. - In respect to the first point
of view, I should concur ge-
nerally in the suggestions
of the Committee, if it were
decided that the ^{essence} business
of the Dept. was to be continued
as at present. - The arrange-
ments proposed by the Committee
would I am satisfied
place the Dept. on a more
satisfactory footing both
as to economy & efficiency.
While however the ^{total} cost of
the proposed Establishment
does not seem to me greater
than is ^{necessary} ~~required~~ for the work
if entrusted to a separate provincial Dept.
to be done, its distribution
as respects the Taluk
requires, in my opinion, re-
consideration. - The chief duty
devolving on the District
Officers will consist of the
repair of the minor Irrigation

Works, & while this duty is heavy
in some localities, in others
it cannot be said to exist
at all, as in the Districts
of Malabar & Canara, or in
a very slight degree as in
the dry Taluks of Travincelly,
Trichingopoly, Salem, T. Arcot
etc., & by the black soil
Taluk of Luddupah, Bellary
& other Districts - yet the
scheme of the Committee
provides for nearly the same
establishment for every Taluk
throughout the Presidency,
& the result would be that
in some places the Taluk
servants would be overburdened
with work & in others be
^{comparatively} left idle & underpaid.
It is probably intended
that the Supply Engineers
should remedy this by employ-
ing the lower subordinate
servants wherever most
wanted, but I do not see
how this can be done
without the Canara &
Malabar should have
equally strong
the same Taluk establishment
as Districts where small
Irrigation works abound.
Malabar & Canara are in
the same Division, & the

great & small, as well as
the original works

2nd - as it deals with the
question of restoring the
concreteness & repair of
the ^{2nd} ~~main~~ Irrigation
works to the Revenue Office
under the instructions given
in the despatch of the Secy
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establishment for every taluk
throughout the Presidency
& the result would be that
in some places the taluk
servants would be overburdened
with work & in others be
^{comparatively} idle & unremunerated.

It is probably intended
that the Supply Engineers
should remedy this by employ-
ing the lower subordinate
servants wherever most
wanted, but I do not see
directly why Canara &
which are in the same Division
Malabar should have
equally strong
the same taluk establishment
as Districts where small
Irrigation works should.
Malabar & Canara are in
the same Division, & the

anomaly of their having
the same. Such establishments
as Districts abounding in
small irrigation works
I deem more especially to
require attention

4 3- I observe that under the proposed scheme, Range Officers are to correspond with & be directly subordinate to the Supt. Engineer - The District Engineers are thus done away with, & the Supt. Engineer will ~~the~~ exercise on one hand ^{former} ~~their~~ functions of the District Engineer & on the other be vested with most of the powers of the late Chief Engineer. - As this arrangement will both ^{is} ~~be~~ ^{expedite} ~~the~~ ^{business} of the Superintending Engineers having been increased to eight, it seems to me to merit a practical trial, but I would suggest that the Departmental rules should authorise the Supt. Engineer to ~~make~~ ^{bring} over charge against the Subordinate servants to the Executive ^{on apt Engineer for ~~not~~ ^{making a report}} ~~that in most instances~~

such cases would come before him in review. This course would tend to diminish the number of embarrassing appeals which would otherwise reach the Office of the Secty. of War in the P. W. Dept. from the original decisions passed by the Supdy Engineer against Subordinates accused of misconduct. It is as a general rule ^{always} advisable ~~that~~ ^{whenever} possible the Officer who prefers ~~such~~ such charges & the Officer who tries them should be distinct.

5-4
I concur in the Committee's
proposals to give all Officers
from the Super's Engineers to
Colonel Messers a permanent
travelling allowance & to
entertain the Special Colon-
elment detailed in Pt
for projecting new Works &
for employment in such
true duties when large & im-
portant new Works ^{which are} beyond the
strength of the local Officers
have to be carried out.
An important want will thus
be supplied.

6

The 2nd point has now to be considered, & I feel unable to join in the ^{opinion} ~~opinion~~ at which the Committee have arrived ~~that it is impracticable~~ to against the transfer of the minor Irrigation works to the Revenue Officers.

Their ^{reasons} ~~arguments~~ are given in P 2 & 3 of their Report, & the conclusion at which they have arrived is based almost entirely upon the argument that such a course would add to the costliness of Establishments.

If I understand the Committee rightly & I am anxious to do so, I gather that in their opinion Rs 80,000 per annum would be at least required in addition to that Establishment which they have recommended at an annual cost of Rs 12,98,360.

7

In the absence of more specific detail, I can only point out that in proportion as the Professional Dept is

* See my Minute of 26 Feb. 1863. P 346.

relieved of work so ought its Establishment to be reduced. Relieved of the laborious occupation of superintending & repairing thousands of ^{irrigation} ~~irrigation~~ works, the Professional Dept would have absolutely nothing to do throughout ^{a larger} ~~the~~ area of the Presidency, and it was never intended, by me at least, that under these circumstances it should continue to have ~~an~~ ^{an} ~~Establishment~~ <sup>Taluk Establish-
ment for every Taluk of every District
throughout the whole
Presidency.</sup> - Such a course would, in my opinion, be as inconsistent with economy as with the requirements of the Service, & my idea was that after the transfer ^{each} ~~the~~ District Engineer should have an ^{establishment} ~~establishment~~ ^{ascertained} ~~ascertained~~ by the wants of his District. He should have the means of maintaining the roads & works which still remained in his charge & of constructing any new bridge, building &c which might be required while new works of extraordinary size were to be

provided for by extra money
such as the general Special
Establishment which the
Committee have now been
included in Part 2.

8
7/11 - It appears however that the Committee's opinion of the necessity of durable ^{throughout} ~~every~~ ^{every} district ~~in the event~~ ^{in the event of} ~~the transfer~~ ^{the transfer being made} ~~has been influenced by~~ ^{the assumption they make} ~~that they make~~ in P. 3. They there observe "It is not proposed to make over to the Revenue authorities any masonry works, whether new works or repairs, the cost of which may exceed Rs 1000. Suppose therefore a Colingula has to be built at a cost of Rs 1200 the work must be entrusted to the Engineer Dept. In the same tank a small upper Colingula has to be built at a cost of Rs 350 & then stone & work costing Rs 2000 - The two latter would come under the head of Minor works & if the latter are to be placed under the Collector would have to be executed under the orders of the Talookdar - There would thus be two men independently superintending the execution

3
" I work on the same tank.
" x x x x x In short it is im-
" possible to provide two sep-
" arate Establishments for dyists
" nearly identical & working
" side by side without entail-
" ing a considerable increase
" of charge"

- If the premises of this argument were admitted I should concur in the conclusion at which the Committee have arrived but I am not aware that of any determination to carry out the transfer in the manner here described. A suggestion to such an effect may have been made but it is one to which I should have objected had it been formally brought before the Committee.

The necessity of keeping the two branches of the Dept distinct had always struck me, and I ^{suggested} ~~proposed~~ that as a preliminary step towards the transfer Govt. should obtain from each District a list of the ^{more} important Tanks & other Irrigation works which might ^{require} ~~require~~ still a large amount of expenditure for their maintenance, in order that they might ^{be continued} ~~be continued~~ under the care of the Engineer while the smaller ~~Irrigation~~ works were made over entirely to the Collector. This arrangement would have prevented collision & interference.

to me the natural & fitting
mode of dividing the business of
repairs - ^{from} the work which
would devolve on each func-
tionary had been thus
ascertained, I proposed that
their Establishments should
be fixed, after comparing the
lists of servants ^{by the local officers} asked for
with the former Establishments
and those which were found
sufficient in other places -

- Our districts & even parts
of the same District vary
so very materially in the
number of these irrigation
works, that I believe the
only safe course to pursue
is to arrange Establishments
according to local ^{local} ~~requirements~~
and submit the ^{proposed} ~~proposed~~
been ~~submitted~~ ^{tested} ~~submitted~~
I am not prepared to admit
that transferring the minor
works to Collectors will
increase the expense of super-
intendence - one of the
objections which I made to
the establishments proposed

by the Revenue Board (see ^{my} ~~my~~
minutes of 26 Feb 1863, paras 17 & 18
letter to Secy to Govt of India
1862) was that local pecu-
liarities & requirements had
not been sufficiently attended
to, & the same cause has
led to my remarks regarding
the ^{newly} proposed taluk Establish-
ments in P 3 of this Minute

+ Contrast for instance Canara
with any district on the Coromandel
Coast, and the Goodenah Taluk with
any other on any other
part of the Southern taluk of the
Bellary District.

The various arguments for
replacing under the Collector
the minor Irrigation
works which are so closely
connected with the Revenue
interests of which he is the
guardian have been detailed
in my former Minutes & need
not now be repeated. I wish
however to make a brief allu-
sion to some observations
which I find in the present
papers.

12 #2 - The Committee for instance
speak disparagingly of the
old Marammat System
at the close of P 3 of their Report & Mr.
Pryor does the same in
P 6 of his Minute. Now we
undoubtedly thought system had
great defects & imperfections
but it is to be considered how
far this is attributable to
the wretched & deficient
Agency at the Collector's com-
mand - His Establishment
consisted of a Marammat
Supt. on a salary of about Rs 50
of a few uneducated assistants
on Rs 10 or 12 in fees each
second or third taluk & a
few native clerks on petty sa-
laries - When this Establish-
ment is contrasted with the
expensive one allowed under
the new system, the soundness
of the principle of placing
the Village Irrigation Works

under the Collector is shown
in the fact that with such
imperfect means the work
was done in a way which
makes the Landholders, the
most interested parties, prefer
the old system to the new.
Had the Public Works Commission
improved the Collector's estab-
lishment & given him an
Assistant in the Management
Dept instead of ^{within his District} creating a se-
parate & independent Agency
to perform the duties hitherto
entrusted to him, the public
interests would I believe
have been better advanced
& at a ^{far} cheaper cost.

I ask only further allude
to two points in the present
papers which tend to strengthen
my preference for the old
system - One is the Com-
mittee's allusion (pp 3) to "the
want of a sufficiently stringent
law to compel the Villagers
to furnish labor for the re-
construction of what are essentially
Village works" -- It is sig-
nificant & instructive ^{fact}
~~under the old system~~ ^{that}
~~in the old system~~

Those who were regarded as
the natural custodians of the
Village works ~~were~~ worked
into the people for their repair
as such compulsory legisla.

14 The remaining point relates to that want of a more free inter-communication & cooperation between the officials of the two Depts to which the Committee allude in Pt 4 of their Report, & which

is endorsed by Mr. Pycroft
in P. O. of his Minute - This
is attributed ^{mainly} ~~mainly~~ to a
supposed prohibition against
Revenue Officers interfering
in matters of professional detail
and it is suggested as a
remedy that Revenue Officers
should be permitted to draw
the Engineer's attention to
any defective work or any
use of bad materials which
comes under their observation.
Such a suggestion being
appearing necessary ~~and~~ indicates that the

Dept cannot be on a sound
& healthy basis, but I would
wonder the shape want
of cooperation to a deeper
cause - Collectors ^{have} cer-
tainly ^{keep} ~~keep~~ forbid to interfere
with the details of plans &
estimates or with the interest
arrangements of the Engineer's
establishment, but ^{a Collector} ~~his~~ Dept
& his duty to bring to notice
any cases of fraud or negligence
by which the public interests
were injured, has always
it appears to me, been ac-
knowledged - Chapter
XI of the revised Code which
was framed on the old
Standing Rules is clear on
the point (see more especially

Circular Standing Orders of
D. P. O. Page 265

Sections 5 & 10) and the
Collector's acknowledged position
as Head of the District &
the authority to whom the Govt
itself looks for information
regarding this & other Depart-
ments, implied his right
to bring to the Engineer's notice
any defect or mismanagement
of his subordinates in the
execution of Works - I
wonder therefore the re-
sult of intercommunication
to the anomalous position in
which the Collector & Engi-
neer are placed regarding
the Village Irrigation Works.
- These Works are intimately
connected with the Collector's
duty & interests, & he is
still nominally their "protective
Superintendent" yet in reality
their management has been
taken from him & placed
^{entirely} ~~entirely~~ independent
under a Dept - He is thus
knowledgeless except to suggest
and this is a point which he
cannot be often inclined to
take, especially when ^{such} interference
on his part is apt to be re-
sented & lead to controversy
Even the Govt order, however
lately had a tendency to
discourage Revenue Officers
from interfering with
the Department, and

to leave all responsibility
reg. ~~the~~ Irrigation Works
to the separate & inde-
pendent Department to which
they have been transferred.

15

as matters now stand we
must expect to see ~~the~~ ^{increasing}
increasing ^{institutions} on the part of Collectors
that the separate & independent
Dept to which Govt has made
over the Irrigation Works
must be held entirely respon-
sible for their due construction
As a majority of the Mem-
bers of Govt have decided against
restoring the minor Irrigation
works to the Collectors, the
question is, for the present
at least, at an end. It
has however been my duty
to record my views on the sub-
ject & strong as my own opinion
is in the advisability of the
measure I feel bound to add
that its introduction would
be hazardous without the
strong concurrence & support
of Government on account
of the conflicting interests
opinions & prejudices with
which it is surrounded -
It is not sufficient for a
measure to be good in itself -
the means & the time for
carrying it out must be
feasible.

5 June 1863

E. M. L. by

that such a plan would entail increased expense
& a risk of confusion, since both Departments
would require establishments to look after the numerous
scattered works of petty size, & the same tasks
might be receiving repair from the Collectors &
Engineers' servants at the same time - I quite
agree that such a half measure would not succeed
& never contemplated it - If my scheme is to
be tried, & this seems desired by the Secretary of
State, the Collectors should be required to report
what establishments they would require to carry
on the entire control of the tanks & channels,
excepting any of great size which should be de-
tailed in a list - and the District Engineers
should state what servants they required for the
comparatively few but important duties which
remained to them.

It will thus be seen that the two great principles
advocated by me have not yet been tested - viz
the entire restoration of the smaller works to the
Collectors, & the distribution of establishments accord-
ing to the local peculiarities & wants of each district
instead of on any uniform & average scale.

To illustrate

10. — ^{make} The principle in which I have advocated the restriction of the minor works to the ^{Revenue} Officers ^{I make} in the following extract from my Minute of 23rd Sept 1861

" Para B - But to carry out the principle which I urge, the smaller irrigation works, or those which are spoken of by the President as local or Municipal, should be given over entirely to the Collector who should have as before an establishment to send him in effecting their prompt repair. The District Engineer would then be relieved from so much detail that a smaller number of servants would suffice to enable him to carry on his own peculiar duties & by this arrangement neither Department need clash with the other. Moreover public money is expended an account must be rendered & the Collector would of course have to explain their expenditure, but the forms for this purpose might be made few & concise."

" P. 14 - The papers which are now before you do not enable the opinions of the local authorities to be seen on the arrangement which I suggest. They were consulted regarding the plans proposed by Colonel Lawford & Pears. viz - to assign petty repairs under a certain amount (Rs 50) to the Revenue Officers & it was naturally objected

1863 Dep't
No. of the 16. Gov't for
No. 1955.

Minute by the Honble
Mr. Northby

Dated 5th
Rec'd 16th June/63.

972
13

Stating that he would
concur generally in the suggestions
the Committee as respects reforms
in the dep't in its present basis
of undertaking the execution of
all repairs as well as all original
works, if it were decided that the
Executive business of the dep't was
to continue as at present and dis-
agreeing with the Committee in
the opinion they have arrived
against the transfer of the Irriga-
tion works to the
Revenue Officers -

No 440

Minute

73

Latterly, generally, of the
scheme herein detailed.
I think it provides for the
due execution of all the
works which ought to be
thrown upon the P.W.
Dep't. It will be the
duty of the Gov't to organize
it properly, and a local or
municipal system, as
may throw the responsi-
bility of executing the
trifling repairs to Local,
Village Roads upon
those for whose benefit
they were constructed
and by whom they are
used.

I quite agree with the Com.
that the Gov't ought to have
a class of disposal officers,
not attached to any par-
ticular district, who
might be employed in
working out the details
of any important re-
quisitions with reference to
irrigation or other works
whether emanating from
the superintending Eng-
or from any other source.
It is perfectly evident
that the district officers
will have their hands much

too fully routine work to
be able to pay the attention
which could be required
to scheme out the plan
and more especially the
details of any large work
and when such a work
has to be carried into two
or more districts or even
ranges it is a matter of
necessity that it should
be the product of one
mind. There are many
projects of this kind which
have been necessarily post-
poned because the Govt
had not able disposal
officers with assistants
who could be spared
from the ordinary con-
stant of departmental
duties, and I believe that
results most valuable to the
country will be produced
when the Govt is in a
position to turn the un-
divided attention of a
^{qualified} ~~particular~~ officer to any
particular work.
The point, however, upon
which I lay the greatest
stress is the enforcement
of individual responsi-
bility of officers -
whether to such responsibility
has been altogether no
-minal - under the

scheme as proposed each
officer will have his
definite line of respon-
-sibility, and I wish it
to be distinctly understood
by the officers that the
Govt is fully prepared
to enforce this respon-
-sibility: that it will
not admit of the flimsy
excuses for extenuation
exceeded, or for failure,
of work which have hitherto
passed current.
It would therefore be
fair that each officer
in the Department,
from the Secretary
downwards, should be
warned that any wil-
-ful neglect of duty,
any exhibition of care-
-lessness, will be visited
with its proper punish-
-ment, & that removal
from office will be a
simple and effective
remedy for such conduct
which the Govt will not
hesitate to apply.
I have heard, and I have
little doubt as to the
working of that part

of the scheme which places
the Secretary in rather an
anomalous relation to
the Gov^t - he is to be the
responsible adviser of
the Gov^t with reference
to all projects & plans
submitted; but he is
to leave the examination
of details to the Superintend-
-ing Eng^r. it is diffi-
-cult of course impossible
to split up responsibility -
-lets in this way - the
Secretary should be able
to speak authoritatively
on the plans, so autho-
-ritatively as to send
them back for revision
to the Dep^y Eng^r, when
inspection is a mere
matter of opinion in
which case that of the
Dep^y Eng^r who has looked
into all details is
probably the best of the
two - should he then
be authoritatively re-
-lieved of the responsibility
of the shortcomings of the
Superintending Eng^r.
I think it by no means
improbable that it

may eventually be necessary
to revert to the former system
which made the Chief Eng^r
the responsible adviser of
the Gov^t - the duties of the
Secretary being performed
by an unprofessional
officer -
~~According to~~ the principal
want in the Dep^y is that
of an officer similar to
what are called in England
Chief works - men tho -
-roughly acquainted with
every species of professional
detail, and capable of
examining into all the
plans & estimates -
to such a man could be
entrusted with full &
entire confidence the
analysis of plans & esti-
-mates submitted, and
of the Secretary is to be looked
upon as the adviser of the
Gov^t - it is well worth
consideration whether
an officer of this stamp
should not be attached
to the Secretariat - such
a man however cannot
be found in India we
must go to England for him

The present class of Galilean
- meters are altogether
unlike each other
- —

The proposed scheme is
in every way preferable
to that under which the
Dep^y has been hitherto
conducted, and I am
disposed to give it a fair
trial. any improvement
may be easily suggested
hereafter



Stating that the scheme pro-
posed by the Committee appears
to consider the reorganization of the
P. P. Q. in every way preferable
to that under which the Dept had
been hitherto conducted, that it may
begin with a fair trial, and that
improvements may be passed
upon it hereafter.

Minute by the
Honorable the Pre-
sident.

Dated
Received 16th June 1823.

Miss of C. Green and Subordinates to be retained in the P.T.S. after Dec. 30 June 1863

Names.	Present Rank and Station	Future Rank	District to which posted	Remarks.
Captain J. Beem	District Eng ^r Malabar	Executive Eng ^r P. O. Os	Malabar	
Captain A. L. Moberly	Acting Dist ^r Eng ^r Nellore	Do	Nellore	
Captain J. P. Asher	District Eng ^r Bellary	Do	Bellary	
Captain J. G. Mahajan	District Eng ^r Salem	Do	Salem	
Captain J. Mullins	Acting District Eng ^r Bangalore	Do	Bangalore	
Captain J. G. Rajeev	District Eng ^r Madras	Do	Madras	
Captain H. L. Prasad	Executive Eng ^r District Eng ^r Bangalore	Executive Eng ^r District Eng ^r Bangalore	Bangalore	
Captain J. P. Stoddard	District Eng ^r Bangalore	Do	Bangalore	
Captain J. P. Stoddard	District Eng ^r Bangalore	Do	Bangalore	
Captain J. P. Stoddard	District Eng ^r Bangalore	Do	Bangalore	

Deputy Commisary Arnold
Lieutenant J. Cunningham

do Surveylly
do Speculation

March

Deputy Commisary Arnold
Assistant Commisary Bailey
Mr R. L. Lowry
Mr W. Williams

Sub Eng 1st Class Madras
do Malabar
do Coimbatore
Sub Eng 2nd Class Coimbatore

Sub Eng 1st Class
Malabar
Coimbatore
Nellore
Vice Consul

Mr W. Williams
Chedambazh Woodley
J. Thangabarao Rao Bahadur

Sub Eng 2nd Class Coimbatore
do North Arcot
Sub Eng 3rd Class Madras

Ag. Sub Eng 1st Class
Vice Williams

	Overseen	Overseen	Overseen	Overseen
Sub Conductor J. McLaughlin	50	50	50	50
Mr. J. B. Martin	50	50	50	50
Mr. J. B. Hammett	50	50	50	50
Inspector J. A. Quinn	50	50	50	50
Inspector A. F. Nordman	50	50	50	50
Sub Conductor J. Shannon	50	50	50	50
Chamber J. F. Fier	50	50	50	50
Inspector J. F. Fier	50	50	50	50

[illegible]

Dated May 1863.

Report of the Committee on the reorgani- } dated 14th May 1863.
- zation of the P.W. Depart. }

I concur generally
in the proposals of the Com-
mittee as detailed in the above
report, and would give their
scheme a fair trial.

Report - Paras 2 - 3 -

2. The Committee have arrived at the conclusion that "it is not possible, save at a considerable increase of expense to make anything like a general retransfer of the execution of repair and minor works to the Revenue Authorities!! They gave at large in paras 2. 3 of their report the reasons which have led them to this conclusion, which has been forced upon them in despite of their original prepossession to the contrary.

Recorded in Proceedings
P.W. Dept^y 17th March 1863.

3. In my minute of
January last, I intimated
that

Q. No 1599

[illegible]

Unceasingly

050

29

220

262

Chorley. A.

2

10

5

२६

(Fixed) Conjecture

0590

Corporal J. Telford
Corporal J. J. McQuinn

Corporal J. Telford
Corporal J. J. McQuinn

that I saw very great difficulty in reverting in any degree to the former system, whereby the execution of works of irrigation and communication was carried out by the local Revenue Officers - but said that the experiment must be made, although it should at the first be confined to two or three districts.

4. In this writing, I, however, assumed that the change would be attended with a saving of expense, or at the least would involve no increase. The Committee who have gone carefully into the question, show that such will not be the case. Indeed *prima facie* it could not but seem very doubtful whether a system under which two distinct agencies would have to be maintained for the performance of similar duties could possibly be economical in the same localities.

economical.

5. Under these circumstances, the present state of things whereby the execution of all public works great and small, original and repairs is entrusted to one Department specially organized for the purpose must be adhered to, unless the Secretary of State, on these proceedings being laid before him, should deem the advantage of the opposite course to be such as to outweigh the enhanced expenditure which would be caused by it.

6. For my self, I cannot but doubt, ^{whether} even if that course was not the most costly it would be desirable to adopt ~~recourse to~~ it. The arguments in favor of it have not been conclusive to my mind. The ^{merits} advantages of the old system and the ^{demerits} disadvantages of the new have both

been

been exaggerated. Insufficient allowance has scarcely been made for the difficulties incident to a state of transition from the one system to the other, to defects rather of administration, than of the system itself, to the great and sudden increase of work to be done falling upon a new Dept. hastily, and of necessity, imperfectly organized, and to the very great difficulties attendant on the carrying out public works at all in a country like this. On the other hand time has shed its softening influence on the shortcomings of the old Maramat System. My own belief founded on my acquaintance with it during the earlier years of my service is much that of the Public Works Commissioners viz that nothing could have been much worse. The construction and repair of works for the development

Note. The Public Works expenditure for 1850/51 the year in which the Public Works Commission was appointed was 24 1/2 lacs. and this was very much above the average of preceding years. See Report 208 and Appendix V page 370. Of late years the expenditure has ranged from ~~Rs 50,00,000 to Rs 60,00,000~~ (in 1862/63) to Rs 68,74,000 - 1856/7 to Rs 58,60,000 - 1860/61

See their report para 55. et seq.

17
of the Country was confided as regards their execution to a Class of men without any professional education acting under corrupt native servants, the whole of them being practically under but little check. In no department under Govt, save perhaps in the Salt, was there greater roguery. Some Collectors took no trouble whatever about their Maramat, and those who did could give it but a limited portion of their time. The supposed advantage of having works executed by one Department and inspected by another is more specious than real. The Civil Engineers were obliged to trust largely to their Subordinates, who soon found their interest to lie in collusion with the Native Revenue Officers rather than in exposing their fraudulent practices.

Moreover

7. However times have changed. The ranges of Thakildars and their duties (as well as the duties of their Commanded Superiors) have been greatly enlarged, their establishments have been reduced to a minimum, they no longer possess police authority, ^{the value} wages of labor have risen, the people know their rights, forced labor so extensively resorted to in the execution of works in the olden time can no longer be exacted. Were we to fall back ~~in fact~~ in part upon the former system it would have to be reintroduced under very different circumstances from those under which it originally obtained.

8. I quite agree with the Committee - para 4 that the two Departments the Revenue and Public Works should work together more closely than they do at present, and that every advantage

should

119
should be taken of the opportunities which the Revenue Officers unquestionably possess of discovering and giving timely notice of defects or delays in the execution of necessary works" x x x
"It should not only be permitted, but should be the duty of every Revenue Officer down to the Thakildar, to draw immediate attention to any defective work which may come under his observation; the members of the Pub. Works Department on their part giving ready attention to all such representations!! This should be made fully known to all Revenue and Pub. Works Officers.

9. I should be glad if any such mode as that suggested by the Committee in para 6 could be adopted for the repair of village tanks and roads, but I doubt it. My vern is very much

much that expressed by the Honble Mr. Malley in his minute of the 23rd Sept 1867 to which I would refer.

In Pros. D.P.W 31st Decr 1867

Report paras 7-8.

10 The scheme of District Cetto adverted to in these paras ^{seems judicious} and especially the allotment ~~for~~ each talook of a Talook overseer, who will be held directly responsible for the repair and conservancy of the minor works, particularly irrigation works of his Talook, but will be available when required under the orders of the Range Officer for other works in progress within the Talook. I entirely approve too the design that there shall be a small establishment of Officers of various grades who will not be in charge of ranges or Talooks, but will be employed on special works or projects. I presume that these Officers will be engaged not only in

- 2 Executive Engineers
- 2 Asst. - do -
- 1 Sub. Engineer
- 5 Supervisors
- 13 Overseers.

Total	Pennair.	Godavery.
acres	acres	acres
882000	50000	650,000.
757000.	7000.	4,50000

⊕ Area now irrigated.
Unirrigated but capable of irrigation-

deriving wholly new projects, but in developing and utilizing to their full extents projects already only partially carried out. To this last I attach great importance. It is truly melancholy to reflect how far the results of the greatest public works in this Presidency fall short of what they should be. From returns just received it appears that the extent of land irrigated from the Godavery, Krishna and Pennair Anicuts is not much more than half that capable of irrigation. Of 1,37,000 Acres which might be watered from these great works, 757,000 at present derive no benefit from them. The more difficult and expensive part of these works has been executed. It remains only to carry out the subsidiary arrangements for the full distribution of

of the water provided by
such an expenditure of
money and Engineering Skill.
The estimated cost of com-
pleting these works is
Rs. 51 3/4 lacs which, supposing
the additional tax on the
land brought by them under
irrigation to be only Rs. 3
per ~~canal~~ ^{acre}, would be
repaid in less than three years.

The extension of Cochran's
or rather the Northern Canal
from Doogaragapatam to
Kietnapatam is another
project well deserving
special consideration. At
present the Canal north of
Ennore leads, so to say, to
nothing. Were it prolonged
to the backwater which
runs from Kietnapatam
inland, it would convey to
the Madras Market the
produce of the land in
Kellore to the south of the
Pennair river of which a
part is now under the
irrigation.

irrigation of the Kellore
Cicut and still more
will be brought under that
to be built by the Canal
and Irrigation Company
at Somasikuram. The
estimate I believe is about
two lacs, and the interest
on that amount with all
charges could be met by
Tolls. The Collector of the
District whom I have
lately seen has strongly
pressed this upon me.

11. The proposal to
allow each Officer whose
duties involve locomotion
a fixed monthly sum, in
addition to his pay, as
travelling allowance seems
to me good. The arrange-
ment is appropriate in
the case of Departments
whose members should
be constantly on the move.
It prevents disingenuous
practices which discredit
the Department. and tends
to

to demoralize its inferior servants, and ^{it} will lead to a considerable saving of time and trouble in the preparation of bills.

12. Means should as proposed in para 12 be taken for transferring the lithographic work of the Department to private establishments. There are but few things which Govt should do for itself if it can get them done by others, and Lithography is not one of them.

13. If the salaries of the Secretary to Govt, P.W. Deptt, of his Deputy and of his establishment be charged, as they should be, to the head of Salaries & Expenses of the Public Deptt, the aggregate cost of the revised establishment will be, in round numbers, 12 lacs & a half Rupees per

12
per annum. The Committee have very attentively examined this part of the subject referred to them, and their conclusions may safely be accepted. Considering the extent of this Presidency and the peculiar character of its irrigation and Revenue system, I do not think that the establishment for the execution and maintenance of public works could be fixed at a lower scale either as respects numbers, grades or salaries.

14. I concur with the Committee in their views regarding extra temporary establishments contained in para 14 of their report, and think that the present practice, which has been carefully guarded against abuse, should be maintained.

15. In paras 15 to 27 the Committee define the duties

duties and responsibilities
which should devolve on
the several grades of ser-
vants in the Public Works
Deptt. from the Secretary
to Govt. to the Talook
Overseer. This part of the
Report seems to have been
very carefully considered
and I see nothing to add
to it. It is very difficult
to lay down such defini-
tions with such exactness
as to provide for everything
that should be required,
neither less nor more -
should any alterations or
additions hereafter seem
called for they may be
made. In principle and
in their general view the
Committee appear to me
quite correct. It should
of course, as observed by
H.E. the President, be im-
pressed on all concerned
that all that has been
defined will be rigorously
expected - nothing less will
be

Para 29.

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be admitted, and that
responsibility to the full
extent stated will hence-
forward be real and not
nominal.

16 The revision of the
Public Works Code and
simplification of the present
system of Accounts and
Returns will be in good
hands if made over to
Colonel Audlow. I do not
recollect any Order from
the Supreme Govt. directing
the introduction of the Bengal
system of Public Works
Accounts in this Presidency.
If there be such an Order,
I should much regret it
and think that we should
shew cause against it.
I observe that in his Despatch
of the 8th April 1862, H.O. Deptt.
No. 9, the Secretary of State
writes as follows. Para 14.

"The multiplicity
and complexity of the
accounts

accounts here referred to,
are matters of general
complaint. They prevent
Executive Officers from
attending properly to the
most important of their
duties, while, as has been
shown by Mr Maltby,
they present no obstacle
to gross fraud and pecu-
lation on the part of
subordinates in the De-
partment. A system of
account and audit equally
strict, but of a more
simple and intelligible
character than the one
at present in use, is evi-
dently one of the essentials,
to a really efficacious
and complete reform of
the Department, and I
am anxious that your
immediate attention should
be given to the best means
of introducing such a
system."

These remarks it
is

^x
i.e. in Minutes by the Honble
Messrs Morehead & Maltby.

is evident apply with
greater force to the Bengal
system of accounts than
to ours, as the former, it
is understood, is much
more complicated, and
enters much more into
detail.

17 The thanks of Govt.
are due to the Committee
for the manner in which
they have dealt with an
extensive and difficult
subject, the inquiry being
in addition to their own
proper duties of themselves,
sufficiently onerous.

W. G. M.

May 22^d 1863

90 W. 1863 Dept.
Proc. of Govt. for June
No. 1952.

Minute by the Honble
J. Pycroft.

Dated May 1863
Received 16 June "

Concurring generally in
the proposals of the Committee
appointed to consider the reorga-
nization of the P.W.D. and stating
that their scheme may be given
a fair trial.

No 437

Public Works Department.

Proceedings of the Madras Government.

Read the following letter from the
Committee appointed to report on the
re-organization of the Dept of P.W.

Order thereon 18th June 1863. No 1599.

The foregoing letter contains
the final report of the
Committee appointed under
date the 17th March last
to submit a scheme for
reducing the cost of the
Public Works Establishment
in this Presidency and to
consider and report on
certain other points con-
nected with the working
of the Department. The
points embraced in their
present letter are,

(a)

(a) The expediency, or otherwise, of retransferring the execution of all minor works and repairs to the Revenue Authorities.

(b) The cost of the establishment required.

(c) The duties and responsibilities which should be imposed on the several grades of officers employed in the Department.

2. On the first question the conclusion at which the Committee have arrived is, that it is not possible, save at a large increase of expense, to make any thing like a general re-transfer of repairs and minor works to the Revenue Authorities. The reasons which have led them to form this conclusion are stated

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stated at length in the 2d and 3d paragraphs of their letter. They show that it is impossible to provide for two separate establishments, for objects nearly identical, and working side by side without entailing a considerable increase of charge; and setting aside the question of cost, they think it doubtful whether the proposed re-transfer would be followed by the advantages which are expected. Admitting that the Public Works Department has not hitherto answered expectation, it is the opinion of the Committee that much that is defective in its working is attributable to defects in the organization of the Department, which the

The changes recently sanc-
tioned and others which
they propose will go far
to remove. Among the
"chief of these defects are
"the attempt at overcentrali-
"zation, and needless multi-
"plicity of accounts and
"returns, inadequacy of
"local supervision, by experienced
"officers, want of defined
"responsibility, & what is
"rather a fault in the
"practice than in the theory
"of the system, a want of
"constant and unreserved
"communication between the
"local officers of the two
"departments, and, lastly,
"the want of a sufficiently
"stringent law to compel the
"villagers to furnish labor
"for the execution of what
"are essentially village works."

All

1313

All these are faults which
the Committee think are
susceptible of being remedied
without removing the super-
intendence of the minor
works and repairs from
the department at present
entrusted with it.

His Excellency the
Governor, in Council concurs
in this opinion. He is satis-
fied that the proposed
retransfer of the minor
works to the Revenue Autho-
rities, even if it did not
involve any increase of cost,
would not be desirable.
It appears to him that, by
the advocates of this mea-
sure, the merits of the old
system and the demerits
of the new system have
both been somewhat exag-
gerated. Sufficient allowance
has

has scarcely been made for
the difficulties incident
to a state of transition
from the one system to the
other; to defects of adminis-
tration, ^{rather} than of the system
itself; to the great and
sudden increase of work
to be done, falling upon a
new department, hastily
and, of necessity, imperfectly
organized; and to the very
great difficulties attendant
on the carrying out public
works at all in a country
like this. On the other
hand, time has shed its
softening influence on the
shortcomings of the old
Maramat system, the
defects of which have been
repeatedly denounced by
experienced officers in both
departments (Revenue
and Public Works), and
which

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which are clearly ^{exposed} ~~expressed~~
in the Report of the Public
Works Commissioners appointed
in 1857. Moreover, the
circumstances of the country
and the position of the
Revenue department have
greatly changed since that
department was relieved of
the execution of public
works. The ranges of Tahal-
dars and their duties, as well
as the duties of their Command-
Superiors, have been greatly
enlarged; their establish-
ments have been reduced
to a minimum; they no
longer possess police authority;
the value of labor has risen;
forced labor, ^{formerly} so extensively
resorted to in the execution
of public works, can no
longer be exacted; and,
consequently, if the Govern-
ment were to fall back
in

in part upon the former system, it would have to be re-introduced under very different circumstances from those which originally obtained. It may be added that some of the ablest and most experienced collectors are opposed to the retransfer. That part of the present system which provides for the execution of all public works, being entrusted to one department specially organized for the purpose, will accordingly be retained subject to such orders as the Secretary of State may pass on these proceedings being laid before him.

The Governor in Council quite agrees with the Committee that the two departments (the Revenue and Public Works) should

work

* para. 4.

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work together more closely than they do at present; and that every advantage should be taken of the opportunities which the Revenue officers unquestionably possess of discovering and giving timely notice of defects or delays in the execution of necessary works. It should, as the Committee observe "not only be permitted, but should be the duty of every Revenue officer, down to the Tahildar, to draw immediate attention to any defective work which may come under his observation. The members of the Public Works Department, on their part, giving ready attention to all such representations. This should be fully made known to all Revenue and Public Works officers.

The Governor in Council
Hunt

thinks it very desirable that
 some such plan as that
 suggested by the Committee
 in paragraph 6 of their
 Report should be adopted
 for the repair of repairs
 of village tanks and roads,
 but before passing orders
 on this point, he would
 wish to have before him
 the views of the Board
 of Revenue and of the
 Officers named in the
 margin as to the feasibility
 of working such an Act
 as that proposed by the
 Committee.

The scheme of District
 Establishments adverted
 to in paras 7 & 8 of the
 report, appears to the
 Governor in Council to be
 judicious, and will be
 carried into effect with
 as little delay as possible.
 It

Mr P. Grant. Collector of Amritsar
 Mr W. Wedderburn. Collector of Bellary
 Mr G. L. Morris. Collector of Nagara
 Mr J. A. Ballant. Collector of Malabar
 Mr V. H. Levinge. Collector of Madras
 Lt Col. S. A. Ludlow. Dy. Secy to Govt.
 Capt. C. W. S. Chambers. Sup. Engr. 1st Div.
 Major J. H. Anderson. Sup. Engr. 2nd Div.
 Lt Col. G. W. Walker. Sup. Engr. 3rd Div.
 Capt. E. A. Wood. Sup. Engr. 4th Div.

It assigns on an average
 about two officers of the
 grade of Executive or Assistant
 Engineer to each District
 who will be placed in charge
 of the more important
 ranges; the other ranges
 being entrusted to Sub
 Engineers or Supervisors,
 with a Talook Overseer
 for each Talook, who
 will be held specially
 responsible for the minor
 works and, specially,
 for the minor irrigation
 works, but will be available
 when required, under the
 orders of the Range Officer,
 for other works in progress
 within the Talook. On
 an emergency, and with
 the sanction of the Superin-
 tending Engineer, these
 Officers may be employed
 on works beyond the limits
 of their Talooks. In some
 cases.

which the Government will
not hesitate to apply.

The changes now
sanctioned will necessitate
an immediate revision
of the Public Works Code,
and this duty, as the
Committee suggest, will
be entrusted to the Deputy
Secretary, Lt. Colonel Lucan,
who will at the same
time revise and simplify
the present system of
accounts and returns.

If the salaries of
the Secretary to Government
Public Works Department
and of his Deputy and
Office Establishment be
charged, as they should be,
like the other departments
of the Secretariat, to the
head of Salaries and
Expenses of Public Depart-
ments, the aggregate
Cost

Cost of the revised Public
Works Establishment will
be in round numbers 12
lacs and a half of Rupees
per annum; and considering
the extent of this Presidency
and the peculiar character
of its irrigation and Revenue
system, the Governor in
Council is satisfied that
the Establishment for the
erection and maintenance
of public works could not
be fixed at a lower rate
either as respects numbers,
grades, or salaries. The
Governor in Council concurs
with the Committee in
their views regarding extra
temporary Establishments
as set forth in para.
14 of their report. The
Government of India will
be requested to permit
the

The continuance of the present arrangement in regard to these Establishments which in this Presidency has been carefully guarded against abuse.

A list of the officers above the grade of Sub Engineer, ^{who} will be retained in the Department is, sub-joined. The Superintending Engineer will submit without delay lists of the Sub Engineers, Inspectors and Talook Overseers whom they propose to retain or appoint in their respective Divisions, keeping in view the allotment specified in Table D. They will also furnish statements showing the names of the Executive Officers and Upper Subordinates to be placed in charge.

Mr. W. B. Pannikar — Rs. 300
- Thompson - Presidency — 310
- Drummond - Kistna — 300
Boiler Maker Nolan - Dowlaishwaram — 300

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Chief of the several Stamps in their respective Divisions.

It is observed that the salaries of the Mechanical Engineers specified in the margin have been omitted from the Committee's scheme. The Superintending Engineer of the Divisions in which the Mechanical Engineers in question are at present employed, will report without delay whether their services are still required for the purposes for which they were engaged, and if not, whether for such of them as were engaged under covenant, provision can be made in the grade of Sub Engineer or Supervisor, ~~provision~~ personal allowance being granted to them if the salary attached to the grade

grade, in which they may
be employed be lower
than those which they
now draw

The Superintendent
Ingenieur will also report
the number of indentured
apprentices at present
employed in their respective
Divisions. The apprentices
must be discharged when
their indentures expire,
except such as may be
considered qualified for
employment as Talook
Overseers, and for whom
vacancies in that grade
may be available.

The Governor in Council
does not perceive any
necessity for retaining
medical Establishments
for the Public Works Dept.
at Dowlandwarum and
Berzwarah. That employed
on the Tambacherry Grant

the Estm.

To
The Superintendent
" ^{Consts Engrs} Const & Audit
" Accountant
" Public ^{key} Depa
" Revenue —
" Military —
" Civil Paymaster
" Honorable S
" L. D. Sim E

1,202 6 to 57 65
Divisions
Public Works Accountant

Genl Coll C.

The Board of Revenue at Bangalore
Hon P Grant, Colln of Bellary
" A Medderburn
" G. L Morris
" G. A Ballard
" F. H. Levinge
" St Coll S. D. E. &

Arbuthnot
Recd 19th 20th June
1863
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By Secy to Govt & W Dept

W 1863 Dep't
of Gov't for June
No. 1599.
of the N York
18 June 63

Report from the Committee
appointed to report on the re-
organization of the Department
in the North -

Cases it will probably be necessary to employ more than one Overseer in a single Talook, while in others where there are few or no irrigation works, as in Canara and Malabar, two Talooks may be placed under a single Overseer. This is a matter which should engage the immediate attention of the Superintending Engineers. The Superintending Engineer of the 7th Division will probably be able to spare a few of the Talook Overseers allotted to his Division, for employment in other Districts. The new Scheme involves the abolition of the office of District Engineer, all the officers in charge of ranges being placed under the

the immediate orders of the Superintending Engineer of the Division. The Talook Overseers will be under the orders of the Officer or Officer subordinate in charge of the range to which the Talook belongs.

The Governor in Council agrees with the Committee that the Government ought to have at its disposal a small establishment of officers of various grades not attached to any particular District, but who may be employed in working out the details of any important projects connected with affairs with reference to irrigation or other works whether emanating from the Superintending Engineers or from any other source. The District Officers have their

These lands, too full of
routine work to be able to
pay the attention which
is requisite for working
out the plan, and especially
the details of many of the
large works which are
necessary to develop the
resources of the Country,
and when such ^a work
has to be carried into two
or more divisions, it is the
more necessary that a
single officer should be
specially employed on it.
There are many very useful
projects which have been
necessarily postponed
because the Government
have not had at their
disposal officers who
could be spared from the
ordinary routine of depart-
mental duty. Much,
moreover, has to be done
in developing and utilizing
to their full extent projects
already

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already only partially carried
out. It is manifest from
the returns before Govern-
ment that the results of
some of the greatest public
works in this Presidency
fall far short of what
they should be. The extent
of land irrigated from the
Godavery, Krishna, and
Pennair Rivers is not
much more than half
about that capable of irri-
gation. Of 16,37,000 acres
which might be watered
from these great works,
7,57,000 at present derive
no benefit from them. The
more difficult and expensive
part of these works have
been executed. It remains
only to carry out the
subsidiary arrangements
for the full distribution
of the water provided by a
vast expenditure of money
and

And Improving Skill.

Among other projects well deserving of special consideration are, the extension of the Northern Canal from Doogarazapatam to Kistnapatam, the construction of additional annicuts in the upper parts of the Godavery and Krishna which would serve to utilize vast quantities of water that now flows annually over the present annicuts into the sea and would bring under Cultivation large tracts now uncultivated. The storage of water for the arid District of Coimbatore by forming reservoirs of the mountain streams which flow down from the Neilgherries and various other projects equally important which demand the undivided attention of special officers. The

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The proposal to allow each officer whose duties involve locomotion a fixed monthly sum in addition to his pay, as travelling allowance, is approved and sanctioned. This arrangement appears to His Excellency in Council to be appropriate in the case of a Department whose members should be constantly on the move. It prevents dissipated practices which discredit the Department and tend to demoralize the inferior servants, and it will lead to a considerable saving of time and trouble in the preparation of bills. It will be the duty of the Secretary to Government and of the Superintending Engineers to see that their subordinates do not neglect their duties by remaining stationary.

Stationary when they ought
to be on the move.

The suggestion in para.
12 that means be taken
for transferring the litho-
graphic work of the Depart-
ment to private Establish-
ments, is approved. A
Notification inviting tenders
from persons willing to
undertake the work will
be issued immediately.

In paras 15 to 27
the Committee define the
duties and responsibilities
which should devolve on
the several grades of servants
in the Public Works Dept.
from the Secretary to Govt
to the Talook Overseer. The
Governor in Council concurs
generally in the Committee's
recommendations on this
point which appears to
have been very carefully
considered. The enforcement

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of the individual responsibility
of officers is a ^{matter} point to
which His Excellency in
Council attaches the
greatest importance. Hitherto
such responsibility has
been in many cases little
more than nominal. Under
the rules proposed by the
Committee, each officer
will have his definite line
of responsibility; and it
must be distinctly understood
that this responsibility will
be rigorously enforced, and
that henceforth the Govt
will not admit the excuses
for estimates exceeded, or
for failure of works, which
have hitherto passed current.
In future, whenever it shall
appear that there has been
neglect of duty or wilful
carelessness, removal from
office will be the remedy
which