

- (1) பக்கங்களின் எண்ணிக்கை 20
 (2) புதுக்கித் திருப்பிய நாள் March 90.
 (3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம் 10/2

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

பெரியபாளையம்

அரசாணை எண். மு. கோப்புத் தாள் எண்.	<u>2756</u>	அச்சகம் பலவகை
நாள் :	<u>18-10-1890</u>	<u>198</u>

10
மடிக்கவோ கண்டபடி கையாளவோ கூடாது

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GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following paper:—

From Lieut.-Colonel R. R. E. DRAKE-BROCKMAN, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 19th September 1890, No. 312 E.W.

I have the honor to forward, for sanction of Government, a plan and an estimate, amounting to Rs. 5,800, for reconstructing the Kundipoya bridge of 5 bays with rolled iron beams and wooden platform at the 60th mile 3rd furlong on road No. 6 in Walawanád taluk, Malabar district.

2. The weight of rolled iron beams measuring 12" $\times$ 6" is given in the estimate at lb. 50.51, while that given in the catalogues of Richardson and Cruddas of Bombay and Burn and Co. of Calcutta is lb. 56 per running foot. The estimate has accordingly been altered. This and the correction of some slight mistakes in the woodwork have raised the amount of the estimate from Rs. 5,500 to Rs. 5,800.

Note by the Chief Engineer, Public Works Department.

The data on which the section of the beams has been calculated is not given, but assuming that the maximum distributed load on the bridge amounts to 150 lb. per square foot, the maximum stress per square inch in the beams for the 32 feet spans will be 4 tons and for the 30 feet spans 4.3 tons. In both cases the span for the purposes of calculation has been taken as the length of the beam. The tests laid down in the specification are of little practical use, but if the beams are to be ordered from England it might be stipulated that the tensile strength of the iron should be 24 tons per square inch with a contraction of 25 per cent. and an extension in 8" of 12 per cent. As, however, the beams will probably be purchased from some agent in India, it would be sufficient to require a certain number of the beams to be tested with the working load, and to note the deflection, which should not exceed $\frac{1}{16}$ of the span. Probably steel joists would be found more economical, as lighter sections could be used, those weighing 43 and 39 lb. per foot run in steel taking the place of the 56 and 42 lb. iron joists.

(Signed) J. PENNYCUICK, Colonel, R.E.,
Chief Engineer, P.W.D.

3rd October 1890.

ORDER—dated 18th October 1890, No. 2756 W., Public Works.

The estimate, amounting to Rs. 5,800, for reconstructing the Kundipoya bridge, on road No. 6, Walawanád taluk, Malabar district, is sanctioned.

2

18TH OCTOBER 1890, No. 2756 W., PUBLIC WORKS.

2. Attention is invited to the note by the Chief Engineer, Public Works Department, above recorded.
3. This sanction has been registered as Local No. 23 W. of 1890-91.

(True Extract.)

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

To the Superintending Engineer, IV Circle.
" Local and Municipal Department, with four enclosures.

Exd. J. Moses,
Spore Copies

2756

2

BUILDINGS AND ROADS.
CIVIL WORKS.
Govt. of (1890) Madras.
PUBLIC WORKS.

Dated October, 18th.

Recd.

Encl.

G.O., 18th Oct. 1890, No. 2756 W.

OCTOBER.

Kundipoya Bridge, Malabar
District

Estimate of Rs. 5,300 for reconstructing
the —, sanctioned.

2. P.
2756 P.W.D.
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Note by the Chief Engineer

The data on which the section of the beams has been calculated is not given, but assuming that the maximum distributed load on the bridge amounts to 150 lbs per square foot, the maximum stress per square inch in the beams for the 32^{feet} spans will be 4 tons and ~~4.3 tons~~ for the 30^{feet} span. In both cases the span for the purposes of calculation has been taken as the length of the beam.

The

The tests laid down
in the specification
are of little practical
use, but if the beams
are to be ordered
from England it
might be stipulated
that the tensile
strength of the iron
should be 24 tons
per square inch
with a contraction
of 25 per cent and
an extension ⁱⁿ 8"
of 12 per cent. As
however the beams
will probably be
purchased from some
agent in India, it
would be sufficient
to require a certain
number of the beams
to be tested with the
working load, and to
note the deflection,
which should not
exceed

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exceed $\frac{1}{1200}$ of the span.
Probably steel joists
would be found more
economical, as
lighter sections could
be used, those weighing
43 and 39 lbs. per
foot run in steel
taking the place of
the 56 and 42 lbs
iron joists.

WCB
1.10.90 E.C.

The arrangement for securing
the spring beams to the
iron joists is not good, as it
involves boring a hole
through the web of the
joist just where the greatest
strength is required in the
web.

S 340

N^o 312
E. W.

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Supg. Engineer's Office, ~~W. Circle~~,
Coimbatore 19th September 1890.

From

Act. Col. R. R. E. Drake Brockman R.E.,
Superintending Engineer,
Fourth Circle.

To

The Chief Engineer,
P. W. Department,
Madras.

Sir,

Enclosures 3.

- 1 Plan
- 1 Estimate
- 1 Report

I have the honor to forward for sanction of Government a plan and an estimate amounting to Rs 5,800 for reconstructing the Kundipoya bridge of 5 bays with rolled iron beams and wooden flat form at the 60th mile 3rd furlong on road No 6 in Walluvanad taluk, Malabar District.

2. The weight of rolled iron beams measuring 12" x 6" is given in the estimate at Rs 50.57 while that given in the Catalogues of Richardson & Crutcher of Bombay

Bombay and Burn & Co of Calcutta is
the 56. per running foot. The estimate has
accordingly been altered. This and the
correction of some slight mistakes in
the wood work have raised the amount
of the estimate from Rs 5,500 to Rs 5,800.

I have the honor to be,

Sir,

Your most obedt Servt,

Rudra Nath Bhattacharya
Lt Col. R.E.,
Superintending Engineer, IV Circle.

H

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P.W. Cus. 8996
From
The Supg. Engr.
4th Circle

Dated 19th } Septer, '90
Recd 22nd }
Recd 23rd

No. 312
E.W.

Encls. 3.

Kundipoya Bridge
Forwarding for sanc-
tion of Government a
plan and an estimate
amounting to Rs. 5800/-
for re-constructing the

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Cuddalore
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Public Works Department.

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Current No. 8996
Letter No. 312
Dated 19th September/90
From the S.E. IV Circle

Submitted by E.W.
within 30.9.90
NOTE OF REMARKS.

The accompanying plan
and estimate under review
amounting to Rs. 5,800 per-
sonal for re-constructing
the Kundipoya Bridge
of 5 bays with rolled
iron beams & wooden
form at the 60th mile 3rd
from long on road No. 6 in
Walthuwanad Taluk, Malabar
District.

The span of centre bay
of the bridge is 30ft. & for
the side bays, the span
is 32ft. each.

Report is submitted.

The weight of rolled iron
measuring 12"x6" has been
given in the estimate at
Rs. 50.51, & it is understood
that in the Catalogues of
Richardson

P.W. Cas: 8996
 From
 The Supg. Engrs
 4th Circle

Dated 19th } Septer, '90
 Recd 22nd }
 Recd 23rd

Sp. 312
 E.W.

Encls. 3.

Kundipoya Bridge
 Forwarding for sanc-
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 plan and an estimate
 amounting to Rs. 5800/-
 for re-constructing the

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Public Works Department.

Current No. 8996
 Letter No. 312
 Dated 19th September/90
 From the S.E. IV Circle

Submitted by E.W.
 within 30.9.90
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The accompanying plan
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The weight of rolled iron
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 given in the estimate at
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 that in the Catalogues of
 Richardson

Richardson & Cruddas of
Bombay & Brown & Co. of
Calcutta is the 56 per
cent running foot, & the esti-
mate has accordingly been
altered in the S.E. office.

This & the correction of
some slight mistakes in
the wood work have
raised the amount of
the estimate from
Rs 5500 to Rs 5800.

It will be seen from
the report that four of
the beams of this bridge
having decayed & broken,
have been renewed in
the course of the last
3 years, and damaged
planks have also been
renewed likewise. But
at present the whole of
the wood work is quite
unfit to be left in its
present state, more es-
pecially the beams &
corbels which are rotten
& dangerous & it is there-
fore proposed to dismantle
them & sell the materials
by Public auction.

The existing piers
and abutments of
the

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the bridge built of
granite stone in Churnam
are quite sound & strong
enough to carry the
proposed platform,
but they are to be raised
 $1\frac{1}{4}$ ft. above the present
top level with granite
stone in Churnam in
order that the original
height of roadway
over the bridge be the
unmattered.

The rates as far as
can be checked are fair.
Contingencies & Super-
vision are charged
at 5 percent.

The plan & section to
have been counter-
signed by the President
District Board.

J. H.
25.9.90.

Note by L.M.

The data on which the section of the beams has been calculated is not given, but assuming that the maximum distributed load on the bridge amounts to 150 lbs per square foot, the maximum stress in the beams for the 32' span will be 4 tons per square inch & 4.3 tons for the 30' span. In both cases the span for the purposes of calculation has been taken as the length of the beams. The tests have shown on the specimens one of little practical use, but if the beams are to be ordered from England it might be stipulated that the tensile strength of the iron should be 24 tons per square inch with a contraction of 25 per cent & an extension

in 5" of 12 per cent. As however the beams will probably be purchased from some agent in India, it would be sufficient to require a certain number of the beams to be tested with the working load & to note the deflection, which should not exceed $\frac{1}{1000}$ of the span.

Probably steel joists would be found more economical, as light sections ~~could~~ could be used, those weighing 43 and 39 lbs per foot run. ^{in that} Both the plans of the 56 & 43 lbs are given.

W.C.
30-9-90

H.C.

For copy this and please

No. 2756W of 18 Oct 1890

B.H.
civil works
PUBLIC WORKS DEPARTMENT.

2756
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PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following

From the S.E. IV Circle No. 312CW of 19th Sep 90
Note by the Chief Eng. P.W.D. of 3.10.90

The estimate amounting to Rs 5,800 for reconstructing the Kundipaya bridge, on road No. 6, Walluvanah taluk, Malabar District, is sanctioned. Attention is invited to the note by the Chief Engineer P.W.D. above recorded. This sanction has been registered at Local at 28 W of 1890-91.

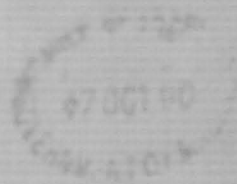
J.H.
17/10/90

To
The S.E. IV Circle
Local Municipal Dept
with 4 enclosures.

W.C.
1.10.90
S. W. 8 Oct

M.
K.M.

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7/11/18 W-90
S.C.P. 15/10

To
The Hon. Secy of the
Chapman & Co. and
of the District

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W-90
S.C.P. 15/10
S.C.P. 15/10

8996.

7/11/65

Govt. of Madras.

PUBLIC WORKS.

20/11/90

Dated

To

From

G.O. 18 Oct 1890 No 2756w.

Thundipaya Bridge
Malabar D.R.

Estimated at Rs 5800 for
reconstruction of the same.

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24/11/10

2/11/10