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(2) Date of repair 29.10.87
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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W. DEPARTMENT

G.O. No.	2241-W	Press.
B.P. No.		Mis.
Dated	25-9-1885	198.

DPMT

Not to be folded or roughly handled

2241
1

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers :—

NOTE by the Superintending Engineer, IV Circle, on the estimate of Rs. 9,000 for a masonry bridge of 30 feet span across the Todar stream, on the road from Mangalore to Mysore *via* the Agoomba ghât, to take the place of an old masonry bridge that was so damaged by the floods of 1883-84 that it had to be abandoned.

The old bridge is stated to have consisted of one bay of 27 feet, with abutments 8 feet high and rise of arch 9 feet. The new bridge is to be placed in a new straight channel constructed specially for it, and I gather that it is to be similar in design to the old one, except in the following particulars :—

- I. The waterway is to be 30 feet instead of 27 feet;
- II. The archwork is to be of chiselled granite instead of laterite; and
- III. The arch is to be 3 centre instead of segmental.

2. As the old bridge stood about 63 years, it may be assumed that the waterway now proposed will be ample. The old bridge appears to have been damaged by a (probably long continued) set of the current against one of the upper wings, producing a scour at its base, and in the course of years gradually laying bare the foundations and undermining them. Most probably if the danger due to the scour had been noticed, and the face of the wing protected by an apron of rough-stone, the old bridge would have been standing still. All such works should be periodically inspected and necessary protective measures taken.

3. The increase of span is of course an improvement, and so is the substitution of granite for laterite in the archwork, but the alteration in the form of arch, as shown in the plan marked, No. ⁸⁷⁷/₈₅₁ is not, in my opinion, altogether judicious; and I have overleaf given the sections I would recommend. The thickness of the arch should be at least half as much again at the springing as at the crown, and the back of the abutment should be carried up to one-third of the rise of the arch above the springing line. It will also be best to spread the foundations more as shown in my sections.

4. As these alterations will probably not very greatly alter the cost of the work, I have countersigned the plan and estimate. But, if necessary, a revised estimate should be prepared, as I am decidedly of opinion that the sections of arch, backing, and wings, proposed in the original estimate, would not be safe.

18th August 1885.

(Signed) J. BEATTY, Colonel, R.E.,
Superintending Engineer, IV Circle.

From J. STURROCK, Esq., President, District Board, South Canara, to the Chief Secretary to Government, Financial Department (through the Superintending Engineer,* Coimbatore), dated Mangalore, 25th July 1885, No. 845.

* No. 341 W.—Forwarded with a note of the alterations suggested by the Superintending Engineer.

(Signed) J. BEATTY, Col., R.E.,
Suptg. Engineer,
IV Circle.
19th August 1885.

- | | |
|-----------------------|--------------------------|
| 1. Report. | 6. Catchment basin. |
| 2. Specification. | 7. Section of pit. |
| 3. Detailed estimate. | 8. Longitudinal section. |
| 4. Abstract " | 9. Plan, &c., of bridge. |
| 5. Survey. | |

I have the honor to forward an estimate, amounting to Rs. 9,000, with plans, &c., as per particulars in the margin, for constructing a bridge of 30 feet span across the Todar stream in the 8th furlong 18th mile on road No. 5, and to request that Government may be pleased to sanction the same.

2. The work consists of a single bay of 30 feet span, and the Local Fund Engineer in submitting the plans, &c., states that great care has been bestowed in their preparation, and that, if the design meets with approval, it may be adopted in other places, thereby obviating the necessity of using wood or iron.

3. From the report accompanying the estimate it will be seen that it is proposed to abandon the present bridge-site, as the destruction of the old bridge, constructed probably half a century back, is attributed to the obliquity of the current, and to construct an entirely new work over a new channel direct to the lower reach.

4. The Local Fund Board's resolution sanctioning the estimate is enclosed.

No. 331, Financial.

Transferred to the Public Works Department.

(By Order.)

MADRAS,
3rd September 1885.

(Signed) M. HAMMICK,
Acting Under Secretary.

ORDER—dated 25th September 1885, No. 2241 W., Public Works.

The estimate, amounting to Rs. 9,000, for constructing a bridge across the Todar stream, on the road from Mangalore to Mysore, is sanctioned.

2. The modifications suggested by the Superintending Engineer should be carried out.

3. This sanction has been registered as Local No. 18 W. of 1885-86.

(True Extract.)

Lieut.-Col., R.E.,
Offg. Under Secy. to Govt., P.W.D.

To the Financial Department, with nine enclosures.
" Superintending Engineer, IV Circle.

Exd. J. Henricus,
Spare Copies

PUBLIC WORKS.

Encl.

SEPTEMBER.

Estimate for a — on the road from Man-
galore to Mysore, sanctioned.

Public Works Department, 1885-86.

bro.

For orders Cof 53/9
AB

W.

I presume this may be correct,
for us to bear $\frac{1}{3}$ of cost - i.e. No. 777,
but I would point out that, properly
speaking, the Municipality should defray
the whole cost of a work designed solely
(I presume) to protect municipal property.
Please see G.O. of 23rd July, 84, No. 677 E.,
with reference to this point.

Cu.
10.9.85

W

To be sanctioned
subject to the launch
of the arch being made
 $2\frac{1}{4}$ feet thick, & the
backing over the
abutment raised
both as recommended
by the Supt. Engr. at
a small additional
cost.

W.F.

Sep^r 18 1885

Aug 9079
Public Works Department, 1885-86.

Current No. 2241
7772

Letter No. 331

Dated the 3rd Sept 1885

From the Secy to Govt. Engrs. & Public

NOTE OF REMARKS.

1. The accompanying plan shows the estimate made for constructing a masonry bridge across the Tadar on the road from Bangalore to Mysore, via the Sgoombaghat. — The estimate amounts to Rs. 9,000.
2. The proposed bridge is to take the place of an abandoned old one, and it is intended it should cross the stream ^{old one} while flowing in the new channel through which it is to be diverted, as shown in the survey. — The new bridge is of one bay of 30 feet span with a three-centred arch. The width of roadway in the clear above the arch is 12 feet. The archwork is to be of chisel dressed stone (granite); and the rest of the masonry is to be

of hammer dressed stone in
mortar. A concrete substra-
-tum, $1\frac{1}{2}$ ft. thick, has been
allowed for the foundations.

3. The design has evidently been
prepared with care but,
subject to approval, it is
essential for the thorough
safety of the bridge that the
corrections pointed out by
S.E.N. should be effected.

The arch should be once and
a half as thick at springing
line as it is at crown (if $1\frac{1}{2}$ ft.
at crown, then $2\frac{1}{4}$ ft. at springing
line), backing with the height
of the lowest line of the inclined
plane equal to one-third the
rise of the arch (if the rise be
 $9\frac{1}{2}$ feet then height of back equals
 $3\frac{1}{3}$ feet), should be provided
over the abutments; and the
wing walls should receive a
cross section of superstructure
 $6\frac{1}{2}$ feet wide at base and rising
with a uniform batter on the
outside to a top width of $1\frac{1}{2}$ feet
under the blocking course,
to which it is a foot

2241

foundations of the wing walls
descending in steps - each
step being foot wider than
that immediately above
it (see section attached to
S.E.N.'s report). Subject to
approval, it would be well
if the foundations of the
abutments were built on
similar lines.

4. As remarked by S.E.N. the
 foregoing necessary corrections
will not, probably, effect
much alteration in the
cost of the proposed bridge.

5. The plans and estimate
have been countersigned
by the President of the L.
Board of the South Canara
district.

W.L.

17th Sept. '85

S.H.

2241
8

S. A. W.

2241
6

Is the plan on
the 4th page of the
Supplies report to
be lithographed?

Yrs. if that
Report is
be printed

Sep 29 85
It does not seem
necessary to
lithograph the
Sketch
ATT

proposed will be ample. One old orange

2241
8

C-

2241
7

I put this in
our basket - do
we know how
to get to DW?

No - it must have
been taken by the Peon

2241/4

182
29/9

... will be ample. The old bridge appears

224/1

Note by the Superintending Engineer
Fourth Circle on the estimate of Rs. 9000 for a
Masonry bridge of 30 feet span across the Todar
Stream on the road from Mangalore to Mysore
via the Agoomba Ghat, to take the place of
an old masonry bridge that was so damaged
by the floods of 1883-84 that it had to be abandoned.

The old bridge is stated to have con-
sisted of one bay of 27 feet with abutments
8 feet high and rise of arch nine feet. The
new bridge is to be placed in a new straight
channel constructed specially for it, and I
gather that it is to be similar in design to the
old one, except in the following particulars:-

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of 27 feet;

II. The archwork is to be of chiselled
granite, instead of laterite; and

III. The arch is to be 3 centre instead of
segmental.

2. As the old bridge stood about 63 years
it may be assumed that the waterway now
proposed will be ample. The old bridge appears
to

to have been damaged by a (probably long continued) set of the current against one of the upper wings, producing a scour at its base, and in the course of years gradually laying bare the foundations and undermining them. Most probably, if the danger due to the scour had been noticed, and the face of the wing protected by an apron of rough stone, the old bridge would have been standing still.

All such works should be periodically inspected, and necessary protective measures taken.

3. The increase of span is of course an improvement, and so is the substitution of granite for laterite in the archwork, but the alteration in the form of arch, as shown in the plan marked ~~No. 877~~^{No. 885}, is not in my opinion altogether judicious; and I have ^{overleaf} given the sections I would recommend.

The thickness of the arch should be at least half as much again at the springing as at the crown, and the back of the abutment should be carried up to one-third of the rise of the arch above the springing line. It will also be

3
be best to spread the foundations more as shown in my sections. 224

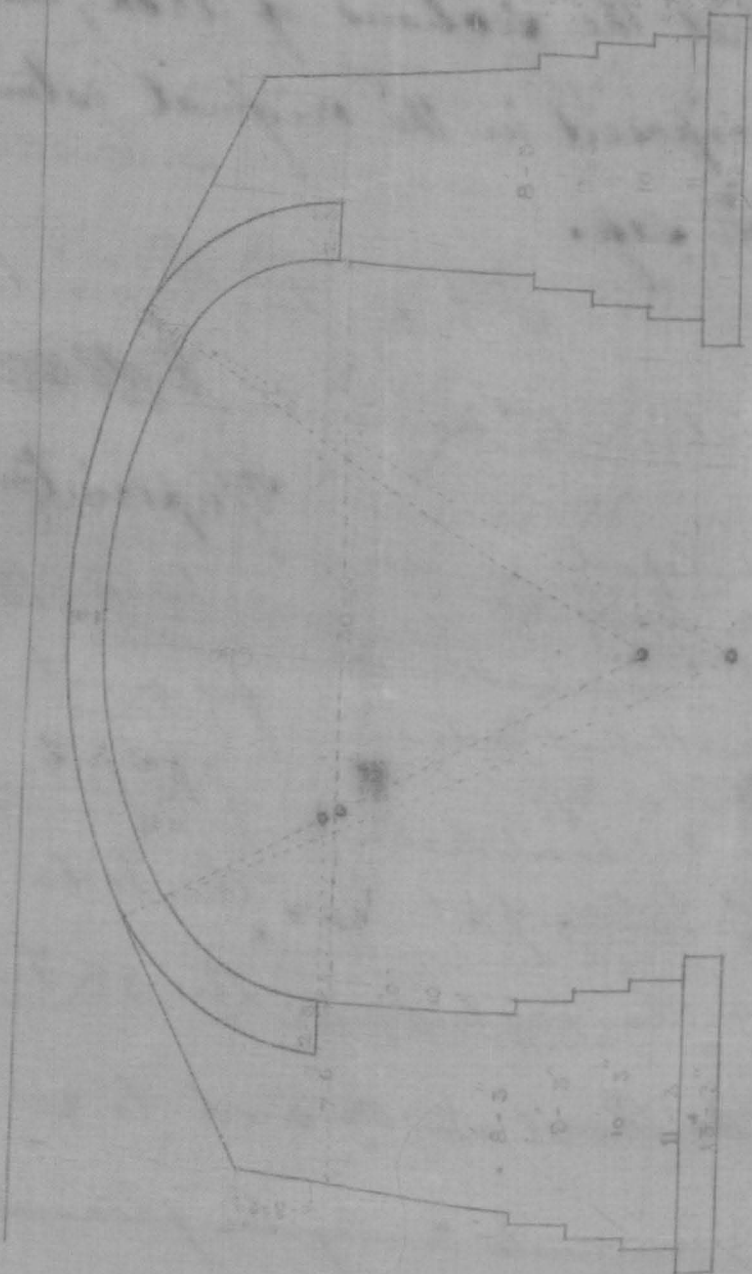
As these alterations will probably not very greatly alter the cost of the work, I have countersigned the plan and estimates. But if necessary a revised estimate should be prepared, as I am decidedly of opinion that the sections of arch, backing, and wings, proposed in the original estimate would not be safe.

L. Beatty - Col. R.E.
Superintending Engineer W.C. Circle
18/8/85

^{the}
* See H -
page

Section of Bridge recommended

Section of Wing wall recommended near the abutment



SCALE 8 FEET = 1 INCH

L.V.D.
18/8/85

2241/10
No. 845
South Canara Collectors
Office, Mangalore, 25 July
1885

To: The Hon. E. F. Webster
Chief Secretary to Government,
South Canara.

No. 341
W

Forwarded
with a note
of the alterations
suggested by the
Supt. Engineer

(Through the Superintending Engineer
Sir

19/8/85. L.V.D.
Supt. Eng.

I have the honor to forward an
estimate amounting to Rs. 9,000 with

1. Report.
2. Specifications.
3. Detailed estimate.
4. Abstract.
5. Survey.
6. Calculations.
7. Section of pit.
8. Longitudinal section.
9. Plan of bridge.

for constructing a bridge
of 30 feet span across
the Todar Stream in
the S. S. Taluk 18th Mile
on Road No. 5, and to request that govt.
may be pleased to sanction
the same.

2. The work consists of a single bay
of 30 feet span, and the Local Fund
Engineer in submitting the plans

ENGINEER'S OFFICE
JUL 85

277
11

states that great care has been bestowed
in their preparation and that if the
design meets with approval it may be
adopted in other places, thereby ob-
viating the necessity of using wood or
iron.

From the report accompanying
the estimate it will be seen that it is
proposed to abandon the present bridge
site as the destruction of the old
bridge, constructed probably half a
century back, is attributed to the
obliquity of the current, and to build
an entirely new work on a new
channel due to the lower level
reach.

The Local Fund Board's Resolution
transferring the estimate was
sent to the Board of the Board of the Board

Yours most obedient servant
J. H. [Signature]

out by the Local Fund

Life 2/4

17 L. 7

23 JUL 85

10

Sub 7772

Local Fund (1880) Department
Financial Department

From, CURRENT No. 1036

The President,

District Board

South Canara.

To,

The Chief Secretary
to Government,

Financial Department
Madras.

No. 845.

Dated 25th July 1885
Despatched

Received 22nd Aug
Jul 4/9/85.

Enclosures 2.4
(3 plans)

Forwarding for sanction
an estimate amounting to
Rs 9,000 with plans &c. for
constructing a bridge of
30 ft span across the Todar
Stream in the 8th Turlong,
18th Mile on Road No 5.

(With endorsement)

No. 331

Transferred to the Public
Works Dept.

(By Order)

M. M. M. M.

Ag. Under Secretary.

1.22
6/9/85

Madras

3 Sept. 1885

To the P. W. Department

6. 18.9.85 - 2.25.9.85

M. P. P. P.

PUBLIC WORKS DEPARTMENT.

No. 2241

2241

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PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 25th Sept 1885

Read the following

Note by the Supt. Engineer IV (H. dated Aug. 18th 1885)
Letter from the President, District Board
South Canara... } (" " July 25th 1885 No. 845)
Endorsement thereon in the Financial Dept. " Sept. 3rd 1885 No. 331

The estimate amounting
to Rs 9000/-, for constructing
a bridge across the
Todar stream, on the road
from Mangalore to
Mysore, is sanctioned.

2. The modifications
suggested by the Supt.
Engineer should be carried
out. by the Local Fund

Board.

3. This sanction has
been registered as Local
No. 18 W of 1885.86.

W
23/9/85
111
22.9.85

W
25.85

J - 82/14
25/9
B W
25/9

To,
The Financial Dept
with enclosures

" S.E. IV order 22/85

(2)
The Chief Secretary
for communications

Cn
22.9.85

2241
12

7772

Govt. of Madras.

PUBLIC WORKS.

Dated

29/9/85

Recd.

Recd.

Recd 5-40pm

G.O. 25 Sep 1885, No 2241 W

Bridge across the Todar
Stream

Set for a - on the road
from Mangalore to Mysore,
somewhere.

55
4

102877

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