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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W DEPARTMENT

G.O. No.	885 (W)	Press.
B.P. No.		Mis.
Dated	6-4-1880 ~~197~~ .	

Not to be folded or roughly handled

Carney

885

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

6th April 1880, No. 885 W.

Buildings and Roads.
Civil Works.

Read the following papers :—

No. 18. From Major H. M. VIBART, R.E., Acting Superintending Engineer, Third Circle, to the Chief Engineer, Public Works Department, dated Chepauk, 21st February 1880, No. 926.

With reference to G.O., No. 487 W., dated 19th February 1879, I have the honor to forward herewith plans and estimate amounting to Rs. 44,400 for constructing a wooden bridge on masonry abutments and cast iron screw piles over the Kandadu backwater in the South Arcot District.

This *ala*

One Detailed Estimate.
" Abstract "
" Specification.
" Report.
Six Plans.

2. In the Chief Engineer's memorandum No. 351, of 22nd January 1879, printed with the Government Order above quoted, the retention of the present site of the bridge is recommended, in order to avoid making new approaches and to make use of the present abutments which that officer understood had not suffered any damage. On subsequent examination of the abutments, however, by the Executive Engineer, considerable cracks were found in them, also large holes which extended about 3 feet below the water level; *vide* sketch enclosed. The masonry, moreover, appears to have been built with shell lime, and the mortar has been much washed out of the joints. The depth to which the wells of the abutments have been sunk cannot be ascertained, but judging from the damage the superstructure has received the foundations have apparently not been taken down to the firm soil. Under the above circumstances, and as the cost of removing the existing masonry from the very foundations and of sinking fresh wells at the present site would be much greater than the cost of a bridge on another site, it is proposed to construct the new bridge a short distance to the south of the present site.

3. With reference to the Chief Engineer's remark in paragraph 3 of his Note above alluded to, that the timber of the present bridge should be utilised, I have to state that this timber is of but little use, being much cracked, it could only be useful in making railings, joists, &c.; it is, however, considered advisable to sell the timber for what it will fetch by auction (value about Rs. 500) and purchase fresh timber for the new bridge.

4. Borings taken last year by the Executive Engineer at the site of the bridge showed the silt and soft soil to extend to a great depth, hence provision has been made in the estimate for foundation $23\frac{1}{2}$ feet below ground level. This will carry the foundation into the firm soil to 4 feet on west and $8\frac{1}{2}$ feet on east side. The thickness of the abutments and wing-walls have been made in proportion to their height, and they cannot, I think, be reduced with safety considering they will be in salt water.

No. 18-A. From the Superintending Engineer, Third Circle, dated 15th March 1880, No. 1,304.

No. 18-B. Endorsement of the Under Secretary to Government, Revenue Department, dated 15th March 1880.

Proceedings of the Board of Revenue, dated 11th March 1880, Miscellaneous No. 2,805.

From C. S. CROLE, Esq., Acting Commissioner of Salt Revenue, to the Acting Secretary to the Board of Revenue, dated 25th February 1880, No. 1,233.

REFERRING to paragraph 6 of my letter No. 964, dated 14th instant, recorded in Board's Proceedings, No. 260, dated 20th idem, I have the honor to report that the Superintending Engineer, Third Circle, states that plan and estimate amounting to Rs. 44,400 for constructing a wooden bridge on masonry abutments and cast iron screw piles over the Kandadu backwater were forwarded to the Chief Engineer on the 21st instant.

2. I observe that the cost of the bridge was originally estimated at about 10,000 Rupees, half of which was to be debited to Salt (Imperial)—*vide* G.O., No. 263, dated 3rd February 1879.

SUBMITTED to Government in continuation of Board's Proceedings, dated 20th February 1880, No. 260.

2. It is presumed that full explanation of the very considerable excess over the original rough estimate has been afforded in submitting the plans and estimates.

(True Copy and Extract.)

(Signed) C. A. GALTON,
Acting Secretary.

To the Secretary to Government, Revenue Department.

TRANSFERRED to the Public Works Department, in continuation of G.O., dated 26th February 1880, No. 762.

(Signed) LORNE A. CAMPBELL,
Under Secy. to Government.

No. 18-C. *Note by the Chief Engineer, Public Works Department.*

THE Chief Engineer has the honor to submit an estimate, amounting to Rs. 44,400 for reconstructing the Merkanam lattice bridge.

2. On Colonel Foord's note of 22nd January 1879, the Government in G.O. of 3rd February 1879, No. 263, Revenue Department, directed the reconstruction of the bridge in the manner pointed out by that officer at an estimated cost of about Rs. 10,000.

3. The Superintending Engineer, to whom the matter was referred, considered that considerable cracks being found in the abutments as also large holes extending to 3 feet below the water level, and the mortar being much washed out, &c., it would be best to construct an entirely new bridge close alongside of the existing one, and having seven timber spans of 26 feet each resting on screw piles, the cost of which he estimates as above shown at Rs. 44,000.

4. The Chief Engineer is not himself satisfied that the design is the most suitable or economical that can be put forward for adoption, (although quite admitting that where reconstruction has been decided on the estimate should provide for nothing

but sound work), nor does he consider that the marked change in all the communications which must soon follow on the opening of the canal from the Palar to the Merkanam back-water has been sufficiently taken into account.

5. Whatever money there may be to spare he thinks would be much better thrown into the early completion of the latter work during 1880-81, while the time thus gained would admit of the whole conditions connected with this bridge being more carefully studied.

6. He has no reason to doubt that by throwing in cubes or rough stone round the shallow abutments and piers, the bridge with perhaps some repair to its wood-work may be made to last out for two or three seasons more. The delay thus proposed will also have the advantage of permitting the incidence of the charge for such structure as may eventually be decided on being settled in a manner which it is to be hoped may be considered satisfactory by the several departments interested in its execution.

(Signed) R. H. SANKEY, Colonel, R.E.,
Chief Engineer, P.W.D.

22nd March 1880.

No. 19. ORDER THEREON, 6th April 1880, No. 885 W.

THE Government are of opinion that the design submitted with Major Vibart's letter No. 926, dated 21st February 1880, for the new bridge at Merkanam, should be reconsidered under such instructions as the Chief Engineer may issue, and that in the meanwhile such temporary expedients may be adopted as are best calculated to ensure the present structure lasting out two or three seasons.

2. The Board of Revenue will be requested to report their opinion as to the necessity of maintaining a bridge at Merkanam after the canal shall have been opened the whole way from Madras to that point.

(True Extract.)

[Signature]

Major, R.E.,
Under Secy. to Govt., P.W.D.

To the Superintendent of Works, Buckingham Canal, with file of orders.
" Board of Revenue.
" Revenue Department.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1880) Madras.
PUBLIC WORKS.

To
THE SUPERINTENDENT OF WORKS,
BUCKINGHAM CANAL,
&c., &c., &c.

Dated April, 6th.

Issued

Recd.

Encl.

G. O., 6th April 1880, No. 885 W.

APRIL.
Nos. 18-19.

New Merkanam Lattice Bridge in South Arcot District.—Major Vibart's design for the — to be reconsidered under the instructions of the Chief Engineer, in the meanwhile such temporary expedients to be adopted for ensuring the safety of the present structure for two or three seasons; the Board of Revenue to report as to the necessity of maintaining a bridge at Merkanam after the canal shall have been opened.

No 926

3rd Circle Superintending Engineer's Office
Chennai 21st February 1880.

From

The Superintending Engineer
3rd Circle.

To The Chief Engineer
Public Works Department.

Sir,

With reference to G. O. No 487 W dated 19th February 1879, I have the honor to forward herewith Plans and Estimates amounting to Rupees 44,400 — for constructing a wooden Bridge on masonry abutments and cast iron screw piles over the Kaudadu Backwater in the South Arcot District.

2. In the Chief Engineer's Memo No. 351 of 22nd January 1879, printed with the G. O. above quoted, the retention of the present site of the Bridge is recommended, in order to avoid making new approaches and to make use of the present abutments which that officer understood had not suffered any damage. On subsequent examination of the abutments, however, by the Executive Engineer, considerable cracks were found in them also

Enclosures 10
1 Detailed Estimate.
1 Abstract Estimate.
1 Specification
1 Report.
6 Plans.

10

large holes which extended about 3 feet below the water level - see sketch enclosed. The masonry moreover appears to have been built with shell lime and the mortar has been much washed out of the joints. The depth to which the wells of the abutments have been sunk cannot be ascertained, but judging from the damage the super-structure has received the foundations have apparently not been taken down to the firm soil. Under the above circumstances, and as the cost of removing the existing masonry from the very foundations and of sinking fresh wells at the present site would be much greater than the cost of a Bridge on another site, it is proposed to construct the new Bridge a short distance to the south of the present site.

3. With reference to the Chief Engineer's remark in para 3 of his Note above alluded to - that the timber of the present bridge should be utilized. I have to state that this timber is of but little use being much cracked. it could only be useful in making railings joists &c it is however considered advisable to sell the

timber

timber for what it will fetch by auction (value about Rs 500) and purchase fresh timber for the new Bridge.

4. Borings taken last year by the Executive Engineer, at the side of the Bridge showed the silt and soft soil to extend to a great depth, hence provision has been made in the estimate for foundation 23½ feet below ground level. This will carry the foundation into the firm soil to 4 feet on west and 8½ feet on east side. The thickness of the abutments and wing walls have been made in proportion to their height and they cannot I think be reduced with safety. considering they will be in salt water.

I have the honor to be
Sir

Your most obedient servant

A. C. R. S. V. B. A. Major R. B.

Ag. Sup. Engineer 3rd Circle.

P.W.D.

93 FEB 80

NO. 1304

1880

From

The Superintending Engineer
3rd Circle

Dated 21st

Received

February
1880

Enclosures 10

Sent to III C

Vide C No 137

No 926 of 1881

173

11/3

Londados Back Hatch

in the South Beach District

Forwarded for sanction

Plans & estimates for amounting to Rs 44400 for

constructing a wooden

bridge over the

Plans to be returned
for countersignature
of Salt Commissioner

No. 1304

3RD CIRCLE, SUPERINTENDING ENGINEER'S OFFICE,

Chapauk, 15th March 1880.

Dep 2 16 - do

FROM

THE SUPERINTENDING ENGINEER,

3RD CIRCLE,

TO

The Chief Engineer
Public Works Department.

SIR,

Enclosures - 10.

1. Detailed Estimate

1. Abstract - do -

1. Specification

1. Report

6. Plans.

I have the honor to return, herewith,
duly countersigned by the Commissioner
of Salt Revenue, the Plans and Estimates
for constructing a Bridge
across the Gondado Back water
returned with your Memorandum
No 671 dated 27th February 1880.

I have the honor to be
Sir.

Your most obedient servant

Major A. B. S. Bant

Major A. B. S. Bant

Chief Engineer, 3rd Circle.

1880
P.W.D.

17 MAR 80

From No 1885

The Superintending Engineer
3^d Circle

No 1304

Dated 15th
Exp^d 16th } March 1880
Received

Enclosed - 10

Constructing a Bridge across the
Lundadu Backwater - Returning
herewith duly countersigned
by the Commissioner of Salt
Revenue the Plan & Estimates
for

P. W. SECRETARIAT - 1879-80.

KEEP WITH.

885-4

Current No 1885

Letter No 1304

Dated the 15th March 1880.

from the Supg Engr. 3^d Circle.

Note of Remark No.

The Bridge over the Lundadu Backwater, proposed to be reconstructed in the manner suggested by Col. Ford R.E. at an Estimated Cost of Rs. 10,000. recommends that the present site be retained in order to avoid making new approaches & to make use of the present abutments. Some piles to be used between the central pier & abutments. (instead of brick piers) The wood of the present girders to be used. The girders to be taken down to pieces & put together again.

The Supg Engr. states that the abutments were spanned & considerable cracks were found & large holes & tenders about 3 ft. below the water level & the mortar has been much washed out of the joints. The timber is of but little use, being much cracked.

Cracked and as the Cost
 of repairing the existing
 masonry from the foundation
 & of lining fresh Wells at
 the present site would be
 much greater than the Cost
 of a Bridge on another site
 it was therefore proposed
 to construct a new Bridge
 at the distance to the East
 of the present site for which
 a design was submitted -
 Estimated (as detailed below)
 to Cost Rs. 44,400 or Rs. 34,400
 in excess over Col. Ford's Es-
 timate.

The Bridge has the
 same distance as the latter
 but consists of seven bays
 of 26 ft span each. The
 roadway will be carried
 on plankings & posts, fixed
 to rectangular wooden beams
 resting on Cast Iron screw
 piles & on masonry abut-
 ments.

Wells	6804-0-0
Brickwork, Stone & Plastering	4792-12-8
Woodwork	6461-4-0
Earthwork & Graveling	1989-5-6
Fencing	70-5-1
erecting Old Work	158-9-6
Boat Charges &c	258-0-0
Valing Water Pumps	1600-0-0
Indies of Supd	1666-11-3
	23800-0-0

Cost of Iron Work
 including Carriage
 from P.W. Workshop
 to Sindriamam

Total Rupees 44,400.00

The Estimate has been
 examined & found correct.
 The Plans & Estimate
 have been approved & com-
 mitted by the Acting
 Commissioner Salt Re-
 venue.

20th March 1880.

[Signature]

86
 Revenue Department.

Miscellaneous No. 2805

Pro: of the Board of Revenue
 Dated 11th March 1880.

Read the following letter from
 C. F. Cole Esq. Esq. Esq. Esq.
 Esq. of Salt Revenue to the Secretary
 to the Board of Revenue dated 25th
 February 1880 No. 1233.

Referring to para 6 of my
 letter No. 964 dated 14th Decr. 1879,
 recorded in Board's Proceedings
 No. 260 dated 20th idem, I have
 the honor to report that the Superin-
 tending Engineer, 3rd Circle, states
 that Plan & Estimate, amount-
 ing to Rs. 44,400, for constructing a

a wooden bridge on masonry abut-
ments and cast iron screw piles
over the Kandaber Back water
were forwarded to the Chief Engi-
neer on the 21st Instant.

2. It is observed that the cost
of the bridge was originally esti-
mated at about 10,000 Rupees
half of which was to be debited
to Salt (Imperial) vide G.O.
No. 268 dated 24th February 1897.

Submitted to Govern-
ment in continuation of Board's
Proceedings dated 20th February
1898 No. 260.

2. It is presumed that
full explanation of the very
considerable

Considerable excess over the original
rough estimate has been afforded
in submitting the plans & esti-
mates. (True Copy & Extract)

W. C. C. S.
Ag. Secretary
To
The Secretary to Government
Revenue Department

~~CS~~

An Colonel Foord's note
of 22nd Jan^y 1879 the Govt.
in S.O. of 3rd Feb^y 1879 No
268 Revenue Dept. directed
the reconstruction of the
bridge in the manner
sketched out in the plan
at an estimated cost of
about Rs 10000

The Engineer estimated
that the water was
refused considered but
considerably cracks being
found in the abutments
as also large holes ex-
tending to 3 ft. below the
water level and the
masonry being much washed
out &c. it would be best
to construct an entirely
new bridge, close along

P.W.D.
164880
No 1838

Amicus 1882 Sept
24. 1578.

To the Board
of Revenue

Sheet 11 - Washburn
Nov. 12 - do -

P.W.D.
1880
15th March
Mr. J. G. [unclear]
No. 762
in Mr. P. W. D.
on 11-12-1880
Contribution of £20 at 26th Feb 1880
Deposited to the P. W. D. in
London Feb 26th 1880
J. G. [unclear]
Under Secy & Govt

Under the
 long walk, both on the
 winding path, and
 the flat in the middle
 on the way, abundant
 was the number
 back to the, have been
 found to the, and the
 found to the, and the

A. S. No. 439 W. 14-2-79 lis.
C. S. No. 552 + 553. 13-2-80.
" " 671- 27-2-80.
Geo. 596 W. 11-3-80.

Side of the existing
one, and having seven
timber spans of 26 ft.
each resting on sand
piles, the cost of which
is estimated as above
shown at \$44,000

The correspondence
leading up to this design
shows that the Salt
(Imperial) ship and the
Local Fish Boat each
in turn have been en-
deavored to escape the
thin chain of lines
which would estimate
amounting to \$20,000
and it may therefore
be expected that a
much stronger opposition
will be offered by the
towns of Shantung in the
cutting under the present
design

The Chief Engineer
is not himself satisfied
that the design is the
most suitable or eco-
nomical that can be
put forward for adoption

885/10
p 8
in all the communications

(although quite admitting
that where necessary
has been decided on the
estimate shall provide
in nothing but sound
work) nor does he con-
sider that the marked
change which must soon
follow in the opening of
the Canal from the Palace
to the Shikamun back.
water has been sufficiently
taken into account

Whatever money there
may be to spare in
timber could be much
better thrown into the
early completion of the
later work during 88/89
which the time thus
gained would admit
of the whole condition
connected with this bridge
being more carefully
studied

He has no reason to
doubt that by throwing
in cubes or rough stone
round the Shaheen
abutments & piers the
bridge, with perhaps

Some repairs to our
wood work it may be
worth to look out for
two or three seasons
more - The delay
thus proposed will also
have the advantage of
permitting the incidence
of the charge in such
structure as may eventually
be decided on, being
settled in a manner
which it is to be hoped
may be avoided later -
- Parting by the several
disputants interested
in its execution

No. 885 W ~~Sec~~ P. W. Department. B & N
Clarks

PROCEEDINGS of the MADRAS GOVERNMENT.

~~Under date the~~ 6th April/80

READ the following

From the Superint. profile (H.C. No. 926 of 21 July.

" " 50 " 50 *of* *1880.*
 " " 4 " 4 *of* *1304 " 15 Mar / 80.*

Endorsement in the Rev. Depts (N.E. dated 15th Mar 80)

State by the Chief
Squire, etc.

The Government
are of opinion that
the design submitted
with Major Vibart's
letter No. 926, dated 21st
February 1880, for the
new bridge at Meskaram
should be ~~re-~~ considered
under such instructions
as the Chief Engineer
may issue, and that
in the meanwhile
such temporary expedients

may be adopted as are
best calculated to
ensure the present
structure lasting for
two or three seasons

2. The Board of
Revenue will be
requested to report
their opinion as to the
necessity of maintaining
a bridge at Inkanam
after the Canal shall
have been opened the
whole way from Maddur
to that point, and
further to state what
they consider should
be the incidence

The Board of Revenue
said 1/2 to Sub.
1/2 to Local
M

of the charge as regards
the Department interested,
in case a new structure
be eventually decided
on.

M

23/3/80

~~L.S. 8th Circle~~ ✓
~~L.S. 8th Circle~~ ✓
B. of Revenue
Gen. Dept.
Chief Engineer C.E.D.

and 11 enclosures
11 + 10 enclos (+6
plans) sent to S.E.
18/4/80 III vide C No 1574
of 1881. 17/3/81

G.H.S.

22
No 1131 & ca.

Govt. of 1880: Madras.

PUBLIC WORKS.

To

Dated

Issued

Recd.

Encl.

G. O. of April 1880, No. 885 W

Nos. 16-79

Mem

Merkanum Lathice bridge

in South Arcot District - Major

Liberts design further - to

be reconsidered under the

instructions of the Ch. Engrs.

the meanwhile such

temporary expedients to be

adopted for the ensuring the

security of the present structure

for two or three seasons;

and Board of Rev. to report as

the necessity of maintaining

the bridge at Merkanum after

the canal shall have been