

(1) Number of pages 5

(2) Date of repair 6/18/66

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public Works **DEPARTMENT.**

G.O. No. 1741	Press Mis.
31-32	
Dated 2 : 6.	18 66.

Not to be folded or roughly handled

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*Proceedings of the Madras Government, Public Works Department,
2nd June 1866.*

No. 31. Read the following letter from the Consulting Engineer for Irrigation and Canal Company, to the Secretary to Government, Department of Public Works, dated Madras, 19th May 1866, No. 12:—

1 Estimate.
1 Letter in original from Agent, No 24 of the 17th instant.

1. I have the honor to forward, for the sanction of Government, a supplemental estimate, Rupees 1,360, in connection with the breach works at the Soonkasala Anicut. The Agent's letter, No. 24 of the 17th instant, with its accompaniment from the Chief Engineer, is enclosed.

2. This estimate provides for removing the masonry wall, which was built on the temporary dam above the breach, and which was sanctioned in Proceedings Madras Government, No. 1,748 of the 23rd June 1865, and for sundry other works, including an experimental concrete flooring or filling in of a hole in the rocks below the anicut.—(Paragraph 3 of Chief Engineer's letter).

3. The original estimate, Rupees 37,180, for closing the breach was sanctioned in Government Order No. 1,289, of the 12th May 1865.

4. With regard to the observations contained in the 4th paragraph of Mr. Latham's letter, I may remark that the case mentioned does not appear to me to bear upon the efficacy of water cushions to protect the rock of a river bed from the action of an overfall. The hole washed out of the face of the anicut must, if not actually commenced, have been continued, by the rotatory action of the water. Similarly, hollows in rock in the river bed are acted upon, and there is no comparison between the action of the water in the case of a properly constructed water cushion, and that which is experienced when the water falls on an uneven rocky bed, the lower parts of which, as well as the higher, are connected with the deep channels of the river bed.

From the Agent and Manager Madras Irrigation and Canal Company, to the Consulting Engineer Irrigation and Canal Company, dated Madras, 17th May 1866, No. 24

I have the honor to transmit, for the sanction of Government, the accompanying supplemental estimate for the completion of the Soonkasala Anicut breach works, amounting to Rupees 1,360, together with copy of the Provisional Chief Engineer's letter No. 36, of the 10th May 1866.

From the Provisional Chief Engineer, to the Agent, dated Kurnool, 10th May 1866, No. 36.

1. I have the honor to forward to you, for transmission to the Consulting Engineer for sanction of Government, an estimate entitled "Supplemental estimate to complete anicut breach works."

2. The three first items refer to the removal of the wall and part of the temporary rubble dam, in order to allow the water of the river to flow over the now repaired breach. The removal of the temporary wall, the levelling down of the rubble deposit in front of it so as not to cause eddies, and the scouring up of the silt in front of the work, and the coating the surface so levelled down with six inches of concrete in order to prevent filtration of water to the underside of the apron, and consequent blowing up of the masonry slope, are the items in question.

3. The fourth item is for concrete to fill up a hole which had worked out in the natural rock, threatening the undermining of the anicut, and close by the side wall of the new apron. The depth and nature of this hole were ascertained as the water subsided and the opportunity of using

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the spare rubble deposit, removed from the temporary dam, in order to fill it up was taken advantage of. The work is of an experimental character, and will determine how far concrete can be used successfully to stop up similar holes elsewhere.

4. I may here remark that the overfall of the anicut is, in some cases, received in natural basins full of water, formed in hollows through which the anicut is built, or in hollows which have been excavated by the overfall, and often full half the height of the overfall in depth. These natural water cushions do not seem to protect the anicut, for one of the worst holes, about a yard deep, was washed out of the anicut face in one of these hollows. It seems, therefore, that an apron of some kind will be eventually necessary where the rock below the anicut proves treacherous.

5. Concrete will probably be required to form a substratum for any apron adopted. The present experiment will show what power the concrete has to resist the overfall without a face.

(True Copy.)

(Signed) F. H. HENSLOWE,
Agent and Manager.

No. 32.

ORDER THEREON, 2nd June 1866, No. 1,741.

CIVIL WORKS, No. 8.

The Government sanction the estimate of Rupees 1,360, submitted with this letter, for completing the repair of the breach in the Soonkasala Anicut.

(True Extract.)

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

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

Yrd. S. T. Augustin.

Enclosures 2. No. 12

1 Estimate
1 Letter to right
from Genl-

No. 24, 1866

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Consulting Engineer's Office,
Irrigation and Canal Co.
Madras 19th May 1866

Captain John. Mullins R.E.,

Consulting Engineer, Sand & Co.,

To Colonel C. A. Orr R.E.,

Secretary to Government C.P.W.

Sir

1 I have the honor to forward for the sanction of Government a supplemental estimate, Rupees 1360, in connection with the Breach works at the Soonkasala Anicut. The Agents' letter, No. 24 of the 17th Instant, with its accompaniment from the Chief Engineer, is enclosed.

2 This estimate provides for removing the Masonry wall, which was built on the temporary dam above the breach, and which was sanctioned in Proceedings Madras Government. No. 1748 of the 23rd June 1865, and for sundry other works, including an experimental concrete flooring or filling in of a hole in the rocks below the Anicut. (para 3 of Chief Engineer's letter)

3 The original estimate Rupees 37,180 for closing

590
closing the breach was sanctioned in Govern-
ment order, No 1289 of the 12th May 1865.

1. With regard to the observations contained
in the 1st para of Mr Nathan's letter, I may
remark that the case mentioned does not
appear to me to bear upon the efficacy of a
water cushion to protect the rock of a river bed
from the action of an overfall. The hole
washed out of the face of the Ancient must,
if not actually commenced, have been
continued, by the rotatory action of the water.
Similarly hollows in rock in the river bed
are acted upon, and there is no comparison
between the action of the water in the
case of a properly constructed water cushion,
and that which is experienced when the
water falls on an uneven rocky bed, the
lower parts of which, as well as the higher,
are connected with the deep channels
of the river bed. —

I have the honor to be,

Sir

Your most obedient servant

Wm. Miller Captain R.E.

Consulting Engineer N.E.C.

2 May 1855-1289
3 Dec 1860-1748

Wm. M. D. D. (11)

The Secretary to the

The Secretary to the

dated 19th May 1866

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Forward for sanction
a Supplemental Estimate
of 1860 in connection with
the Breachwork at the
Sagittaria River and with
certain alterations —

1741-20 June 1866

W. M. D. D.

1741

The Government sanction the
estimate of the 1860 submitted, with
the letter for completing the repair
of the breach in the Sagittaria
River.

W. M. D. D.

W. M. D. D.

Start of 1860
2nd June 1866

4th May 1866
W. M. D. D.