

CD 3099

Gobl. of (1893) Madras.
PUBLIC WORKS.

1/11/93
9/5

Dated

Recd.

Encl.

G.O. 8 May 1903 No. 1261 W

Platform Bridges

Estimates for recently
certified on roads
in the Malabar
District sanctioned
for execution by the
District Board.

90/6

J.C. 9/11 . 29/5

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers:—

From J. C. LARMINIE, Esq., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated 26th February 1893, No. 77 W.

I have the honour to forward, for sanction of Government, the following estimates for iron girder bridges on the roads in Malabar district:—

	RS.
(1) Reconstructing Thoopanad bridge on road No. 6 with rolled iron girder and timber platform	4,920
(2) Reconstructing Oocharakadavoo bridge on road No. 55 with rolled iron girder and timber platform	4,435
(3) Reconstructing Kutticole bridge on road No. 1 with rolled iron girder and timber platform and with District Board Engineer's letter in original	5,100
(4) Reconstructing the timber bridge at Mahé	10,330

2. These estimates were returned to the President, District Board, with my notes (copies of which are enclosed) suggesting certain modifications and the President now retransmitted them for sanction as they are considered urgent, especially the estimate for the Mahé bridge. The President's letter in original is herewith forwarded with its enclosures.

3. I may add that as per para. 955-B of the Madras Public Works Code, the first two estimates can finally be dealt with by me, but it is considered advisable to take your opinion on the matter as I differ from the views of the District Board Engineer.

From the Superintending Engineer, IV Circle, dated 26th March 1893, No. 114 W.

ORDER—dated 8th May 1893, No. 1261 W., Public Works.

The following estimates submitted by the Superintending Engineer, IV Circle, for reconstructing platform bridges on roads in the Malabar district are sanctioned for execution by the District Board :—

	RS.
Renewing the platform of Oocharakadavoo bridge on road No. 55 with steel girders and timber platform (Local No. 6 W. of 1893-94)	4,435
Reconstructing Thoopanad bridge on road No. 6 with steel girders and timber platform (Local No. 7 W. of 1893-94)	4,920
Reconstructing Kutticole bridge on road No. 1 with rolled iron beams and timber platform (Local No. 8 W. of 1893-94)	5,100
Reconstructing Mahé bridge on road No. 1 (Local No. 9 W. of 1893-94)	10,330

2. These sanctions have been registered as shown above and are classified as Communications, Original Works.

(True Extract.)

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

To the Superintending Engineer, IV Circle.
,, Local and Municipal Department,
with plans and estimates.

Exd. C. A. Munisawmy.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.
Govt. of {1893} Madras.
PUBLIC WORKS.

Dated May, 8th.

Recd.

Encl.

G.O., 8th May 1893, No. 1261 W.

MAY.

Platform Bridges

Estimates for reconstructing certain —
on roads in the Malabar district, sanctioned
for execution by the District Board.

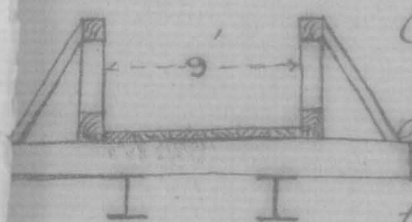
Note on Kutticole Bridge Design

The design and estimate pro-
vide for three rolled iron beams to each
span of 24 feet. Taking the maximum
live load at 120 lbs per square foot, the
load on each bay will be $24 \times 9 \times 120 =$
 $= 25920$ lbs or $11\frac{1}{2}$ tons. Girders and planking
say another $2\frac{1}{2}$ tons.
Total 14 tons.

The safe distributed load for one rolled
beam $12" \times 6"$ for a 24' span is $10\frac{1}{2}$ tons, and
as the plan allows for three such beams,
there is a superfluous amount of strength
i.e. $31\frac{1}{2}$ tons against 14 tons to be carried.

* of even lighter
section

Two beams would suffice and the road
planking might be laid longitudinally,
carried on stout joists bolted transversely
direct to the top flanges of the beams
thus dispensing with the longitudinal joists
shown by detail at C.



Regarding the Piers, it is not shown
how the rails forming the upper 20 feet
of each pier are to be secured to the lower
timber pile portion, the latter will, it
is supposed, first be driven and the
rails

No 77
W
From

Supdy. Eng^r Office 47
26th February 1893.

J. C. Larmann Esq.
Superintending Engineer
4th Circle,

To

The Chief Engineer
P. W. Department.

126/4

- Encls 23.
5 Plans
4 Estimates
3 Abstracts

Sir,

I have the honor to for.

1 Specimen - ward for sanction of Govern.
3 Reports - ment, the following estimates
1 Do in a letter
form for iron girder bridges on the

2 Copies of 8 roads in Malabar District.
Notes

1 Letter from (I) Reconstructing Thoopanad
the President bridge on Road No 6 with rolled
of the D. A. B. iron girder and timber plat-
form with 2 office form Rs 4920.
Notes in vol.

(II) - 8 - Oocharakadane bridge
on road No 55 with Rs 4435

(III) - 8 - Kutticole bridge on
road No 1 with Rs 4
with D. A. B. and Eng^r letter in original 510

IV. Reconstructing the timber bridge
at Mahe Rs 10,330

2. These estimates were re-
turned to the President District
Board with my notes (copies of
which are enclosed) suggesting
certain modifications and the
President now retransmitted
them for sanction, as they are
considered urgent, especially
the estimate for the Mahe bridge.
The President's letter in original
is herewith forwarded with
its enclosures.

3. I may add that as per
para 955 B of the Madras Public
Works Code, the first two estimates
can finally be dealt with by
me, but it is considered ad-
visable to take your opinion
on the matter as I differ from
the views of the District Board.

Engineer.

Engineer.

I have the honor to be

Sir,

Yours most Obedt Servt

J. C. Lawrence
Superintending Engineer

26/2 47/16

From P. W. CURRENT No. 1928

The Supg. Engrs
4 Circle

Dated 26. } Feb 193.
Despd 28. }
Recd: 1.3.93

No. 77

W

Encls: 23. (5 plans)

Iron girder Bridges on
certain roads in the
Malabar District
Forwards for sanc-
tion of Govt. four—

18/4

No. 114
W

From.

Supg. Engrs Office 4th
26. March 1893.

J. C. Larmine Esq.
Superintending Engineer,
4th Circle,

To

The Chief Engineer
P. W. Department.

Sir,

I have the honor to
request you will be good
enough to obtain the early
sanction of Government
to the estimates for iron girder
bridges submitted with this
office letter No. 77 W dated
26th ult. in order to enable the Dis-
trict Board Engineer Ma-
labar to put up the bridges
before the commencement
of the rainy season.

CP. 1928
W. T.
13-93

I have the honor to be
Sir,

Yours most obedt. Servt.
J. C. Larmine
Supg. Engineer 4th

26/30

dp

From CURRENT No. 3099

P.W. CURRENT No.

The Supg. Engrs
+ Circle

Dated 26. } Mar/93
Despd 29.
Recd 1. 4. 93

No 114
W

Iron girder bridges on
certain roads in the
Malabar District

Request to obtain
the early sanction of
Govt to the estimates
for—

urgent

Public Works Department.

Current No. 1928

Letter No. 77W

Dated 26 February 1893

From the Super Engineer IV Circle

TECHNICAL NOTE.

Name of work Renewing bridges on roads
in the Malabar District

The Super Engineer IV Circle submits
for the sanction of Govt. the following
plans & estimates for renewing plat-
form bridges on roads in Malabar
District prepared by the District
Board Engineer at the suggestion
of the Super Engineer.

- (a) Renewing the platform of Oocharas:
Kadavoo bridge on road No. 55
with steel girders & timber
platform Rs 4435
- (b) Reconstructing Thropanad bridge
on road No. 6 with steel gir-
ders & timber platform Rs 4920
- (c) Reconstructing Kullicote bridge
on road No. 1 with rolled iron
beams & timber platform Rs 5100
- (d) Reconstructing Mahi bridge on
road No. 1 Rs 10330

Oocharakadavoo bridge. This bridge
is of 5 spans, two spans of 20 feet
each from the left abutment

18/9/93 N.S. 5 90

7201

2099

P.W. CURRENT No.

3 spans of 30.6' each from the right
abutment with piers 4 feet wide at
top. The estimate provides for a
roadway of 9 feet clear to be carried
by two steel girders for each span,
placed 6 feet apart from center to
center. The girders of the two spans
near the left abutment will be
of a section 11" x 5 1/2" weighing 40 lbs
per running foot & the girders of
the three spans near the right abut-
ment a section of 12" x 6" weighing
56 lbs per running foot. Rolled
steel cross joists 10 feet long of
a section of 4" x 3" weighing 13 lbs
per foot will be bolted on top of
the longitudinal girders. The joists
will project 2 feet from center to
center of each longitudinal girder
on the up & down stream & will
be fitted with wooden joists 5" x 4"
bolted to the cross steel joists &
the roadway planking 3" thick
nailed on as per plan.

Thorpam bridge. This bridge is
of 5 spans each 29 feet except
the span at right abutment which
is 30 feet. The piers are 23 feet
long & 5' 6" wide. The estimate
provides for raising the piers
& abutments 18 inches & for a
roadway 9 feet wide supported
by two steel girders for each
span placed 6 feet apart from
center to center with cross beams
of similar to Ocharakadav
type.

Kullicle bridge. This bridge
has been dismantled as it was found
to be quite unsafe for traffic. The
abutments are also reported to
be badly cracked. The estimate
under review provides for dis-
mantling the existing abutments
& rebuilding the same 9 feet to
wards the bank, so as to provide
additional waterway, as the ex-
isting waterway is reported
to be insufficient.

The proposed bridge will be of
5 bays each 24' 5 1/3" & will carry
a roadway of 9 feet on rolled
iron beams supported by 3 rows
of iron rail piles.

The cross girders will rest on
piers of 3 iron rail piles placed
3' 9" apart from center to center.
The girders will be 10 feet in
length & 8" x 6" in section weigh-
ing 34 lbs per foot run & will be
bolted to the iron rail piles by
means of angle iron brackets, as
per detail plan, over these
cross girders. The main longi-
tudinal girders of a section
12" x 6" weighing 56 lbs per
foot run will be bolted with
longitudinal wooden beams
4" x 4" on the inner face of the
web to spike the joists & road
planking.

The plan & report provide for
3 main longitudinal girders

provides for only 2 girders as suggested by the Super Engineer. The position of these 2 girders are not shown in the plan.

Makhi bridge. This bridge will be reconstructed on the same design as the old bridge on wooden piles or piers 15" in dia. each pier will be of 3 piles placed 5' 10" apart from centre to centre. The piles will carry a cross beam 16 feet in length over which 4 longitudinal beams 12" x 12" will be placed to carry the joists to roadway. The roadway will be 11' 4" between wheel tracks & 13 feet between hand rails.

There will be 14 bays each 20' 6" wide except the 6' bay from the left abutment to the end bay at right abutment which will be of 22' 6" feet each.

The Dist. Board Engineer reports fully explaining the necessity for the work.

The estimates have been examined but many of the rates provided cannot be checked.

All these estimates have been framed on the suggestions of the Super Engineer, vide his notes & remarks on the estimates but the Dist. Board Engineer differs from the views of the Super Engineer under Chap. II para 36 of the

Local Fund rules. The S.E. could have sanctioned the estimates for renewing the Thoopanad & Oocharakadavoo bridges but he submits them for the opinion of the Chief Engineer.

No copies of the Dist. Board's resolutions sanctioning these estimates have been submitted neither have the estimates been countersigned by the President Dist. Board.

The S.E. only initiates the plans & estimates for renewing the Thoopanad & Oocharakadavoo bridges but not for Kullivole & Makhi.

[Signature]
6-11-93

0/10/11

These estimates may I think be sanctioned.

I cannot say that I think the designs are too much favorable but they will answer their purpose.

[Signature]
26/4/93

[Signature]
26/4/93

[Signature]
26/4/93

1261.W d/ 8 May 189.
PUBLIC WORKS DEPARTMENT.
[Signature]

THE MADRAS GOVERNMENT.

Read the following
IV Circle (H.E. P. 77.W d/ 26. II. 93)
(H.E. N. 114.W d/ 26. III. 93)

The following estimates submitted by the Suptg. Engineer IV Circle for reconstructing platform bridges on roads in the Malabar District are sanctioned for execution by the District Board.

Platform of Oochara:	
a road 100 with steel	Rs
ber platform	4435
Local No: 6 W of 1893-94	
Thoopanad bridge on	
el girders and timber	
	4920
Local No: 7 W of 1893-94	
Kullivole bridge on	
lled iron beams and	
	5100
Local No: 8 W of 1893-94	
Make bridge on road 100	10330
Local No: 9 W of 1893-94	
These sanctions have been registered as Local	
of 1893-94	