M.R.O. 1—39,000—16-10-29.

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	1727	Press ~~Mis.~~
463-64 Dated	19-6-	N 1868

Not to be folded or roughly handled

Proceedings of the Madras Government, Revenue Department,
19th June 1868.

No. 463. Read the following Proceedings of the Madras Government in the Public Works Department :—

Passing orders on the report submitted by the Superintending Engineer, 6th Division, regarding his inspection of the lower Coleroon Anicut, and approving of the approximate estimates, amounting to Rupees 9,950, for certain works connected therewith. } (Here enter 11th June 1868, No. 1,833.)

No. 464. ORDER THEREON, 19th June 1868, No. 1,727.

Irrigation, No. 10.

Communicated to the Revenue Board.

(True Extract.)

(Signed) H. SEWELL,
Acting Under Secretary to Government.

To the Board of Revenue, with Proceedings Public Works Department, No. 1,833.

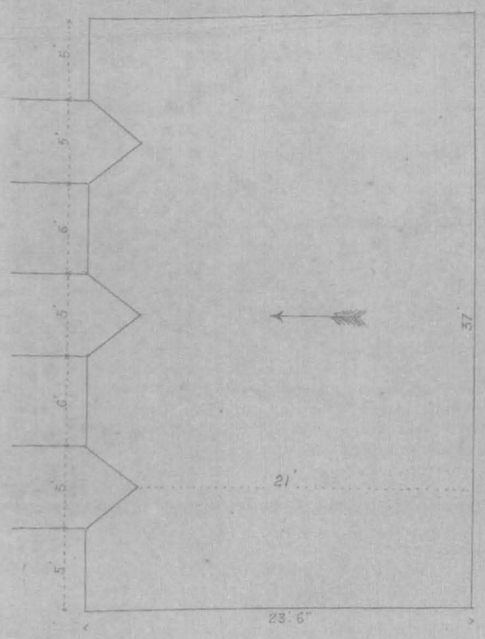
Ex'd. F. R. Bantleman.

No. 229. Read the following letter from the Superintending Engineer, 6th Division, to the Secretary to Government, Department Public Works, dated Tanjore, 19th May 1868, No. 174 :—

1. I have the honor to inform you that the season has been a very dry one since the occurrence of the storm at the end of January, and hearing that the water had fallen below the level of the lower apron of the north branch of the Lower Anicut, I proceeded to the Anicut on the 9th instant, and examined the works on that and the two following days. The north branch is in very good order, a few stones had been removed from the lower apron, they have been replaced : the aprons of this branch are protected by a coating of concrete, which has stood remarkably well, it appears to be much more durable than the laterite, and I propose to cover the portion of the apron of the south branch (which is not floored with granite) with concrete.

1 Abstract Estimate.

2. Very little stone is to be seen along the apron, or round the sluices of this branch. In front of each of the sluices, and at a distance of about 30 yards, the bed of the river is scoured out to a depth of from 15 feet to 17 feet below the lower apron, between the sluices, this hollow is reduced to 5 feet; from these hollows the bed shelves up to within a few inches of the level of the apron except in front of the sluice aprons, around which the sand is scoured to a depth of from 1 to 4 feet. As a precautionary measure, I would suggest that one cubic yard of rough stone per lineal yard should be thrown round the sluice aprons of the north branch as soon as possible.



3. In front of the Anicut, owing to the draught by the Vadavaur and North Rajah Voikal, the stream sets on the north bank, and the deep stream is on that side, and the bed of the river shoals gradually to the south side. The deep stream leads to the northern sluice, and thence scours the face of the work up to the second sluice, and in a less degree to the third sluice; the hole scoured along the front retaining wall between the first and second sluice varies from $2\frac{1}{2}$ feet to 5 feet in depth. I propose to place a little stone all along the retaining wall, between the sluice floors, which are as per margin, and are unsuited for the splay wings proposed in letter No. 1,710,* dated 6th March. I propose to cut a deep channel from the deep bed of the river to sluice No. 2, and if the sluice is judiciously opened during the next season, and the direct cut from the deep stream to the second sluice acts well and is maintained,

* G. O. No. 902, dated 20th March.

there will be no further danger of a scour along the face of the work between the northern and second sluices.

4. The work on the south branch has progressed very satisfactorily; the whole of the rear retaining wall has been got in to a height of 6½ feet, or to within 2½ feet of the apron level, and this for a distance of about 200 feet, the rest of the work being complete with the exception of the concrete covering now proposed.

5. As the work has been brought up, rough stone has been thrown in rear of it, close to the retaining wall, so that if hereafter any lateral scour does take place, the stone will sink close to the wall and will protect it the more effectually. With the stone which has been recovered, and that brought down from Trichinopoly and elsewhere, the southern branch will be sufficiently protected except in rear of the new portion of the Anicut, which is not to be exposed to the waters this season. For this portion about 1,000 cubic yards of stone will be required, and it is hoped that the greater part will be delivered at the Anicut during the approaching monsoon.

1,634 cubic yards.

6. The portion of the old apron of the Anicut, from the southern abutment to the first sluice, has been examined for a distance of 125 feet, the stone facing of the apron was found to be resting on clay with no brick-work under it, two feet of brick-work have now been placed under the stone. Owing to the necessity of first completing the rear retaining wall, and then opening out the apron, it has not been possible to examine the old apron between the north and south sluices more closely than I examined them in March. Now that the retaining wall is nearly completed, the apron will be examined, and a correct estimate prepared for it; but an approximate estimate is enclosed, which it is anticipated will not be exceeded. As the estimate only amounts to Rupees 3,800, and as Rupees 18,000 are allotted for the work in the Budget, I propose to charge the concrete work to this estimate. If permissible, I would suggest that the stone for the north branch should also be charged to this estimate, or the north branch may be provided for under "Repairs Agricultural."

Rupees 2,950.

Rupees 2,050.

7. As it is desirable to get stone for the sluice aprons of the north branch, and as 3,000 cubic feet of laterite in large blocks are obtainable at about the rate at which stone can be procured, I have directed that these 3,000 cubic feet of laterite shall be secured, and be thrown round the sluice aprons before the river comes down in flood, if possible.

8. In looking over the accounts of the work, I find that the baling and embanking have far exceeded the estimated amounts, and there will be an excess of about 5 per cent. on the estimates for the Lower Anicut works taken in the aggregate. The work provided for in the estimates was so intermixed, that it is difficult to separate the expenditure upon them.

Rupees 70,400
,, 16,750
53,650

Rejecting the Rupees 16,750, which provides for the front retaining wall and floor, Budget No. 169 is reduced to Rupees 53,650. The expenditure up to the end of 1867-68 was as follows:—

No.	Estimate.	Expended up to 1867-68.	Balance.	Allotment 1868-69.	
168	97,880	92,895	4,985	7,900	
169	* 53,650	33,947	19,703	17,500	* Deduct 16,750.
170	† 8,800	819	7,981	18,000	† Now sent.

9. It is anticipated that Rupees 23,500 will be required in 1868-69 to complete Nos. 168 and 169, exclusive of rough stone for aprons. About Rupees 10,000 will be required for stone in 1868-69 and 1869-70.

No. 170.

10. The estimate now forwarded may prove to be insufficient, as it provides for only renewing the flooring of 300 feet of the apron, and it is doubtful whether the stone required for the north branch may be included in it, if not the latter must be provided for from "Repairs Agricultural."

Rupees 2,050.

Rupees 3,200 are required to complete the number of shutters required for the Anicut; if these may be provided for in No. 170, they will raise the estimate to Rupees 12,000.

The allotments for 1868-69 will probably just cover the anticipated outlay.

11. For the future it would be well to provide Rupees 5,000 annually for rough stone for the protection of the work; this, I presume, would have to be provided for under Repairs, and not under Budget works or from the loan.

12. I have lately examined the dams provided for in Budget No. 171.

The dams at the Veerasholen head were completed, with the exception of the second step of the dams, when I examined them on the 7th instant. It is not proposed to plaster the work till next year. A portion of the filling in and the removal of the front embankment was in progress. The work has been carried out satisfactorily under the immediate superintendence of Serjeant Jack. The estimate will be somewhat exceeded, owing to the filling in of the foundations by the floods in January, as reported on the 6th February.

No. 1,653 in G. O. No. 540, 17th February.

On the 6th instant, 122 feet of the Arasalaur dam and of its retaining wall had not been commenced.

The Cauvery dam, the Cauvery wing, and the nose had been got up to within 3½ feet of the river bed, and 2 feet of the foundations of the Arasalaur south wing had been laid. It is intended this season to complete the nose and the Arasalaur south wing, but not to raise the Cauvery north wing and the dams themselves above 6½ feet, or 3½ feet below the river beds.

13. It is a curious fact that, on the 6th instant, water stood at a depth of 8½ feet below the level of the bed of the Arasalaur, while in the Veerasholen bed the water stood at 5½ feet below the bed; throughout the season there has been far more water to deal with in laying the foundations of the Veerasholen dam than in laying those at the Arasalaur head: this is probably due to the fact that the land which skirts the river at the Veerasholen head is far higher above the bed than that which skirts the Arasalaur is above its bed.

Codamoorty Dam.

14. On the 22nd ultimo, the foundations of the Cauvery north abutment and wings, and of seven or eight piers and the retaining wall between them, had been brought up to within 2½ feet of the river bed, and the boxes or wells for the foundations of piers 9 and 10 were placed. It is proposed, if possible, during the present season to complete the north abutment and wings and the nose between the Cauvery and Codamoorty, and to bring up the foundations in the Cauvery only to within one foot of the level of the bottom step of the dam.

15. The foundations of the Veerasholen and Arasalaur dams have been carried to a depth of 10 feet below the river bed, and consist of solid masonry over one* or sometimes two† cubes.

* 1¼ feet to †2¼ feet.

16. It was not found possible to lay the foundations of the dam at the Codamoorty head in this way, as it was found difficult to keep the level of water below 6 feet below the bed. These foundations have, therefore, been laid at a depth of 12 feet, the upper 6 feet of solid masonry, and the lower of square wells or boxes filled with cubes, the quantity of masonry work in the foundations being far in excess of that estimated. A revised estimate will shortly be submitted for this work.

No. 230. ORDER THEREON, 11th June 1868, No. 1,833.

IRRIGATION, No. 16.

1. The extraordinary dryness of the present season having afforded the Superintending Engineer of the 6th Division a good opportunity of closely examining the Lower Coleroon Anicut, that Officer now reports the result of his inspection, and details the progress which has been made with the restoration and strengthening of the southern section of the work.

2. The Government are glad to learn that the condition in which the northern branch of the Anicut was found is very satisfactory, as only a few stones, which have been easily replaced, had been removed from the lower apron, which, protected by a coating of concrete, is generally in excellent condition, although very little stone is to be seen either along the face of its rear retaining wall or round the sluices. Down-stream, opposite the sluices, and along the rear of the lower apron between the sluices, the bed of the river is somewhat scoured, and, as a precaution, Captain Oakes suggests a small quantity of rough stone being thrown in. Up-stream, owing to the draught towards the Vadavaur and North Rajah Voikal, the bed of the river is lowered on the northern and raised on the southern side. This causes the deep stream current to set towards the first or northern sluice, and to sweep from it along the face of the Anicut towards Nos. 2 and 3 sluices, causing a scour. To obviate this, Captain Oakes formerly proposed to build splay wing-walls between the sluices, but his fuller examination has shown him that such walls are unsuitable, and he would in their stead place some rough stone along the face of the front retaining wall, cutting a channel at the same time through the sand from the deep stream to sluice No. 2, which being worked judiciously, will, he thinks, restore the uniformity of the bed of the river in front of the Anicut, and prevent further scouring action.

Proceedings of the Madras Government, Public Works Department,
11*th June* 1868.

3. These proposals seem all judicious, and may be carried out at the discretion of the Superintending Engineer, as necessary works of maintenance, from his Agricultural Repair allotment.

4. On the southern branch, where the work of restoring the Anicut and strengthening it throughout is under execution, very satisfactory progress appears to have been made, and the work, by the measures proposed by Captain Oakes, will it is believed be placed in a very secure condition.

5. The approximate estimates of Rupees 3,800 which he submits for taking up and relaying portions of the old apron, and of Rupees 2,950 for covering the apron with concrete, as well as of Rupees 3,200 for completing the number of shutters required for the Anicut, are approved, and the total amount, Rupees 9,950, will be charged to the Budget* allotment of Rupees 18,000, the remaining estimate of Rupees 2,050 for providing rough stone for the northern branch being met, as above directed, from the Agricultural Repair allotment.

* Item No. 170.

6. The Superintending Engineer believes that the aggregate of the allotments for 1868-69 for the Lower Coleroon Anicut works will cover the anticipated outlay; but should there be a probability of the expenditure upon those works being in excess of 5 per cent. of the estimates, Captain Oakes will submit in time the usual comparative statement with the detailed particulars required by the rules.

7. The construction of the regulating works, forming item No. 171 of the Budget, is stated to be proceeding favorably, and the Government trust that their completion will effect the desired improvement of the supply of the Cauvery below Combaconum.

(True Extract.)

Colonel, R. E.,
Secretary to Government.

To the Superintending Engineer, 6th Division.
,, Controller of Public Works Accounts.
,, Accountant General.
,, Revenue Department.

Exd. S. T. Augustin.

Revenue 1868. C/o 4
Bro of Court for June
No. 2130.

Proceedings of the
Govt. Dr. Dr. C/o 4

Dated 11th June 68.
Received 17th "
No 1833.

No 1727 19 June
Order
Passing orders on
the report submitted
by the Supg. Engr 6th Dn
regarding his inspection
of the Lower Coleroon
Anicut and approving
of the approximate
Estimate, Amt. Rs 9980
for certain works con-
nected therewith —

No 463-464.

No 1727.

Comm.r to the
Revenue Board

19th June 68

14 Copies to the Rd Revenue Bro Dr Dated 33 Despd 20