M.R.O. 1—77,006—8-6-37.

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(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No. 172 - Press ~~Mis.~~

350-351.

Dated 19-1- 1867.

Not to be folded or roughly handled

No. 350. Read the following letter from the Consulting Engineer Irrigation and Canal Company, to the Secretary to Government, Public Works Department, dated Camp, Gadiganore, 5th January 1867, No, 106 :—

1. I have the honor to forward, for the consideration of Government, a letter, No. 370 of the 22nd* ultimo, from the Agent and Manager Madras Irrigation and Canal Company, pointing out that the orders of Government of the 17th and 20th November last, Nos. 3,671 and 3,703, in which the sanction of revised estimates for the second and third sections of the Main Canal was postponed until, by the measurement or examination of the work already done, it could be shown that the additional work included in those estimates was really required, and further that provision might be made in the estimate of the second section for such work as had been proved to be necessary to stop the leakage through the banks of that part of the canal, wherefrom breaches had occurred and were likely to recur, will, he apprehends, delay that immediate and vigorous prosecution of the works, which is deemed necessary in order to carry out the agreement with the Secretary of State for India, which was entered into by the Company on the 2nd October last. I have received the Order of Government No. 3,960 of the 15th ultimo, referring to that agreement, but the supplementary Contract has not yet reached me, and therefore I am not acquainted with its provisions.

* Received by me yesterday.

2. Mr. Henslowe admits the propriety of the course which the Government have desired should be followed, but, after conferring with the Chief Engineer, he represents that Mr. Latham is not in a position with the staff at his disposal to undertake the measurement of work done, without the loss of a great deal of time, and he suggests that, as this is the case, perhaps the Government will allow the several sections to be measured by members of the Public Works Department.

3. On the question as to whether the Government could spare the services of a considerable number of the Officers and Subordinates of the Public Works department it is not necessary to touch ; but I must point out that, as already noticed, the work done in the sections referred to is not at present in a condition for measurement ; that one reason for the postponement of supplemental sanction was the fact that the estimate of work remaining to be done was unreliable, owing to the irregular state of the banks, and that an advance sufficient to enable such further work as might be needed, to advance the banks to a condition in which they would be capable of fairly accurate measurement, was given. There cannot, I should think, be any reason for handing over the execution of this additional work to Officers of a department with which the Chief Engineer is unconnected, but who would, nevertheless, have to receive instructions from him, as to the form which the banks are intended to take. Such an arrangement would be far from convenient. If, on the other hand, this work be done, and it must not be forgotten that under any circumstances it is work which has to be done, the subsequent measurements will be comparatively simple, and there would be no necessity for obtaining additional assistance to undertake the duty.

4. Another consideration should not be lost sight of. Public Works Officers would necessarily spend much time in making themselves acquainted with the works,

and the knowledge thus gained would be useless, so soon as the task of examination had been completed. On the other hand, the Executive Engineers of the Company, who may be appointed to the charge of Divisions, have in any case to obtain a thorough knowledge of the works, and the information acquired is to be made use of in conducting them to completion.

5. I have already said, in reporting on the second section estimates, that it is necessary for the guidance of the Executive Engineers, who are to have charge of the several sections, that the work remaining to be done should be clearly ascertained. It would indeed be unfair to such Officers to require them to carry on works, the expenditure on which they could not possibly check and control, until they have been placed in such a state as will admit of the amount of work done from time to time being ascertained. It is doubtless much to be regretted that any time should have to be devoted to the examination of work already done, but this happens to be essentially necessary to the proper management of work remaining to be done, and the fact that the management of past work has been defective and has led to difficulties, is a weighty reason why future good management should at least be made possible.

6. In paragraph 13 of his letter, Mr. Henslowe quotes the Chief Engineer as saying "I am asked to assume the probability of mistakes and fraud in the record of "measurement for past work"&c., But what is the real state of the case? Very large additional quantities of work are included in the revised estimates, and the Chief Engineer cannot explain how it is that they are required. The works are confessedly in a state in which it is difficult, if not impossible, to ascertain what has been done or what remains to be done, and Mr. Latham is desired to execute such additional work, and to cause such reformation of irregularities in past work, as will admit of these important points being determined. He is in fact asked to substitute, for an assumption that the additional work entered in the estimates is necessary, direct proof of its necessity.

7. I will now say a few words with regard to the apprehension entertained by the Agent, that delay in at once proceeding with the works of certain sections as fast as might be possible, were their condition not such as to need preliminary investigations, will interfere with the due fulfilment of the supplementary Contract, and prevent (paragraph 17) the employment of certain Contractors who have urgently asked for contracts for work. I think there need be no difficulty whatever in starting at once quite as much work as the Chief Engineer may be able to find superintendence for, or for which labor may be available; and I suppose, in saying this, that the maximum number of laborers ever yet employed on the canal works, and which I think was about 18,000, could be very soon collected. So far as I am aware the second, third, and part of the seventh sections are the only parts of the canal which require to be examined before fresh work is undertaken. In the fourth section, there is a great deal of work to be done, in the fifth a good deal, in the upper part of the sixth not a little, in the lower miles of the seventh section work has hardly been commenced, and there can be no difficulty in setting out work for large parties of coolies there. The eighth section is far from complete. The ninth section, thirty-five miles in length, has not been taken up yet. It was

Proceedings of the Madras Government, Public Works Department,
19*th January* 1867.

sanctioned, but the sanction was cancelled at the request of the Agent, and it can be re-sanctioned without delay, whenever such sanction is asked for. Were I at Madras, I could, in a few minutes, show what a vast amount of work, whether earthworks or masonry, to prevent the immediate starting of which there is no objection, has to be executed; but at any rate there is no room for doubt that all available labor, whether local or brought from a distance, can be at once employed, and there can also be no doubt that in the second, third, and seventh sections all local labor may be profitably employed for some considerable time in executing the work required as a preliminary to the examination of the work done. Under these circumstances, I do not think that the Company can in any way be prejudiced by requiring the orders of Government of the 17th and 20th November last to be carried out, and I do not recommend therefore any alteration or modification of them being made.

From the Agent and Manager Madras Irrigation and Canal Company, to the Consulting Engineer Irrigation and Canal Company, dated Madras, 22nd December 1866, No. 370.

1. With my letter No. 104 of the 13th July, I had the honor to submit, for the consideration and sanction of the Governor in Council, revised estimates for the second and third sections of the Main Canal.

2. In your report on the second section you recommended that sanction should be postponed until the full amount required for placing the whole section in a secure and satisfactory state has been ascertained, and you further suggest that the irregularities in the banks be made up and cross sections taken.

3. In other words, if I understand the recommendation, it is to effect an accurate measurement of the work already done, before any new work be undertaken.

4. The Government, agreeing with your recommendation, authorized an advance of two lakhs to enable the Provisional Chief Engineer to carry out the preliminary work recommended by you. (G. O. No. 3,671, 17th November.)

5. Similarly the Government in their Order of the 20th November, (No. 3,703,) authorized an advance of 1¼ lakh for preliminary work in the third section.

6. The general principle adopted by the Government, and which I presume is to apply to the whole Canal, is, I apprehend, that before any new work is undertaken, the amount of work already done shall be ascertained.

7. In the wisdom of this decision I cannot but concur; but I must submit, for the favorable consideration of Government, that I am by this decision placed in a position of considerable difficulty.

8. By the Contract entered into on the 2nd October last, the Secretary of State in Council declared that the Company had, prior to the 30th April 1866, with the sanction and approval of the Secretary of State in Council, duly expended of the "Guaranteed Capital" various sums, making together a total of £ 937,242 6*s.* 7*d.*, and the Company, on the other hand, agreed to complete the line of Canal from Soonkasala to Cuddapah by the 1st day of July 1871.

9. When a time bargain is made between two parties, it is obvious that, according to every principle of justice and equity, the working party ought to have perfect freedom of action to execute his work, and I am quite certain that in our case Government will never condescend to take advantage of any delays which their own action may interpose, but will generously and cordially second our efforts to carry out our part of the Contract. I had hoped that so soon as I should learn by Telegram that the Contract was signed we should go to work, and I acted accordingly.

10. But upon personally discussing with Mr. Latham the present state of the works, I learn from that gentleman, that the decision of the Government, quoted above, must interpose a very

serious and, perhaps, fatal delay to our prosecution of the works, that all the precautions I had taken beforehand to ensure their immediate and rapid prosecution will be rendered abortive, and we shall be in danger of being prevented by the action of Government (one of the Contracting parties) from carrying out our Covenant.

11. This unfortunate result is one, which I am sure, no one would deprecate more strongly than the Government themselves.

12. Although I am not in a position to show how this evil and danger is to be altogether removed, yet an expedient has suggested itself to me, by which I think that with the concurrence of Government it may be be in some degree mitigated. Experience has shown me that to attempt the task with our own diminished staff will be a very tedious labor, and the subsequent discussion with Government, may protract the settlement to an indefinite period.

13. Mr. Latham says: "I am asked to assume the probability of mistakes and fraud in the record of measurement for past work, and to measure and state authoritatively what work lies buried in the foundations and walls already put in; what earthing up and trimming have been really executed as well as charged for, and what earth and rock really have been excavated during the process of making up the banks and excavating the cuttings. *The attempt to do this must lose me probably the rest of the season now half over; and the correspondence, before Government accept my measurement, will occupy perhaps six months more.*"

14. He adds too: "All my effective Surveyors now are implicated, and I cannot accept their work as having any authority in itself; I can give them no discretion, and their work is often lost and always unsatisfactory from being found always biassed in one direction. I have only one Engineer available, amongst other duties, for superintending this measuring up."

15. Taking all these circumstances into consideration, I propose, for their consideration, that Government should appoint Engineers and Surveyors of their own to measure up the whole Canal, the Company paying the extra remuneration which the work will require.

16. This plan will, I believe, not cost the Company more than would the measurement if effected by our own Officers, and I am quite sure that much time will be saved by it, especially if Government will see fit to *pass* section by section as measured. By this means we may be enabled to go on with the work of completion in the 2nd, 3rd, and 4th sections, while the measuring of the 5th, 6th, 7th, and 8th are progressing.

17. I think I need not proceed to press upon you more elaborately the importance of expedition in this matter, but I may mention that a number of monied men, some of them lately large Contractors on the Railway, have urgently asked for Contracts, but delay on our part must, of course, have the effect of preventing these men from keeping their laborers together.

No. 351. ORDER THEREON, 19th January 1867, No. 172.

CIVIL WORKS, No. 75.

1. The Government, having given their careful consideration to the papers above recorded, regret that they are unable to modify their Orders of the 17th and 20th November last.

2. His Lordship in Council concurs in opinion with the Consulting Engineer that before the revised estimates for the second and third sections of the Canal can be sanctioned, it is indispensable that the necessity for the additional work for which they provide should be clearly shown by actual measurement and examination, to be undertaken by the Officers of the Company.

3, There is, however, no reason why any delay that may occur in the sanction of the revised estimates should prove prejudicial to the interests of the

Proceedings of the Madras Government, Public Works Department,
19*th January* 1867.

Company, as Captain Mullins very plainly shows, in paragraph 7 of his letter, that ample employment can be found for all available local labor as well in the second and third as in the other sections of the Canal which are still incomplete.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Consulting Engineer Irrigation and Canal Company.
,, Manager for do. do.

Exd. S. T. Augustin.

No. 370

Madras Irrigation & C. Co.

Madras 22nd Decr 1866.

From.

The Agent and Manager

Mr Irr & C. Co.

To.

The Consulting Engineer

Irr. & C. Co.

Sir.

1 With my letter No 104 of the 15th July I had the honor to submit for the consideration and sanction of the Governor in Council revised Estimates for the Second and Third Sections of the main Canal.

2 In your Report on the 2nd Section you recommended that Sanction should be postponed until the full amount required for placing the whole Section in a Secure and satisfactory state has been ascertained, and you further suggest that the irregularities in the Banks be made up & cross Sections taken.

3 In other words, if I understand the recommendation, it is to effect an accurate measurement of the work already done before any new work be undertaken.

4

4 The Government agreeing with your recommendation authorised an advance of two Lakhs to enable the Provincial Chief Engineer to carry on the preliminary work recommended by you (G.G. No. 3671 - 17th Nov.)

5 Similarly the Government in their Order of the 20th Nov. (No. 3703) authorised an advance of 1¼ Lakh for preliminary work in the third Section.

6 The general principle acted upon by the Government, and which is to apply pursuance to the whole Canal, as I apprehend, that before any new work is undertaken the Amount of work already done shall be ascertained.

7 In the wisdom of this decision I cannot but concur; but I must submit for the favorable consideration of Government that I am by this decision placed in a position of considerable difficulty.

8 By the Contract entered into on the 2nd October last, the Secretary of State

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State in Council declared that the Company had prior to the 30th April 1866 with the sanction & approval of the Secretary of State in Council duly expended of the "Guaranteed Capital" various Sums making together a total of £937,242. 6. 7d. and the Company on the other hand agreed to complete the Line of Canal from Soonkasala to Cuddapah by the 1st day of July 1871.

9 When a true bargain is made between two parties, it is obvious that according to every principle of practice and equity the working party ought to have perfect freedom of action to execute his work, and I am quite certain that in our case Government will never condescend to take advantage of any delays which there can action may interpose but will generously and cordially second our efforts to carry out our part of the Contract. I had hoped that so soon as I should learn by Telegram that the Contract was signed I should go to work, and I acted accordingly.

10

personally

10 But upon discussing with Mr Latham the present state of the works I learn from that Gentleman that the decision of the Government quoted above must interpose a very serious & fatal delay to our prosecution of the works - that all the precautions I had taken before hand to ensure their immediate and rapid prosecution will be rendered abortive and we shall be in danger of being prevented by the action of Government one of the Contracting parties / from carrying out our Covenant -

11 This unfortunate result is one which I am sure no one would deprecate more strongly than the Government themselves.

12 Although I am not in a position to shew how this evil and danger is to be altogether removed, yet an expedient has suggested itself to me by which I think that with the Concurrence of Government it may be

11a

be in some degree mitigated. Experience has shown me that to attempt the task with our own diminished staff will be a very tedious labour, and the subsequent discussion with Government may protract the settlement to an indefinite period.

13 Mr Latham says: I am asked to assume the probability of mistakes and fraud in the record of measurement for past work and to measure and state authentically what work lies buried in the foundations and walls already put in; what earthwork & trimming have been really executed as well as charges for and what earth & Rock really have been excavated during the process of making up the Banks and excavating the cuttings. The attempt to do this must lose me probably the rest of the season now half over and the Correspondence before Government

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accept my measurement will occupy perhaps 6 months more".

14 He adds too "all my effective Surveyors now are implicated and I cannot accept their work as having any authority in itself. I cannot them no discretion, and their work is often lost and always unsatisfactory from being found always biased in one direction. I have only one Engineer available, amongst other duties, for superintending this measuring up."

15 Taking all these circumstances into consideration I propose for their consideration that Government should appoint Engineers and Surveyors of their own to measure up the whole Canal, the Company paying the Extra remuneration which the work will regain.

16 This plan will I believe not cost the Company more than would the measurement if effected by our own Officers and Assistants but there would be saved by it, especially if Government will see fit to pass Sections by Section as measured. By this means we may be enabled to go on with the work of completion in the 2nd, 3rd & 4th Sections while the measuring of the 5th, 6th, 7th & 8th are progressing.

17 I think I need not proceed to press upon you more elaborately the importance of dispatch in this matter, but I may mention that a number of married men, some of them lately large Contractors on the Railway, have urgently asked for Contracts, but delay on our part must of course have the effect of preventing these men from keeping their Labourers together.

I have

I have the honor to be
Sir,
Your most Obt Servant
To Harford Hamilton
Agents Managers

Consulting Engineer's Office,
Irrigation and Canal Co.
Camp Cadiganore 5th January 1867.

No. 107.

From

Captain John Mullins R.E.
Consulting Engineer I. and C. Co.

To

Colonel C. A. Orr R.E.
Secretary to Government P.W.D.

Sir

I have the honor to forward for the consideration of Government a letter, No. 370 of the 22nd Ultimo, from the Agent and Manager Madras Irrigation and Canal Company, pointing out that the orders of Government of the 17th and 20th November last, Nos. 3621. and 3703. in which the sanction of revised estimates for the 2 and 3 Sections of the Main Canal was postponed until, by the measurement or examination of the work already done, it could be shown that the additional work included in those estimates was really required, and further that provision might be made in the estimate of the 2nd Section for such work as had been proved to be necessary to stop the leakage through the banks of that part of the Canal, wherefrom breaches had occurred and were likely to recur, will, he apprehends, delay that immediate and vigorous prosecution of the works, which is deemed necessary in order to carry out

× received by me yesterday.

Read letter from Agents
Same day 1867

No. 370
1867
From the Agent & Manager
The Madras Irrigation & Canal Co.
Dated 22nd Dec.
Received 26th
Reply
Urging the necessity of
the Government sanctioning
the 2nd & 3rd Sections of the
Main Canal

out the agreement with the Secretary of State for India, which was entered into by the Company on the 2 October last. I have received the order of Government, N° 3960 of the 15th Ultimo, referring to that agreement, but the Supplementary Contract has not yet reached me, and therefore I am not acquainted with its provisions.

2 Mr. Henslowe admits the propriety of the course which the Government have desired should be followed but, after conferring with the Chief Engineer, he represents that Mr. Latham is not in a position with the Staff at his disposal to undertake the measurement of work done, without the loss of a great deal of time, and he suggests that, as this is the case, perhaps the Government will allow the several Sections to be measured by Members of the Public Works Department.

3 On the question as to whether the Government could spare the services of a considerable number of the officers and subordinates of the Public Works Department it is not necessary to touch, but I must point out that, as already noticed, the work done in the Sections referred to is not at present in a condition for measurement, that one reason for the postponement of supplemental sanction was the fact that the estimate of work remaining to be done was unreliable, owing to the irregular state of the banks, and that an advance sufficient to enable such further work as might be needed, to advance the banks to a condition in which they would be capable of

of fairly accurate measurement, was given. There cannot, I should think, be any reason for handing over the execution of this additional work to officers of a Department with which the Chief Engineer is unconnected, but who would nevertheless have to receive instructions from him, as to the form which the banks are intended to take. Such an arrangement would be far from convenient. If on the other hand this work be done, and it must not be forgotten that under any circumstances it is work which has to be done, the subsequent measurements will be comparatively simple, and there would be no necessity for obtaining additional assistance to undertake the duty.

4 Another consideration should not be lost sight of. Public Works officers would necessarily spend much time in making themselves acquainted with the works, and the knowledge thus gained would be useful, so soon as the task of examination had been completed. On the other hand the Executive Engineers of the Company, who may be appointed to the charge of Divisions, have in any case to obtain a thorough knowledge of the works, and the information acquired is to be made use of in conducting them to completion.

5 I have already said, in reporting on the 2 Section estimates, that it is necessary for the guidance of the Executive Engineers, who are to have charge of the several Sections, that the work remaining to be done should be clearly ascertained. It would indeed be unfair to such officers to require them to carry on

on works, the expenditure on which they could not possibly check and control, until they have been placed in such a state as will admit of the amount of work done from time to time being ascertained. It is doubtless much to be regretted that any time should have to be devoted to the examination of work already done, but this happens to be essentially necessary to the proper management of work remaining to be done, and the fact that the management of past work has been defective and has led to difficulties, is a weighty reason why future good management should at least be made possible.

6. In para 13 of his letter Mr. Denslowe quotes the Chief Engineer as saying "I am asked to assume the probability of mistakes and fraud in the record of measurement for past work &c., but what is the real state of the case? very large additional quantities of work are included in the revised estimates and the Chief Engineer cannot explain how it is that they are required. The works are confessedly in a state in which it is difficult if not impossible to ascertain what has been done or what remains to be done, and Mr. Pelham is desired to execute such additional work, and to cause such reformation of irregularities in past work, as will admit of these important points being determined. He is in fact asked to substitute for an assumption that the additional work entered in the estimates is necessary, direct proof of its necessity.

7. I will now say a few words with regard to the apprehension entertained by the Agent that delay in at once proceeding with the works of certain Sections as fast as might be possible, were their condition not such as to need preliminary investigations, will interfere with the due fulfilment of the Supplementary Contract, and prevent (para 17) the employment of certain Contractors who have urgently asked for contracts for work. I think there need be no difficulty whatever in starting at once quite as much work as the Chief Engineer may be able to find superintendence for, or for which labour may be available, and I suppose, in saying this, that the maximum number of labourers ever yet employed on the Canal works, and which I think was about 18000 could be very soon collected. So far as I am aware the 2nd, 3rd, and part of the 7th Sections are the only parts of the Canal which require to be examined before fresh work is undertaken. In the 4th Section, there is a great deal of work to be done, in the 5th a good deal, in the upper part of the 6th not a little, in the lower miles of the 7th Section work has hardly been commenced, and there can be no difficulty in setting out work for large parties of coolies there. The 8th Section is far from complete. The 9th Section, 35 miles in length, has not been taken up yet. It was sanctioned, but the sanction was cancelled at the request of the Agent, and it can be resanctioned without delay, whenever such sanction is asked for. Were I at Madras, I could in a few minutes show what a vast amount of work, whether earthworks or masonry, to prevent the immediate starting of which there is no objection, has to be executed, but at any rate there is

no

no room for doubt that all available labour, whether local or brought from a distance, can be at once employed, and there can also be no doubt that in the 2. 3 and 7th Sections all local labour may be profitably employed for some considerable time in executing the work required as a preliminary to the examination of the work done. Under these circumstances I do not think that the Company can in any way be prejudiced by requiring the orders of Government of the 17th and 20th November last to be carried out, and I do not recommend therefore any alteration or modification of them being made.

I have the honor to be,

Sir

Your most obedient Servant

Columbus Williams Captain R.E.

Consulting Engineer I.V.C.Co.

No. 172 P.W.D. Letter from Consulting Engineer I.V.C.Co. dated 19th January 1867. Enclosing letter No. 370 of 22nd December from the Secretary to Government, Public Works Department, requesting to be favoured with the opinion of the Consulting Engineer relative to the proposal of the Government to reduce the number of Sections of the Railway from seven to three.

Ans. 350 12 Feby 1867

P.W.D.

172 Civil

No. 172

Proceedings of the Madras Government

Under date the 19th January 1867

Read the following

From the Consulting Engr. I.V.C.Co. (N.C. 5 January 1867

No. 107

The Government, having given their careful consideration to the papers above recorded, regret that they are unable to modify their orders of the 17th and 20th November last.

His Lordship in Council concurs in opinion with the Consulting Engineer that before the revised Estimates for the 2nd and 3rd Sections of

of the Canal can be sanctioned, it is indispensable that the necessity for the additional work for which they provide should be clearly shown by actual measurement and examination, to be undertaken by the Officers of the Company.

There is, however, no reason why any delay that may occur in the sanction of the revised Estimates should prove prejudicial to the interests of the Company, as Captain Mullins very plainly shows, in para 7 of his letter, that ample

employment can be found for all available local labor as well in the 2nd and 3rd as in the other sections of the Canal which are still incomplete.

To The Engineer I & Co
Manager &c.

Despt. 19 January 67

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Pub: Works 1867 Department

Pros: of Govt for January

No 172

Pros of the Madras Govt

Dt 19th January 1867

Assim Canal (S.C.W.)

Passing orders on a letter from the Consulting Engineer, forwarding one from the Company's Agent and Manager relative to the postponement of sanction to the revised estimates for the 2d and 3d Sections of—

No 350-351

c. 12 Janry 1867.