(1) Number of pages 24

(2) Date of repair 1-9-80

(3) Initials of the Referencer

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W. DEPARTMENT

G.O. No. / B.P. No.	155-W	Press. / Mis.
Dated	19-1-1885	~~198~~ .

AH

Not to be folded or roughly handled

Archives I--10,006 1 -80.

155/1

19th January 1885, No. 155 W., Public Works.

155/1

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following letter from Colonel J. BEATTY, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 5th December 1884, No. 541 E.W.:—

With reference to paragraph 6 of my letter, No. 448, of 29th September 1884, I have the honor to forward, herewith, the revised estimates promised for the Engapoya and Vangari iron girder bridges in the 24th and 28th miles of the Calicut-Vayitri road.

2. The original estimate prepared by Mr. Nordmann for the Engapoya bridge provided two vents of 43 feet at a cost of Rs. 17,066. Mr. Todd's revised estimate for the same bridge provides, as I suggested, two spans of 40 feet, and the estimate comes to Rs. 14,920 only.

3. For the Vangari river Mr. Nordmann submitted an estimate for one span of 60 feet at a cost of Rs. 10,068; Mr. Todd's revised estimate for one span of 56 feet comes to Rs. 10,050.

4. By substituting Mr. Todd's revised estimates in the general estimate, the three principal streams to be bridged will be provided with lattice girders of somewhat similar type, which I think will be an improvement. The girders of 56 feet span are exactly similar to those of the Kalpathi bridge, which has stood well for many years, and is now in good order.

Enclosure.

From A. B. TODD, Esq., Assistant Engineer, on special duty, Wynaad, to the Superintending Engineer, IV Circle, dated Vayitri, 14th November 1884.

In continuation of this office No. 357, of the 9th instant, I have the honor to forward plans and estimates, Rs. 14,920 and Rs. 10,050 respectively, for two iron girder bridges over the Engapoya and Vangari rivers, Calicut-Vayitri road, *in place of* the two already submitted.

2. The design for the Engapoya bridge is exactly similar to the one already submitted, but with modifications for a 40 feet span in place of a 43 feet span.

3. The design for the Vangari bridge is similar to that of the Kalpathi bridge, as instructed by you.

4. I regret that the coloring of the drawings is not so good as it should be, but, notwithstanding all precautions, the drawing paper deteriorates in the Wynaad climate. I have, in fact, been obliged to trace two of the plans, as the originals were so spotted with mould.

5. The descriptions and specifications of these two bridges were given in the general specification accompanying the estimate for the improvements to the Calicut-Vayitri road.

Order—dated 19th January 1885, No. 155 W., Public Works.

The *revised* estimates, amounting to Rs. 24,970, for constructing iron girder bridges over the Engapoya and Vangari rivers, on the Calicut-Vayitri road, are sanctioned, in supersession of the estimates aggregating Rs. 27,134 for the same items in the general estimate referred to in G.O., No. 3043 W., dated 12th December 1884. The total sanction for improvements to the Calicut-Vayitri road will now stand at Rs. 2,78,544.

2. This sanction has been registered as Provincial No. 231 W. of 1884-85, and classified as Communications, Original Works.

(True Extract.)

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

To the Superintending Engineer, IV Circle, with six enclosures.
,, Examiner, Public Works Accounts, with two abstract estimates.
,, Financial Department.
,, Honorary Secretary, Wynaad Planters' Association.

Exd. A. Grubert.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of 1885 Madras.

PUBLIC WORKS.

Dated January, 19th.

Recd *Encl.*

G.O., 19th Jan. 1885, No. 155 W.

JANUARY.

Iron Girder Bridges

Revised estimate for constructing — over the Engapoya and Vangari rivers, on the Calicut-Vayitri road, sanctioned.

No. 541/W Supg Engineer's Office IV Circle
Coimbatore, 5th December/84

W1

155/3

From,
The Superintending Engineer
IV Circle

To,
The Chief Engineer
P.W. Depart.

Enclos 7
2 Plans +
2 Tracings +
2 Estimates
1 Copy of Mr Todd's letter

+ Sent in Tin case

+ [illegible]

Sir,

With reference to para 6 of my letter No. 448 of 29th September 1884, I have the honor to forward herewith the revised estimates promised for the Engapoya and Vangari iron girder Bridges in the 24th and 28th miles of the Calicut Vayitri road.

2 The original estimate prepared by Mr Nardmann for the Engapoya Bridge provided 2 vents of 43 feet at a cost of Rs 17,066. Mr Todd's revised estimate

estimate for the same bridge — provides, as I suggested, two spans of 40 feet, and the estimate comes to Rs 14,920 only.

3. For the Vangari River Mr Nordmaunn submitted an estimate for one span of 60 feet at a cost of Rs 10,068; Mr Todd's revised estimate for one span of 56 feet comes to Rs 10,050.

4 By substituting Mr Todds' revised estimates in the general estimate the three principal streams to be bridged will be provided with lattice girders of somewhat similar type, which I think will be an improvement. The girders of 56 feet span are exactly similar to those of the Kallpathi bridge which has stood well for many years, and is now in good order.

I

135/4 6 2

I have the honor to be
Sir
Your most obdt servant

L. Beatty. Colonel R.E
Supg: Engineer IV Circle

G.O. 3043-W d/12-12-84

From

The Supg Engineer

IV Circle.

No 541/G.W

Dated 8th Decr/84.

Enclos. 7

SECRETARY TO GOVERNMENT
9 DEC 84
P.W. DEPARTMENT

Engapoya and Vangarai iron girder Bridges —

Forwards Revised estimates of the — of Calicut Vayitri Road.

155/8

Special Executive Engineer's Offic
Vayitri 14th Novr/84
Despd 15th Do —

From,
The Executive Engineer
On special duty
Wynaad

To,
The Supg: Engineer
4th Circle

Sir,

In continuation of this office No 357 of the 9th instant I have the honor to forward plans and estimates, Rupees 14920 and Rs 10050 respectively, for two iron girder Bridges over the Engapoya and Vangari Rivers, Calicut-Vayitri Road, in place of the two already submitted.

2 The design for the Engapoya Bridge is exactly similar to the one already submitted, but

but with modifications for a 40 feet span in place of a 43 feet span.

3. The design for the Vangari Bridge is similar to that of the Culpatti Bridge, as instructed by you.

4. I regret that the colouring of the drawings is not so good as it should be, but notwithstanding all precautions, the drawing paper deteriorates in the Wynaad climate. I have in fact been obliged to trace two of the plans as the originals were so spotted with mould.

5. The descriptions and specifications of these two bridges were given in the General specification accompanying the Estimate for the Improvements to the Calicut-Vayitri Road.

I have &c

(Signed) A. B. Todd

Asst. Engineer. Special Wynaad Dn.

True

4

(True Copy) 155/a

L. Beatty - Colonel R.E.
Superintending Engineer IV Circle

D.a.w.

Yes — may lie over till the other papers are available.

15.12

Dir

Resubmitted with papers relating to orig. estimates

20/2/85

T.

Please compare the cost of the roadway of the 56 ft. span with that of the roadway of the 40 ft span. The former is of buckle plates on iron rolled cross girders, carrying concrete & gravel; the latter of teak planking on plate cross girders. This is an important point. —

CL
12.8.85

Public Works Department, 188 -8

155/7

Current No. 10203

Letter No. 541 E.W.

Dated the 8th December 84

From the S.E. IV Circle

NOTE OF REMARKS.

1. In his letter accompanying the estimate for improving the Calicut-Tagitri road, No. 445/E.W. of the 29th Septr 1884, S.E. IV. stated with reference to the estimates for the Engapoza and Tongarie iron girder bridges then submitted, that they were forwarded to save time, and that he would submit, later on, two other estimates to take their places. — These estimates, with plans, have been now submitted. —

The Engapoza bridge, as at present designed, costs Rs. 14,920 — being Rs. 2,140 less than the amount of the

the estimate of the original bridge. The Vangari bridge osts Rs 10,050, or, but Rs.18 ess than the estimated mount for the originally designed bridge.

. The original design for the Engapoya bridge provided two vents, each of 43 feet span; the present design provides, also, two vents, but each of 40 feet span. The original design for the Vangari bridge allowed but one span of 60 feet; the present design reduces that span to 56 feet.

S.E.IV. writes that the girders of the Vangari bridge "are exactly similar to those of the Kealpathi bridge which has stood well for many years, and is now in good order."

3. S.E.IV. states that by the adoption of the two designs herewith

submitted "the thre principal streams be bridged will be pr -vided with lattice gi -ders of somewhat sim type, which I think will be an improvemen

4. Comparative state -ments have not been submitted, but, subjec to approval, circumsta do not appear to rende them necessary.

15th Dec/84

BH

DW

The papers relating to estimates for improving the Calicut Vayitri road are now in the press.

The present papers might perhaps be allowed to lie over for a day or two until the others are available?

CM

15.12.84

Bridge of 2 bays, each of 40 feet span – of teak planking on plate cross girders.

For a length of 80 feet

28,272 lbs. of wrought iron
– Rs. 5,301 – 0

3,245 lbs. of cast iron
– Rs. 289 – 12

738·4 lbs of lead
– Rs. 270 – 14

337½ c. feet of wood
– Rs. 1,518 – 12

Total – Rs. 7,386 – 6

∴ for a length of 10 feet

3534 lbs. of wrought iron
– Rs. 662 – 10

405·6 lbs. of cast iron
– Rs. 36 – 3

92·3 lbs of lead
– Rs. 34 – 10

42 3/16 c. feet of Wood
– Rs. 189 – 12

Total – Rs. 923 – 3

Weight of a length of 10 feet
= (3,534 + 405·6 + 92·3 + 42·2 × 50) lbs.
= 3,142 lbs.

Bridge of of 1 bay of 56 ft. span – of buckle plates on iron rolled cross girders, carrying gravel.

For a length of 56 feet

33,512 lbs. of Wrought iron
– Rs. 6,284 – 0

2,783 lbs. of cast iron
– Rs. 249 – 0

Total – Rs. 6,533 – 0

∴ for a length of 10 feet

5,984·3 lbs of wrought iron
– Rs. 1122 – 2

496·9 lbs. of cast iron
– Rs. 44 – 7

Total – Rs. 1166 – 9

Weight of a length of 10 ft.
= (5984·3 + 496·9 + *97½ × 120) lbs.
= 18,181 lbs.

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* Capacity of gravel
= (10 × 13 × ¾) c. ft = 97½ c. ft.
and Weight = 11,700 lbs.

No 155. W

PUBLIC WORKS DEPARTMENT.

155

W.

155/10

S.E. III. submits two Estimates for the Kugapoyza and Vangasi bridges on the Calicut-Vayitri road, in supersession of the two originally designed for these streams and sanctioned.

For the former the original Estimate provided 2 spans of 43 ft. & for the Vangasi one span of 60 ft. — whereas 2 spans of 40 ft. and one span of 56 ft. are now provided.

The cost of the Kugapoyzal bridge is Rs. 2,146 less than before; the Vangasi only Rs. 18 less.

We shall now have 2 bridges with timber platforms carried on Whipple-Murphy trusses, and one with a platform of buckle-plates resting on Warren girders.

The latter, the Vangasi, will be exactly similar to the existing Kalpatti bridge which has stood well for many years; the two former are based, I think, on a type design of the Irrigation branch.

The roadway of gravel on buckle-plates will be 3 times the weight of the timber roadway, and if the latter were adopted for the Vangasi bridge, somewhat lighter girders would suffice. There are arguments in favour of both systems.

It is not clear why the girders of all 3 bridges should not be of exactly same type with similar floorings — this has already been commented on in E.W.s original note — but perhaps it is not worth while now making any further change in the Estimates.

C.J.

16.1.85

I think the estimates may be accepted, though [illegible]

with D. W. that it would
have been more convenient
if one type had been adopted
for the 3 bridges:

W.
16.1.85

A/

No 155.W

PUBLIC WORKS DEPARTMENT.

153/11

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 19th January/85.

READ the following

Letter from the Suptg: Engr:
IV. Circle — N.E. No 541/E.W d/ 5th December/84

Present one seals

5

The revised estimates amounting to Rs 24,970, for constructing iron girder bridges over the Engapoya and Vangari rivers, on the Calicut-Vayitri road, are sanctioned, in supersession of the estimates aggregating Rs 27,134 for the same items in the general estimate referred to in G.O. No 3043.W d/ 12th December/84. The total sanction for improvements to the Calicut-Vayitri road will now stand at

27,134
24,970
2,164

No. 278,544.

2. This sanction has been registered as Provl. No. 231 W of 1884-85, and classified as Communi-cations, Original Works.

C.S.
17.1.85

17.1.85

To
The S. E. IV. Circle
with enclos:
" Exc: P.W. Accts:
with two abst. estima
" Finl. Dept:
Hony: Secy: Wynaad
Planters associati

Cn

11-12-06

13-9-76

1/11/06

10216

Govt. of [1884] Madras.

PUBLIC WORKS.

Dated

Recd. Encl.

G.O., 7 June 1884, No. 55

Iron Girder Bridge

Revised estimate for constructing — over the [illegible] river on the Calicut Vayitri road sanctioned

60

5