

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No.	861	Press
439-440		~~Mis-~~
Dated	28. 3.	1870.

Not to be folded or roughly handled

No. 439. Read the following letter from the Officiating Superintending Engineer, 8th Division, to the Acting Chief Engineer for Irrigation, Madras, dated Madura, 14th February 1870, No. 2,703:—

I HAVE the honour to submit for sanction estimates for the head sluice and channel to be taken off the Cadamba tank near the large calingulah, instead of having the main channel from the Striviguntum Anicut on the south bank carried round the water spread of the Cadamba tank to the south-east corner.

2 Estimates, Detailed and Abstract.

2 Plans.

1 Specification Report.

2. The necessity of this alteration in the project has been already explained to the Government in paragraph 12 of your note, No. 311, dated 27th November 1869, published in G. O., No. 198, of the 18th January 1870. The length of the proposed channel is about $2\frac{1}{2}$ miles; the width at sole to be 24 feet, and the fall one foot in the mile. The discharge will then be 323 feet per second, for the supply of the Ammapuram tank, with a depth of $4\frac{1}{2}$ feet in the channel, or the same as was contemplated for the channel above the Cadamba tank in paragraph 10 of the original report, where however there is a misprint, 4 feet being entered as the depth of water instead of $4\frac{1}{2}$ feet. The channel is to be taken off the tank with the sill of the head sluice, $6\frac{1}{2}$ feet below datum line, so as to be above the level of the tank sluices, and the head sluice has four vents of 6 feet. One bridge is required at a distance of 1,200 yards from the head sluice, as otherwise the village of Poreur would be cut off from access to the Palamcottah and Trichendoor road. The bridge is intended to be of one arch, 30 feet span, similar to that detailed in the original specification No. 6 for the cross road through Mungala-curchi.

3. As the line of channel is less than $2\frac{1}{2}$ miles in length, and the channel round the tank would have been about 8 miles long, there is a considerable saving of outlay, while an expensive aqueduct is also avoided.

4. There were the following items in the sanctioned estimate:—

	RS.
Channel round Cadamba tank	74,500
Head Sluice for do.	2,280
Aqueduct for Tenkarai Surplus	10,126
Total	86,906

While application is now made for sanction, for—

Channel through Poreur.	11,960
Head Sluice for do.	4,370
Bridge at do.	3,260
Add on account of compensation for land taken up ...	4,000

Total... 23,590

or reduction of cost, Rupces 63,316.

Proceedings of the Madras Government, Public Works Department
23rd March 1870.

No. 410.

ORDER THEREON, 25th March 1870, No. 861.

IRRIGATION, No. 27.

The Government sanction the modification of the arrangements of that part of the Striviguntam Ancient Project, the Ammapuram tank. The water-supply will, by the plan for which the Superintending Engineer, 8th Division, has forwarded estimates, be taken off from the Calambur tank instead of being carried round that tank by a contour; and this alteration, which is necessary for the reasons mentioned by the Acting Chief Engineer (Proceedings Madras Government 18th January 1870, No. 198), will result in a considerable saving of expense; the provision for this part of the project in the sanctioned estimate was Rs. 84,406, while the estimated cost of the revised arrangement is Rupees 23,590.

(True Extract.)

Major, R.E.,

Acting Joint-Secretary to Government.

To the Superintending Engineer, 8th Division.
" Controller of Public Works Accounts.
" Chief Engineer for Irrigation.

Exd E. C. Shunker.

3

Specification for the Channel to Ammapuram Tank Striviguntam Ancient Project.

Estimate Rupees ————— 11960-0-0

The Channel to have a breadth of 2 1/2 feet at bottom with a slope of one foot per mile.

Specification for the Head Sluice for the Poriur Channel.

Estimate Rupees ————— 4370-0-0

The abutments & piers are to be built 4 1/2 feet high, on a foundation 40 feet in length, 23 feet in breadth, & 6 feet deep. The Sluice is to contain 4 vents, each 6 feet in width. The thickness of the abutments is to be 3 1/2 feet, & that of the piers 2 1/2 feet, inclusive of the cut stone casing 9" thick. The curved side of the arches to be 2 feet, making a total height of 6 1/2 feet for the soffits. The front wall

walls including the returns to be $3\frac{1}{2}$ feet in length and the rear wing walls including returns $27\frac{3}{4}$ feet in length. The thickness of the front wing & returns to be $1\frac{1}{2}$ feet at top & $3\frac{1}{2}$ feet at bottom, that of the rear wing & returns $1\frac{1}{2}$ feet at top, $3\frac{1}{2}$ feet at bottom, for the wing & 2 feet for the return. The front face wall, including the platform for working the sluice, to be $38\frac{1}{2}$ feet in length, $5\frac{1}{8}$ feet average thickness, $5\frac{1}{2}$ feet high; the rear wall being $1\frac{3}{4}$ feet thick. The parapet walls to be $1\frac{1}{2}$ feet thick and 3 feet high.

The rear Apron which is $37\frac{1}{2}$ feet average length, 18 feet wide, and 3 feet thick is supported by a retaining wall $39\frac{1}{2}$ feet in length, 2 feet thick & 6 feet deep; bars of iron are provided $2\frac{1}{2} \times 2$ inches for the shutters. The shutters to consist of beams each $11\frac{1}{2}$ feet long, briches broad & 3 inches thick. The beams to be raised by means

5 means of an iron bar $3\frac{1}{4}$ inches diameter. The sides & flooring of the ments, to be faced with cut stone 9" thick. The roadway over the Sluice, will be 12 feet in width between the parapets. Rough stone $42\frac{1}{2}$ feet in length & 12' in breadth to be placed beyond the rear apron; and the sides of the channel to be pitched with rough stone $1\frac{1}{2}$ feet thick to a height of 5 feet & length 12 feet. With the exceptions noted above, the Sluice to be constructed of brick in chunam.

A Bridge of one elliptical arch 30 feet span at 3600' from the Head Sluice similar to bridge No 6 Estimate Rupees 3260.

Wm Wenderjost
 Captain R.E.
 Offg. Superintending Engineer
 8th Division

Madras
 14th Feb 4th
 1870

Detailed Estimate. ^{1/2} of 1870/71
 District Sivevelly Taluk Thenkaraiv
 Works Constructing an Head sluice at the Head of Porur
 Channel. Shreeygunnam Amicut Project

Particulars of work	Number	Length of each	Total length	Breadth	Depth	Contents
General foundation to Body	1	40	40	23	6	5520
Foundations to front wing walls	2	15 1/4	30 1/2	5	6	915
Do. to front return	2	20 1/4	40 1/2	5	6	1215
Rear wing walls	2	14 1/2	29	5	6	870
Do. Returns	2	11 1/2	23	3 1/2	6	483
Retaining walls	1	38	38	2	3	228
Abutments	2	19	38	3 1/2	4 1/2	598 1/2
Piers	3	19	57	2 1/2	4 1/2	641 1/4
Out road etc	6	1 1/4	7 1/2	1 1/4	4 1/2	42 3/16
Front wing walls above	2	18	36	2 1/2	10	900
Front returns	2	19 1/2	39	2 1/2	10	975
Rear wing walls above	2	17 3/4	35 1/2	2 1/2	7 1/2	665 5/8
Rear returns	2	10	20	1 3/4	5	175
Draw bridges	3	15	45	1 1/4	1	56 1/4
Do. Do.	2	15	30	2 7/8	1	86 1/4
Shanduls	3	15	45	2 3/4	2 1/2	309 3/8
Packing to shore Arches	2	15	30	2	1	60

1870/71

Enclosure No 5
 Letter No 2703 d/11/1
 February 1870 from
 Mr. J. J. J. J. J. J.
 Engineer for irrigation
 Madras

1870/71

Specification for the
 Channel to Shreeygunnam
 Amicut Project for
 the Head sluice for
 Porur Channel.

Triangular portion over backing to meet with face wall	1	5 $\frac{3}{4}$	23	2 $\frac{1}{2}$	1 $\frac{1}{2}$	64 $\frac{1}{2}$
Face walls	3	38 $\frac{1}{2}$	77	1 $\frac{7}{8}$	2	388 $\frac{1}{2}$
Plat form	1	38 $\frac{1}{2}$	38 $\frac{1}{2}$	4	5 $\frac{1}{2}$	847 $\frac{1}{2}$
Parapet walls	2	38 $\frac{1}{2}$	77	1 $\frac{1}{2}$	3	341 $\frac{1}{2}$
Total Cubic feet						1581 $\frac{1}{2}$

Deductions for Casing						
Flooring to vents	4	6	24	19	3 $\frac{1}{4}$	342
Abutments	2	23	46	3 $\frac{1}{4}$	5 $\frac{1}{4}$	181 $\frac{1}{8}$
Piers	6	19	114	3 $\frac{1}{4}$	5 $\frac{1}{4}$	448 $\frac{1}{8}$
Cut waters	6	2 $\frac{1}{2}$	13 $\frac{1}{2}$	3 $\frac{1}{4}$	5 $\frac{1}{4}$	53 $\frac{1}{8}$
Between Cut waters	4	7 $\frac{1}{4}$	29	1 $\frac{1}{2}$	3 $\frac{1}{4}$	27 $\frac{1}{8}$
Do Do	4	6 $\frac{5}{8}$	26 $\frac{1}{2}$	1 $\frac{1}{2}$	3 $\frac{1}{4}$	24 $\frac{1}{8}$
At the edge of flooring	2	31 $\frac{1}{2}$	63	3 $\frac{1}{4}$	3 $\frac{1}{4}$	35 $\frac{1}{8}$
Plat form below and rear	4	7 $\frac{1}{2}$	30	4 $\frac{1}{2}$	3 $\frac{1}{4}$	101 $\frac{1}{8}$
Front side of Plat form	1	33	33	3 $\frac{1}{4}$	5 $\frac{1}{2}$	136 $\frac{1}{8}$
Top of Do	1	38 $\frac{1}{2}$	38 $\frac{1}{2}$	4	3 $\frac{1}{4}$	115 $\frac{1}{2}$
Total deduction Cubic feet						1465 $\frac{1}{2}$
Remaining Cubic feet of brick in Chumam						1382 $\frac{1}{2}$
Being equal to Cubic yards						511 $\frac{1}{2}$

Cut stone work						
Flooring to vents	4	6	24	19	3 $\frac{1}{4}$	342
Abutments	2	23	46	3 $\frac{1}{4}$	5 $\frac{1}{4}$	181 $\frac{1}{8}$
Piers	6	19	114	3 $\frac{1}{4}$	5 $\frac{1}{4}$	448 $\frac{1}{8}$
Cut waters	6	2 $\frac{1}{2}$	13 $\frac{1}{2}$	3 $\frac{1}{4}$	5 $\frac{1}{4}$	53 $\frac{1}{8}$
Between Cut waters	4	7 $\frac{1}{4}$	29	1 $\frac{1}{2}$	3 $\frac{1}{4}$	27 $\frac{1}{8}$

Between Cut waters	4	6 $\frac{5}{8}$	26 $\frac{1}{2}$	1 $\frac{1}{2}$	3 $\frac{1}{4}$	24 $\frac{13}{16}$
At the edge of flooring	2	31 $\frac{1}{2}$	63	3 $\frac{1}{4}$	3 $\frac{1}{4}$	35 $\frac{7}{16}$
Plat form below and rear	4	7 $\frac{1}{2}$	30	4 $\frac{1}{2}$	3 $\frac{1}{4}$	101 $\frac{1}{4}$
Front side of Plat form	1	33	33	3 $\frac{1}{4}$	5 $\frac{1}{2}$	136 $\frac{1}{8}$
Top of Do	1	38 $\frac{1}{2}$	38 $\frac{1}{2}$	4	3 $\frac{1}{4}$	115 $\frac{1}{2}$
Capis to Cut waters	6	1 $\frac{1}{2}$	7 $\frac{1}{2}$	1 $\frac{1}{4}$	5 $\frac{1}{12}$	3 $\frac{29}{92}$
Total Cut stone in Chumam Cubic feet						1469 $\frac{6}{16}$
Being equal to Cubic yards						54 $\frac{11}{16}$

Arch work	4	9	36	15	1 $\frac{1}{2}$	810
Total Cubic feet						810
Being equal to Cubic yards						30

Rough stone in Chumam work						
Apron	1	37 $\frac{1}{2}$	37 $\frac{1}{2}$	14 $\frac{3}{4}$	3	1659 $\frac{3}{8}$
Retaining wall	1	38	38	2	3	228
Total Cubic feet of rough stone in Chumam						1887 $\frac{3}{8}$
Being equal to Cubic yards						69 $\frac{24}{27}$
Rough stone boulders	1	42 $\frac{1}{2}$	42 $\frac{1}{2}$	12	3	1530

Rough stone revetment at the side of the Channel	3	2	12	24	11	396
Total rough stone boulders Cubic feet						1926
Being equal to Cubic yards						71 $\frac{1}{3}$

Plastering						
To front wing wall	2	18	36		10	360
Do Do	2	2	4		5 $\frac{1}{2}$	22
Front returns	2	20	40		5 $\frac{1}{2}$	220

Top of wing walls & returns	2	38½	77	1½	115½
Rear wing walls	2	18	36	7½	270
Do Do	2	2	4	3	12
Rear returns	2	10	20	3	60
Top of wing walls & returns	2	28	56	1½	84
Port face wall	1	31½	31½	1½	141¼
Parapet wall on both sides	2	38½	77	7½	577½
Ends of parapets	4	1½	6	3	18
Entrades of arches	4	7½	29	15	435
Total plastering square feet					2315¾

Wood work

Shutters	4	6½	25	1½	11½	71½
Total Cubic feet of jingle wood						71½
Iron bars for shutters	4	7½	30	2½	2½	
Do Do	4	7½	30	2	2	
Total lbs of iron bar						127

Running feet of cornice work 31½

Abstract Estimate No. of
District Sinnerelly Taluq. Thenkavai
Work, Constructing a Head sluice at the Head of Perin Channel.
Shreyagundam & Vicinity Project

Quantity	Description of work	Rate	Amount	Total
511 ²⁴⁷ / ₂₇	Cubic yards of brick in Chumam per Cubic yard at 5	5	2559	98
54 ⁶⁴ / ₂₇	Cubic yards of Cut stone in Chumam per Cubic yd. at 12	12	653	11
30	Cubic yds of arch work per yd.	6	181	
69 ¹⁴³ / ₂₇	Cyds of rough stone in Chumam per cy.	3 8	244	106
71 ¹ / ₃	Cyds of do boulder per cyd at	2 8	178	54
23 ¹⁵³ / ₁₀₀	Squares of plastering per square at	3	69	76
71 ⁷ / ₈	Cft of jingle wood per cft at	3 8	351	9
127	Lbs of iron bars per lb at		14	1094
31½	Running feet of cornice work at	4	7	14
	Excavating foundation & sundries at about 5 per cent		214	137
	Amount of Estimate		4370	

Under Secretary Captain P. B.

Madras

14 February

1870

Ed. C. Ponnuswami

Offg. Superintending Engineer S. S. S.

Enclosure No 1 with
 No. 2703 of 11th February
 1870 from the Office
 Sup. Engrs. to the Chief Engineer
 for Irrigation Madras

Approved for
 Constructing and
 Shading the Head of
 Poree Channel
 Strengthening
 Project - No. 4370

Detailed Estimate No. of 1869.70
 District Tinnevely Talook Thenkavai
 Work Constructing a Channel from Codembah Tank
 to Ammerpuzam Tank. Slope two to one. 15

Particulars of work	Length	Breadth	Depth	Contents
Cutting Channel	500	26	1	13.000
Do	500	37 $\frac{3}{4}$	6 $\frac{7}{8}$	129,765 $\frac{5}{8}$
Do	500	47 $\frac{5}{8}$	11 $\frac{13}{16}$	2,81,285 $\frac{5}{32}$
Do	500	47 $\frac{5}{8}$	11 $\frac{13}{16}$	2,81,285 $\frac{5}{32}$
Do	500	38 $\frac{3}{8}$	7 $\frac{3}{16}$	1,37,910 $\frac{5}{32}$
Cutting Channel & raising Embankment	1,000	16 $\frac{1}{2}$	5 $\frac{1}{4}$	866 25
Do Do	1,000	15 $\frac{1}{4}$	4 $\frac{5}{8}$	70,531 $\frac{1}{4}$
Cutting Channel	500	31 $\frac{1}{2}$	3 $\frac{3}{4}$	59,062 $\frac{1}{2}$
Do	500	32 $\frac{1}{4}$	4 $\frac{1}{8}$	66,515 $\frac{5}{8}$
Do	500	33 $\frac{1}{4}$	4 $\frac{7}{8}$	82,265 $\frac{5}{8}$
Do	500	34 $\frac{7}{8}$	5 $\frac{7}{16}$	94,816 $\frac{13}{32}$
Do	500	34 $\frac{3}{8}$	5 $\frac{3}{16}$	89,160 $\frac{5}{32}$
Do	500	33 $\frac{3}{8}$	4 $\frac{7}{16}$	78,222 $\frac{21}{32}$
Do	500	32 $\frac{7}{8}$	4 $\frac{7}{16}$	72,941 $\frac{19}{32}$
Do	500	31 $\frac{1}{8}$	3 $\frac{9}{16}$	55,441 $\frac{19}{32}$
Cutting Channel & raising Embankment	1,000	14 $\frac{3}{8}$	4 $\frac{3}{16}$	60,195 $\frac{5}{16}$
Do Do	1,000	14 $\frac{1}{4}$	4 $\frac{1}{8}$	58,781 $\frac{1}{4}$
Cutting Channel	500	31 $\frac{1}{4}$	3 $\frac{5}{8}$	56,640 $\frac{5}{8}$
Do	500	33 $\frac{1}{2}$	4 $\frac{3}{4}$	79,562 $\frac{1}{2}$
Cutting Channel & raising Embankment	1,000	14 $\frac{3}{8}$	4 $\frac{3}{16}$	60,195 $\frac{5}{16}$
Do Do	1,000	18 $\frac{5}{8}$	6 $\frac{5}{16}$	117,570 $\frac{5}{16}$

Cutting Channel & Raising Embankments	1000	18 $\frac{7}{8}$	6 $\frac{7}{16}$	121.50 $\frac{1}{2}$
Do Do	1000	18 $\frac{1}{2}$	6 $\frac{1}{4}$	115.625
Do Do	1000	16 $\frac{3}{4}$	5 $\frac{3}{8}$	91.21 $\frac{1}{4}$
Do Do	1000	17 $\frac{5}{8}$	5 $\frac{13}{16}$	102.445 $\frac{5}{16}$

Total Cubic feet of Earth 24,613.87 $\frac{1}{2}$

Being equal to Cubic yards 91,162 $\frac{141}{432}$

Abstract Estimate 17
District Tennevally Taluk Thenkora
Constructing a Channel from Kodembah
Tank to Annampuram Tank,
Shreejagannath Aicut Project

Quantity	Description of work	Rate	Amount	Total
91,162 $\frac{141}{432}$	Cubic yards of earth	2	11395	11395
	per Cubic yard at			8
	Sundries at about 5 per Cent		564	114

Amount of Estimate 11960

Ch. Sundryal Captain R. L. K.
Offg. Superintending Engineer 8.4.82

Madurai
14th February
1870

By Commr.

Madras.

14th February 1870

No 2703

From,

Captain H. L. Prendergast P. E.
of Engineers
8th Division

19

P. E.
for Irrigation
Madras

to submit for
Head Office
off the Ho.
large Raking
the main
current and
carried round
Gudambur
corner.

is alteration
already ex-

expressed to the Government in para 12
of your note No 311 dated 27th November
1869. published in G. O. 198 of the 18th Jan^y
1870

1870

Enclosure No 2703 in
Add. No 2703 of 14th
February 1870 from the
Off^{ce} of the P. E. Engineers
8th Div. to the Secy
Engineers for Irrigation
Madras.

11. 7. 69

Enclosure for
Contract Engineer
from Gudambur with
to Government
Ref No 11960.

1870 Dept
No. 2703
From, ~~Pr. of the Govt. of Madras~~
The Offg. Superintending
Engr 8th Division

To
The Ag. Chief Engineer
for Irrigation
Madras

Df. 14th February 1870
Recd 25

Submits for sanction
Estimates of Rs. 11960/-
for Head Sluice & channel
to be taken off the leadum-
ba tank, in connection
with the Strengentum
amirah Project.

No. 1429
C. L. March 1870 Q. 2125

No. 861-20 March 1870

No. 2703

From,

Captain H. L. Prendergast P. E.
Offg. Superintending Engineer
8th Division

To,

Major J. Mullins P. E.
Ag. Chief Engineer for Irrigation
Madras

Sir,

Encls 5

3 Estimates
detailed &
abstract

2 Plans

1 Specification
Report

I have the honor to submit for
sanction, Estimates for the Head Sluice
and channel, to be taken off the Ka-
dambar tank near the large Salig-
lah, instead of having the main
channel from the Strengentum
cut on the south bank, carried round
the water spread of the Kudambar
tank to the south east corner.

The necessity of this alteration
in the Project, has been already ex-
plained to the Government in para 12
of your note No. 311 dated 27th November
1869. published in G. O. 198 of the 18th Jan^y
1870

or reduction of cost Rupees 63316.

I have View

Viewed by me
Capt. P. E.

Offg. Superintending Engineer
8th Division

P. W. Department.

25

12/6/1870

Proceedings of the Madras Government.

Under date the 28 March 1870

Read the following.

The Offg. Superintending

Engineer 8th Division

H. E. No 2703 of 14. Telukutta

The Government sanction the modification of the arrangements of that part of the Srirangam Aicut project, which was intended for the supply of the Aima-puram tank. The water supply will, by the plan for which the Superintending Engineer, 8th Division, has forwarded estimates, be taken off from the Cadamba tank instead of being carried round that tank by a cut, and this alteration, which

R.

B. A.

J. O. S.

is necessary for the reasons
mentioned by the Acting Chief
Engineer (Mr. Madras Govt.
18 Jan. 70, No. 198), will result
in a considerable saving
of expense; the provision for
this part of the project in
the sanctioned estimate
was Rs 86,906, while the esti-
mated cost of the revised
arrangement is Rs 23,390.

27/1/70

To Mr. Secy. Govt.
Controller Mr. Accts.
Chief Eng. for Irrig.

Desp. 29/3/70

Cue 762
Govt. of Madras

PUBLIC WORKS.

To
The Superintending Engineer

S. H. Emerson

Dated

Recd.

Encl. 5

G. O. 28 March 1870, No. 861

Nos. 1039-1100

Streets and Ancient Project

The modification proposed by the
Supt. Engr. of the arrangements
of the part of the Streets and
Ancient Project in the Summary
of the, which was intended for
the supply of the Summary
of the, sanctioned with remarks.