

(1) Number of pages _____

(2) Date of repair _____

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MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No. 134,135	1796	Press Mis.
Dated	6-11	18 11/2.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
29th July 1872*

No 444 Read the following endorsement of the Acting Chief Engineer for Irrigation, dated Ootacamund, 26th June 1872 —

From the Agent and Manager of the Madras Irrigation and Canal Company, to the Acting Chief Engineer for Irrigation, dated Madras, 29th May 1872, No 136.

With reference to your letter of the 24th August 1871, relative to the excess expenditure on the Pennair Anicut, I have the honour to forward a revised estimate and a comparative statement of the cost of Pennair Anicut, together with copy of Mr Browning's letter of explanation, for submission to Government.

From the Acting Chief Engineer, to the Agent and Manager of the Madras Irrigation and Canal Company, dated Kurnool, 22nd May 1872, No 330

I HAVE the honour to submit a revised estimate of the cost of Pennair Anicut, which contains the latest information I have been able to obtain —

From this it appears that the total cost of the Anicut and Head	RS
Works at Adamapully has been	4,37,900
But from this, in order to show the real cost, should be deducted	
the value of plant which may be sold	36,687
Leaving the total cost of the Anicut	... 4,01,213

2 In deducting the value of plant I have taken Mr Badham's figures, as experience has shown that his estimate may safely be taken, but Mr Ridley in 1871 made an estimate of the value of the Adamapully plant which was twice as high

3 The total sanction for, and cost of the Anicut may be divided as follows —

	Sanctioned Estimate	Actual cost	Excess
	RS	RS	RS
Works	3,10,490	3,22,239	11,749
Plant	33,950	1,15,661	81,711
Total	3,44,440	4,37,900	93,460

4 But from the excess on plant ought to be deducted the salable value of what is left, or Rupees 36,687, leaving the actual excess on that item only Rupees 45,024 —

The excesses over estimate therefore will be—

On works	...	...	Rupees 11,749 or 3 7 per cent
On plant	...	...	45,024 or 132 6 per cent
			56,773 total on works and plant

5 In G O No 18 of 5th January 1869, it was ruled that when works were completed within a limit of 5 per cent of the sanctioned estimates, the expenditure would be passed I have shown that the excess of cost over sanction upon works at Adamapully anicut is less than 5 per cent, being in fact only 3 7 per cent, but I proceed to give the following explanations concerning differences on the various items

Rubble Masonry—The decrease in quantity here is due to the fact that it was intended to use small pitching stones in each alternate course which were to be bedded on masonry In practice it was found inconvenient to carry this arrangement out, as nearly all the stones were got from the quarry the full size. The consequence was an increase in quantity to the pitching.

*Proceedings of the Madras Government, Public Works Department,
29th July 1872.*

6 In the estimate the totals were—

Masonry	RS
Pitching	15,869
	6,654

7 The actual quantities were—

Masonry	22,523
Pitching	13,639
	8,243

So that on the whole there was a slight decrease of quantity

8 The excess in cost on the above two items of masonry and pitching is due then to the fact that the estimate rates were too low —

Rubble deposit —Here there is an increase of cost, but a decrease in quantity The increase of cost is due to the expense of cartage by the tramway, and to the fact that to ensure completion in good time it was necessary to have night work

9 The failure of the north tramway viaduct also added to the expense

Coping —Here there is a reduction in quantity, but an increase in rate, the estimate-rate having been too low

Wells and Concrete —Here the difference is so slight that it calls for no remark

Excavation in bed of river —Here there is a reduction in quantity and cost, but the rate per yard is above the estimated rate, owing to the uncertain nature of the work

Baling and Coffer Dams —Here there is a saving owing to skilful management which calls for no remark

North Wing-wall —Here there is an excess over estimated cost due to the expense of the wells which were difficult to sink owing to layers of clayey silt in the sand, and also owing to the fact that it was found necessary to use larger wells than had been estimated

Under Sluices —Here there is a saving, partly owing to there having been less excavation than was expected.

Head Sluice —Here also there is a saving, partly owing to the very favourable nature of the foundations

Flood bank, north side —Here there is an increase in quantity and reduction in cost The reason for the increased quantity was that the length of the bank was increased

Stop bank, south side —Here there is a saving, chiefly owing to the shingling having been got from excavation on 1st mile

Contingencies —The difference is so small it calls for no remark

10 As regards the cost of stores, plant and store charges, I have very little to add to the explanation given in the Agent's letters printed with G O No 2,157 of 22nd August 1871 It is quite clear that the cost of store and plant charges was under-estimated

11 If the anicut had been built without tramways, the stone being brought by country bandies, the charges for plant would have been far less than they actually were, but it was not safe to rely upon a supply of stone by country bandies, and there was therefore increased cost

12 With the above explanations I trust the account will now be passed, and I may remark that the proceeds of all plant sold will then appear as a saving upon this estimate

SUBMITTED for the orders of Government with reference to the Order No 2,157, dated 22nd August 1871.

(Signed) C. J. SMITH, Captain, R E,
for Acting Chief Engineer for Irrigation.

*Proceedings of the Madras Government, Public Works Department,
29th July 1872.*

No 435.

ORDER THEREON, 29th July 1872, No. 1,796.

IRRIGATION, No 25.

In their Proceedings of the 31st March 1864, No 889, the Government sanctioned estimates amounting to

Rupees 4,81,800 for the 10th Section, Main Canal, including an anicut and head works on the Pennair at the head of the section.

2. A revised estimate was subsequently submitted amounting to Rupees 3,86,160, owing, however, to certain considerations advanced by the Chief Engineer of the Company, the Government on the recommendation of the Consulting Engineer, in their Proceedings dated 11th January 1868, sanctioned the estimate for a canal only, amounting to Rupees 1,92,450, on the understanding that the site proposed for the anicut should be fully re-considered with reference to the objection raised by the Consulting Engineer

3. Revised estimates for the anicut and head works were again submitted but disapproved of and returned to the Chief Engineer with their Proceedings dated 26th May 1868, No 1,648 Subsequently, however, an estimate, amounting to Rupees 3,00,000, met with the approval of Government as noted in their Proceedings, 28th July 1869

4 This estimate was afterwards found to require modification, and, in accordance with the Consulting Engineer's recommendation, the Government in their Proceedings, 28th September 1868, sanctioned an additional sum of Rupees 500, raising the probable cost to Rupees 3,00,500, and again in their Proceedings, 14th February 1870, No 519, sanctioned a still further sum, raising the total sanction for anicut and head works, up to date, to Rupees 3,44,440.

5. A revised estimate purporting to represent the final bill of cost was then submitted for the orders of Government, but returned with their Proceedings dated August 1871, No 2,157, it being represented by the Chief Engineer for Irrigation that the accounts were not finally settled

6 With his letter No. 136, dated 29th May 1872, the Agent and Manager now submits an estimate, amounting to Rupees 4,37,900, representing the final cost of completing the works, but subject to a probable recovery on account of the sale of plant valued at Rupees 36,687

7. As the total of previous sanctions amounts to Rupees 3,44,400 the net excess for which the sanction of Government is now requested amounts to Rupees 93,460, which His Excellency the Governor in Council, after due consideration of the explanation afforded by the Chief Engineer, resolves to sanction.

(True Extract)

(Signed) G. W. WALKER, Colonel, R E,
Secretary to Government.

To the Agent and Manager of the Madras Irrigation and Canal Company
,, Acting Chief Engineer for Irrigation.

End S T Austin

S P 2
 Memorandum, and (1)
 (Michigan Office)
 Memorial 22nd May 1872

No. The Agent and remaining
 members

Dear Sir,
 I have the honor to submit a revised
 statement of the cost of Annexation which
 contains the latest information I have been
 able to obtain.

From this it appears that the total
 cost of the Annexation and Texas War as
 (Adams equally here) is \$4,200,000.

But from this in order to show
 the real cost should be deducted
 the value of Plant which may be sold - \$1,687,000 -
 Leaving the total cost of the Annexation \$2,513,000 -

In deducting the value of Plant I have taken
 the (Adams) figures as experience has shown
 that the estimate may safely be taken, but
 not really in 1871, made an estimate of the
 value of the Adams equally Plant which was
 as high

The total sanction for and cost of the
 Annexation may be divided as follows.

	Sanctioned Estimate	Actual cost	Balance
War	\$310,490 - - -	\$1,522,259 - - -	\$1,211,769 - - -
Plant	" 32,950 - - -	" 118,651 - - -	" 85,701 - - -
	\$343,440 - - -	\$1,640,910 - - -	\$1,297,670 - - -

(Ded from the excess on Kent ought to be deducted the sensible value of what is left or is 30. 1087 leaving the actual excess on Kent item only 10. 10. 14.

The excess on Estimate therefore is
 on Works 11749 or 37 spent
 on Plant 45,000 or 132.6 spent
 56,749 Data on work and Plant

In 1818 of 5 Denman 1869, it was
 pulled that extra costs were completed
 within a limit of five percent of the sum of the
 Estimate the expenditure would be paid.
 I have shown that the excess of cost on stone
 has upon Works & Denman fully arrived &
 on the other five percent being in fact only 3.7
 percent, but I proceed to give the following ex-
 planations concerning differences on the various items.

Wettersons The decrease in quantity
 here is due to the fact that it was intended
 to use smaller pitching stones in each alter-
 nate course which were to be bedded in
 masonry. In practice it was found neces-
 sary to carry this arrangement out
 as nearly all the stones were got from the
 quarry the full size. The consequence
 was an increase in quantity to the
pitching.

In the Estimate the totals were,
 Masonry 15,869
 Pitching 6,654
22,523

The actual quantities were,
 Masonry 15,639
 Pitching 8243
23,882

So that on the whole there was a slight
 decrease of quantity.

The excess in cost on the other two items of
 masonry and pitching is due then to the fact
 that the Estimate prices were too low.
Wettersons The increase in
 cost, but a decrease in quantity. The increase
 of cost is due to the expense of cartage by the
 Denman and to the fact that to ensure com-
 pletion in good time it was necessary to have
 night work.

The price of the north Denman Viaduct
 also added to the expense.

Oping. Here there is a reduction in
 quantity but an increase in rate, the Estimate
 price having been too low.

Wells and Concrete. Here the difference
 is so slight that it calls for no remark.
Excavation in bed of river. Here there

is a reduction in quantity and cost, but the rate of expenditure is about the same as the rate - owing to the uncertain nature of the work.

Belting and Copper Lining - There is now a saving owing to skilful management, which calls for no remark.

North Pier West - There there is an excess over estimated cost due to the expense of the wells which were supposed to sink owing to layers of clay set in the gravel, and also owing to the fact that it was found necessary to use larger wells than had been estimated.

Inner Screen - There there is a saving partly owing to the having found no carcasses - more than were expected.

Dead Stone - There also there is a saving, partly owing to the very favorable nature of the foundations.

Wood Quay North side - There there is an increase in quantity and reduction in cost. The reason for the increased quantity was that the length of the pier was increased.

West Pier South side - There there is a saving - chiefly owing to the shingle having been got from excavation on the pier.

Contingencies - The difference is small, it calls for no remark.

74
As to the cost of stone, Portland Stone charges, I have very little to add to the explanation given in the (Letter to Messrs. Smith & Co. 1857 of 22nd August 1871. It is quite clear that the cost of stone and Plant charges were under estimated.

If the pier had been built without breakwaters, the stone being brought by country barges the charges for Plant would have been less than they actually were, but it was not safe to rely upon a supply of stone by country barges, and there was therefore increased cost.

With the above explanations I trust the account will now be proved, and I am much pleased that the proceeds of all Plant sold will thus appear as a saving upon the estimate.

Thames
1881 A. Thompson
A. G. Street

Order requested as to
whether this paper
is to be sent to Capt
Smith - or will be
disposed of here

11-6-72

2:55 PM

Submitted for the order
of Government, with reference to the
order # 2157 dated 22nd August
1891.

Octave and 3 *Albion* Captain
26 June 72 3/4 As Chief Engineer
for inspection

Mr. Andrew

13

March 2nd and 3rd 1891
March 29th 1891

70

My dear Sir,

I have the honor to

acknowledge the receipt of your letter of the 21st

inst. in relation to the proposed

amendment to the

constitution of the

State of Georgia

and in reply to inform you

that the same has been

forwarded to the

proper authorities for their

consideration.

I am, Sir, very

respectfully,

Yours,

Wm. H. Hall

(Secretary of State)

Atlanta, Ga.

March 29th 1891

Enclosed

finds

the

original

copy of

the

amendment

to the

constitution

of the

State of

Georgia

and the

opinion

of the

615

From the k: sup for *Smigra* (k.e. of 26 June/72).

AA.

John

[illegible]

Oct 24 May 1872
 Received of May 1872
 of \$6 June 1872.
 Geo. S. V. 1872

Stedman

Thomas (Robert) 24 months
 Semifantastic intelligent
 of the German camp
 In final 28 months

Ms. A. 9. 2. 29. 173

26434

by ^{the} Chief Engineer of the
Company, ^{the Government} on the recom-

mendation of the
Consulting Engineer,

in their Pro-
ceedings dated 11th Jan'y.

1868 sanctioned the
estimate for a Canal

only, amounting to Rs
1,92,450, on the un-

derstanding that the
site proposed for the

anicut should be fully
reconsidered with refe-

rence to the objection
raised by the Con-

sulting Engineer.

3. Revised estimates
for the anicut and head

works were again sub-
mitted but disapproved
of and returned to the
Chief

Chief Engineer with
their Proceedings dated
26th May 1868 No. 1648, Sub.

sequently however, an estimate
amounting to Rupees

3,00,000, met with the
approval of Government

as noted in their
Proceedings 28th July

1869.

4. This estimate was
~~subsequently~~ ^{afterwards} found

to require modifica-
tion and in accordance

with the Consulting
Engineer's recommen-

dation the Govt in
their Proceedings 28th

September 1868 sanc-
tioned an additional

sum of Rupees 500
raising the probable
cost

cost to Rs 3,00,500 and
again in their Proceedings
14th February 1870 No 517
sanctioned a still
further sum raising
the total sanction
for Aricut & Hencel Works,
up to date, to Rupees
3,44,400.

5. A revised estimate
purporting to represent
the final bill of cost
was then submitted
for the orders of Govt
but returned with
their Proceedings dated
August 1871 No 2157
it being represented
by the Chief Engineer
for Irrigation that the accounts
were not finally settled.

6. With his letter No 136
dated 29th May 1872
the

the Agent and Manager
now submits an esti-
mate amounting to
Rs 4,37,900 representing
the final cost of com-
pleting the work
but subject to a pro-
bable recovery on
account of the sale
of plant valued
at Rs 36,687.

7. As the total of
previous sanctions
amounts to Rupees
3,44,400 the net
excess for which the
sanction of Govt is
now requested
amounts to Rs 93,460,
which His Excellency
the Governor in

Council after due con-
-sideration of the
explanation afforded
by the Chief Engineer
resolved to sanction.

G.W. C.E.S.

To
The Regent and Manager of the
"Chief Engineer for the
"Expenditure of the
Wesley 3/8/72

C/25536

Gobt. of 1872 Madras.

PUBLIC WORKS. ✓

To the Agent and Manager
of the Madras Navigation
and Canal Company

Dated

Recd.

Fuel

G. O 29th July 1876. No 1776.

Nos. 434 & 435

Pennair Ancient Works.

Excess outlay incurred
on the Pennair Ancient
works. Sanctioned.