

Read the following papers:—

No. 816A.

No. 432.

*Note by the Chief Engineer for Irrigation.*

THE views of the Accountant General of the Public Works Department with regard to the accounts required appear to be likely to deprive the State of much of the benefit it would otherwise derive from Public Works outlay, by taking up far too much of the time of the professional officers of the department on matters foreign to their proper duties, thus directly leading to insufficient supervision and to wasteful and consequently unnecessary expenditure. Added to this the Accounts Branch of the Public Works Establishments is becoming a most serious charge under that head, and it is not only my conviction but that of most of the officers of the department, with whom the subject has come under discussion, that the greater part of this charge is incurred for work which not only is of no value but which is a cause of loss. From a condition of next to no accounting at all, a re-action has carried the department into a state of affairs which threatens to leave nothing but accounts. Officers have to time their movements and make their arrangements, not with reference to the requirements of the works in their charge, but with regard to the numerous, I may say endless, accounts and returns which they now have to furnish. No one would desire to see any slackness in accounting for expenditure, but the works and not the accounts are, or rather should be, the first consideration, and this natural order of precedence has been, I think, far too much lost sight of.

2. Classifications of work and expenditure are a cause of much waste of time, and consequently of much unnecessary expense. It is perhaps useful to know what has been the cost of (1) providing or carrying a certain supply of water for irrigation, and (2) then of distributing it, also (3) the cost per acre of the project, and (4) the return per acre obtained, with some other particulars of the same kind, although it may be safely stated that even with regard to such general features no two projects are really comparable; but the classification of irrigation projects under scores of heads and sub-heads for main canals and branches, and distribution works, respectively, is of no use for purposes of direction, and must also be useless for those of comparison. Were they made any use of at all, which appears to be improbable, they would only mislead. In the same Presidency, in contiguous districts, in different parts of the same district, conditions and circumstances vary greatly, and comparison is impracticable.

3. The above apparent digression from the particular subject referred by the Government of India has seemed to me necessary to a right understanding of the propositions of the Accountant General, Public Works Department, with regard to provision for establishments in estimates of projects. He shows that establishments employed upon, or connected with, projects are of two kinds: the one those which are already in the service of the State and would be retained whether the projects were carried out or not, and the other those which are specially provided for employment on the works. It would seem that the former could affect in no way the decision as to whether the works should be sanctioned or not, and that only

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30th January 1874.*

indirectly can the charges on their account be said to have anything to do with the cost of the works. In my opinion, therefore, no provision should be made in the estimate for a work on account of "direction and account." That estimate should show as completely as possible what total outlay the work will involve, but provide for no expenditure which is not due to the execution of the work. If the Government of India desire charges on those accounts to be ultimately debited to individual works, this may be done annually in the accounts office by a distribution by percentage to large works, and for the rest to classes of works. There is practically no limit to the amount of detail which the Accounts Department may demand, but the useful limit is not a very wide one, and I think it has long since been passed. A merchant who would not be content with knowing that he had invested Rupees 1,000 in, say, cotton, and had obtained Rupees 1,200 on its resale, but must have added to the cost of his investment a careful account of the share of his time, and of his 1st and 2nd and 3rd Clerks' time, a fraction of the office messenger's time, items for paper envelopes, wafers and postage stamps, etc., would soon find that the establishment needed for this minute investigation had seriously wasted his profits.

4. With regard to the provision in estimates for tools and plant, it appears to be quite proper that this should be made as accurately as possible, so far as large works are concerned; but it will be a matter of regret if much difficulty be experienced in varying the amount with the concurrence of the officers best able to judge of the propriety of the proposals. It is, I believe, quite impossible to judge accurately beforehand of the outlay on this account, and engineering works of difficulty cannot be successfully carried out under the hard and fast system which mere accountants may think suitable. In this Presidency there are however thousands of works carried out yearly for which no special provision for tools and plant can or should be made. It is much better and certainly much more economical that they should be furnished with such appliances as may be necessary out of lump sum grants, based on the experience of former years, but generally on a rather more liberal scale than has hitherto been customary; for I have observed all over the country that tools are not kept generally in an efficient state, and this means that those using them are doing less work, and that the latter is costing more than is right.

5. With regard to variations between estimated and actual cost of works, I would wish to remark that these are in a great measure due to circumstances for which the framers of the estimates are in no way responsible. The cost of a work within the limits of a very wide percentage depends much more upon the qualifications of the executive officers than upon any system of accounts and returns, or any care and pains taken with the preparation of the estimates. The latter may be ample for one officer and altogether inadequate for another, and it is perhaps not incorrect to say that, whatever their amount, some officers would by good management effect a saving, and others by bad management occasion excess.

ELLORE CANAL,  
21st November 1873.

(Signed) J. MULLINS, Lieut.-Colonel, R.E.,  
Chief Engineer for Irrigation.

*Proceedings of the Madras Government, Public Works Department,  
30th January 1874.*

Proceedings of the Government of India, Public Works Department, (Account—Irrigation,) dated Simla, 5th November 1873, No. 290-4 A—I.

*Provision for Establishment and Tools and Plant for Irrigation Projects.*

Read the following:—

*Note by Lieutenant-Colonel P.P. L. O'CONNELL, R.E., Officiating Accountant General, Public Works Department, on provision for Establishment and Tools and Plant for Irrigation Projects,—No. 288 I. (Account—Irrigation), dated 7th October 1873.*

I DEEM it my duty to bring to the notice of the Government of India the desirability for impressing upon Local Governments and Administrations the necessity for seeing that proper provision is made in their estimates of irrigation projects for charges for Establishment and Tools and Plant.

2. As showing the necessity for action in the matter, I would refer to a few cases in which no provision, or in which inadequate provision, has been made for the charges referred to:—

I.—Madras Water-supply project. No provision whatever made in the charges referred to.

II.—Sunkum Project. Inadequate provision.

III.—Orissa and Soane Projects. Inadequate provision. A mere reference to paragraphs 17 to 19 of the Irrigation Budget Orders for 1873-74 will show this to be the case.

IV.—Agra Canal Project. Most inadequate provision; which has already been exceeded, vide paragraph 17 of Irrigation Budget Orders for 1873-74.

V.—Lower Ganges Canal. Inadequate provision, vide paragraphs 15 and 16 of Budget Orders above mentioned.

VI.—Baree Doab Canal, Kusoor and Subraon Branches. Provision estimated at 12 per cent. of outlay on works, but office contingencies and tools and plant, as well as travelling allowance, said to be covered by the 10 per cent. for contingencies.

In the estimate for the Ravee weir and remodelling of this canal, Chief Engineer says 'Tools and Plant' are included in the general percentage. "Establishment is not included until I know the proportion which office contingencies and travelling allowances bears to establishment salaries; I cannot say whether the general contingencies will cover them," etc.

Similar remarks are applicable to the case of the Sirhind Canal.

3. I submit that this state of things calls for remedy. In some cases the establishment is provided at 10 or 12 per cent. of the provision for works, a most inadequate rate. In other cases, no provision is made for travelling allowances or contingencies, or for proportionate share of direction or account. In a few cases the period which it will take to complete the work is under-estimated, and the result is that the consequent charges for establishment are also under-estimated. It is not done purposely, but in ignorance really of what is required, or in the hope of its being possible to do the work for the amount provided.

4. So important does the subject seem to me that I issued a circular to Controllers requiring them to report in all cases when it is probable that the provision for establishment will be exceeded. I attach for information copy of that Circular No. 28 of 1873. The duty then laid on Controllers consists in their having to pass the charges for establishment against the provision for the purpose made either in the estimate for the work, or in the report on the same, just in precisely the same way as they are required to audit the charges for earthwork or masonry, so have I required them to pass the charges for establishment. Thus there will be three limits on the charges for establishment, viz.:—

I.—The proper sanction of Government to the incurring of the charges, such sanction being given in the usual way as at present.

II.—The Budget grant for establishment.

III.—The provision for establishment as made in the estimate for the scheme on which the establishment is employed.

5. I venture to ask for the sanction of Government to what I have done. Anticipating such sanction, I proceed to state how I consider that practical effect should be given to it.

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30th January 1874.*

6. The establishment employed in incurring expenditure on capital account of irrigation works is of two kinds:—

I.—Establishment already existing, and which would have to be retained even if the new works were not commenced.

II.—Establishment to be employed especially on the project.

7. In the former class of establishment, the rules require that a certain percentage should be debited to capital account. These rules I would maintain. But I would require that in every such case the opinion of the Controller should first be obtained before the percentage is fixed.

8. In the second class of establishment, I would require that a regular detail of the establishment to be employed, and the period for which they are to be employed, should be furnished, and in both cases I would lay down that special care is taken to see that due and adequate provision is made for proportion of charges for direction and account.

9. To prevent omissions, I would lay down, as a rule, that after the total of the abstract of an estimate, the necessary provision for establishment and tools and plant should be added.

10. And to admit of a watch over the expenditure, I would add to the budget estimate and to the appropriation account the additional columns mentioned in paragraph 5 of my Circular No. 28 of 1873 as being necessary.

11. To provide for omissions and accidents, I would require that in concert with the Controller, every estimate already sanctioned for irrigation works should be over-hauled at once to see whether proper provision has been made for the charges referred to, and also for maintenance\* charges which are sometimes so inadequately provided for as necessarily to mislead Government as to the financial prospects of projects recommended for sanction. If proper provision has not been made, I would require the immediate submission of a revised estimate. The matter is most important, and, to my mind, it would appear that immediate attention should be paid to it.

\* i. e., repairs during and after construction of works, etc.

Circular from Lieutenant-Colonel P. P. L. O'CONNELL, R.E., Officiating Accountant General, Public Works Department, to all Controllers of Public Works Accounts, dated Simla, 25th September 1873, No. 28 G. S., No. 3 I. S.

SEVERAL cases having recently occurred in which the absence of provision, or insufficient provision, for establishment and tools and plant in the general estimate of capital outlay on irrigation projects was not brought to notice by Controllers, I have the honour to intimate that for the future it will be looked upon as a serious portion of the duties of an Account Office to bring to notice cases in which it is found that there is no provision, or insufficient provision, for the charges referred to.

2. As you are aware the detailed estimate for a project is confined to providing for the actual charges on the work itself, including provision for its maintenance while the work is under construction. The probable charge for establishment and tools and plant, as also that for interest and capitalisation of abatement of land revenue, is made in that portion of the report on the project in which the returns to be derived from it are estimated. For the present you should, in cases when you receive the estimate for a project, ask the Chief Engineer for the report on the same, to ascertain the amount, if any, provided for the heads of charge referred to.

3. The amount thus provided should be considered by you as the basis on which your debits to capital for establishment and tools and plant should be compared. If there is any excess, or tendency to excess, over such provision, it will become your duty to bring the fact to the notice of the Local Government or Administration, as well as to this Office.

4. As regards tendency to excess there ought to be no difficulty to ascertain the circumstances on this point. Thus the provision for establishment is either made on a certain scale for a certain number of years, or according to a percentage based on the outlay on works. If you find that the work is likely to be in progress for a longer period than is anticipated, and that the provision for establishment will be exceeded in consequence, a report of the circumstance should be reported, at once. If in any case the percentage of the amount is too low, that fact should be reported,

*Proceedings of the Madras Government, Public Works Department,  
30th January 1874.*

and if no provision is made for charges for direction and account, or for travelling allowances and contingencies, or if two Executive Engineers are employed when one only is provided for in the scale, your duty consists in bringing the matter to notice. In fact, just in precisely the same way as you watch the expenditure on earthwork or masonry work connected with a project, so are you expected to watch the charge for establishment and tools and plant.

5. The question of making establishment and tools and plant a sub-head of work in the estimate is now under consideration. If the proposal be sanctioned, the check now enjoined would be much simplified. Meanwhile you are expected to take such measures as will admit of that check being exercised. In this view your immediate attention should be devoted to ascertaining whether the provision made for establishment and tools and plant for works in progress is sufficient or not. The point is most important, and after this warning no excuse will be accepted if what is required is not attended to. On this point I would invite your attention to paragraphs 5 and 6 of my Circular No. 41 of 1872. I may add that to complete the check enjoined, I shall suggest to the Government of India the desirability of adding certain columns to Appendix Part V. as well as to Part VI. of the Budget Estimate to show—

|                                      | rs. |
|--------------------------------------|-----|
| Amount of sanctioned estimate ... .. |     |
| Computed charge to end of ... ..     |     |
| Probable charge for ... ..           |     |

and to add columns in the corresponding portions of the appropriation account to show actual charges compared with estimate.

ORDER.—Ordered, that the Note read be communicated to the Local Governments noted in the margin, for an expression of opinion as to how the requirements of the case can be most appropriately met.

Governments of Madras, Bombay, Bengal, North-Western Provinces, and Punjab, in the Irrigation Branch.

(Signed) C. H. DICKENS, Colonel, R.A.,  
Secretary to the Government of India.

No. 433.

ORDER THEREON, 30th January 1874, No. 219.

IRRIGATION, No. 44.

Account.

His Excellency the Governor in Council is of opinion that the views expressed by the Chief Engineer for Irrigation regarding the questionable utility of the great and increasing elaboration of the accounts ordered to be prepared in the Irrigation Branch of the Public Works Department, and the multiplication of forms and statements, are worthy of careful consideration. Not only is the cost of the Accounts Department proper rapidly on the increase, but a large portion of the office establishments of the directing and executive officers is occupied with accounts, and the time of those officers themselves is diverted far too much from their more legitimate and important professional duties. His Excellency believes that Government must look rather to the professional officers of the department than to any system of accounts to secure fair accuracy in estimates of the cost of works, and that there is danger in supposing that any estimates for large irrigation projects can be more than the best approximations, based on the best available data. The preliminary enquiries may easily be made to cost more, and yet the estimates be not any the more reliable.

*Proceedings of the Madras Government, Public Works Department,  
30th January 1874.*

2. The Government concur with the Chief Engineer for Irrigation in thinking that no advantage can accrue from including in the cost of works charges which do not directly appertain to them. These, as charges of the Public Works Department, may, if thought advisable, be ratably distributed on any principle which may be thought desirable, but, inasmuch as they can never be correctly determined for individual works, it is believed that such items of indirect cost, as those relating to direction and account, would be better left out of consideration. It is indeed manifest that to obtain an even apparently complete summary of all charges direct and indirect a portion of the cost of most of the branches of administration both in India and in England would need to be included.

3. His Excellency in Council considers that provision for tools and plant should be made in the estimates of all large works, and that reasonable discretion should be left to directing officers to vary the charge on this account. In this Presidency the majority of the works need no such provision individually, and their very moderate wants should be met from the general plant of the districts which should be supplemented or replaced from time to time out of lump sum grants.

4. Ordered that a copy of these Proceedings be forwarded to the Government of India with reference to their Resolution of the 5th November 1873.

No. 290-4 A.—I.

(True Extract.)

(Signed) J. MULLINS, Lieut.-Colonel, R.E.,  
Joint Secretary to Government.

No. 434.

(Docket No. 220, dated 30th January 1874.)  
Copy of the above forwarded to the Government of India.

(True Extract.)

Lieut.-Colonel, R.E.,

Joint Secretary to Government.

N<sup>o</sup> 816 A  
Note by the Chief Engineer for Irrigation.

The views of the Accountant General of the Public Works Department with regard to the accounts required appear to be likely to deprive the State of much of the benefit it would otherwise derive from Public Works—outlay by taking up far too much of the time of the professional officers of the Department on matters foreign to their proper duties, thus directly leading to inefficient supervision, and to wasteful and consequently unnecessary expenditure. Added to this the Accounts branch of the Public Works Establishment is becoming a most serious charge under that head, and it is not only my conviction but that of most of the officers of the Department, with whom the subject has come under discussion, that the greater part of this charge is incurred for work which not only is of no value, but which is a cause of loss. From a condition of next to no accounting at all, a reaction has carried the Department into a state of affairs which threatens to leave nothing but accounts. Officers have to time their movements and make their arrangements, not with reference to the requirements

for no expenditure which is not due to the execution of the work. If the Government of India desire charges on those accounts to be ultimately debited to individual works, this may be done annually in the Accounts office by a distribution by percentage to large works, and for the rest to classes of works. There is practically no limit to the amount of detail which the Accounts Department may demand, but the useful limit is not a very wide one, and I think it has long since been passed. A merchant who would not be content with knowing that he had invested 1000 Rupees in, say, Cotton, and had obtained Rupees 1200 on its resale, but must have added to the cost of his investment a careful account of the share of his time, and of his 1<sup>st</sup> and 2<sup>nd</sup> and 3<sup>rd</sup> Clerks' time, a fraction of the office messengers' time, items for paper envelopes, wafers and postage stamps &c. would soon find that the establishment needed for this minute investigation had seriously wasted his profits.

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as possible, so far as large works are concerned, but it will be a matter of regret if much difficulty be experienced in varying the amount with the concurrence of the officers - best able to judge of the propriety of the proposals. It is, I believe, quite impossible to judge accurately beforehand of the outlay on this account, and engineering works of difficulty cannot be successfully carried out under the hard and fast system which mere accountants may think suitable. In this Presidency there are however thousands of works carried out yearly for which no special provision for tools and plant can or should be made. It is much better and certainly much more economical that they should be furnished with such appliances as may be necessary out of lumpsum grants, based on the experience of former years, but generally on a rather more liberal scale than has hitherto been customary; for I have observed all over the Country that tools are not kept generally in an efficient state, and this means that those using them are doing less work, and that the latter is costing more, than is right.

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Office of the Chief Eng<sup>r</sup> } Wm. L. Collins Esq. C.E.  
for Irrigation }  
Colore Canal 21 Nov<sup>r</sup> 73 } Chief Engineer for Irrigation

To The Secretary to Govt P.H.D.



ments of the directing and Executive officers is occupied with accounts, and the time of those officers themselves is diverted far too much from their more legitimate and important professional duties.

His Excellency believes that Government must look rather to the professional officers of the Department than to any system of accounts to secure fair accuracy in estimates of the cost of works, and that there is danger in supposing that any estimates for large irrigation projects can be more than the best approximations based on the best available data. The preliminary enquiries may easily be made to cost more, and the estimates be not any the more reliable.

2. The Government concur with the Chief Engineer for Irrigation in thinking that no advantage can accrue from including in the cost of works charges

charges which do not directly appertain to them. These, as charges of the Public Works Department, may if thought advisable, be ratably distributed on any principle which may be thought desirable, but, in-as-much as they can never be correctly determined for individual works, it is believed that such items of indirect cost, as those relating to direction and account would be better left out of consideration. It is indeed manifest that to obtain an even apparently complete summary of all charges direct and indirect a portion of the cost of most of the branches of administration both in India and in England would need to be included.

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4. Ordered that a copy of  
these Proceedings be forwarded  
to the Government of India  
with reference to their resolu-  
-tion of the 5<sup>th</sup> November 1873.

W. 24/11/73

G.M.W.

Letter No. 2207

Copy of the above for-  
warded to the Govt of India.

No. 290-4 A.I.

To the Dy. Commr.

" Lt. Col. R. B. Kennedy

" Ch. Commr. for Irr.

" Off. Controller

Desp. with S.C. 3/2/74

Desp. with S.C. 3/2/74

R. 19

Orig. Dec 7/73

Oct. of 1874 Madras.  
PUBLIC WORKS.

To District Engineers  
of the Secretary to the  
Public Works

Dated

Recd.

Encl. /

G. O. 30<sup>th</sup> Aug 1874 No 219

22

Nos. 431-433 &amp; 34

### Irrigation Projects.

Preparing orders on note by  
the Secy for Irrigation  
on Resolution of the  
Govt of India regarding  
the provision for estab-  
lishment & Tools & Plant  
for Irrigation Projects.

Forwarded copy of  
Proc. on note by the Secy  
for Irrigation on Reso-  
lution of the Govt of India  
regarding the provision  
for establishment &  
& Tools & Plant for  
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