GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers :—

From J. HANNAN, Esq., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Erode, 3rd November 1894, No. 471 W.

I have the honour to submit, for sanction of Government, plans and estimate, amounting to Rs. 29,250, for constructing a pin trussed girder bridge of one span of 100 feet in the clear over the Kadimbilla river in the 52 mile of road No. 2 in the Uppinangadi taluk, South Canara district.

2. A copy of the resolution of the District Board passed at its meeting held on the 22nd October last is also herewith sent.

Note by the Chief Engineer, Public Works Department.

No hydraulic details are given. But, taking off the drainage area to scale, it seems to be about 70 square miles, and taking as high a co-efficient as 900, by formula $Q = 900 \times A^{\frac{2}{3}}$, it will be found that a span of 100 feet will suffice.

2. The proportion of mortar to stone provided for the concrete is considered insufficient. There should not be more than three of stone to two of the dry materials of the mortar and the largest stones should pass through a 2-inch ring.

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

9th January 1895.

ORDER—dated 15th January 1895, No. 86 W., Public Works.

The estimate, amounting to Rs. 29,250, for constructing an iron pin trussed bridge over the Kadimbilla river in the South Canara district is sanctioned.

2. Attention is drawn to the Chief Engineer's note recorded above.

3. This sanction has been registered as Local No. 16 W. of 1894–95.

(True Extract.)

Under Secy. to Govt., P.W.D.

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

Exd. C. A. Munisawmy.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1895} Madras.

PUBLIC WORKS.

Dated January, 15th.

Read. *Encl.*

G.O., 15th Jan. 1895, No. 86 W.

JANUARY.

Iron pin trussed bridge

Estimate of Rs. 29,250 for constructing an — over the Kadimbilla river in the South Canara district, sanctioned with remark.

Extract from the Proceedings of the District Board of South Canara dated 22nd October 1894.

Present:-

G. W. Dance Esq. President
Dewan Bahadur A. Pinto Head Quarters Deputy Collector of South Canara.
Surgeon Major A. J. O'Hara Agt. Dt. Surgeon South Canara.
M R Ry. K. N. Visvanatha Row Asst.
Sub Asst. Inspector of Schools Udipi Range.
J. F. Brito Esq.
M R Ry. M. Shina Row Asst.
" D. Venkal Row "
" C. Gopalakrishnaya "
" K. D. Achutaya "
" K. Sheshagiri Pai "
" K. Narayanshetti "
" T. Kaustappa "

Haji

Haji Haroon Sheit Lahib Bahadur

× × × ×

9. Read letter No. 242/29-94 from the Local Fund Engineer, South Canara, resubmitting for sanction the plan and Estimate amounting to Rs. 29,250 for Constructing a Pin Truss bridge over the Radimbilla stream.

The Estimate is passed subject to the approval of the Supdg: Engineer

× × ×

/True Extract/

Ligh Smith

For President Dt 15/

/True Copy/

J. Hannan

Supdg: Engineer to Govt

Dw 4/
8a 3/8a

GOVERNMENT OF MADRAS

No. 471/W

From.

Supdg. Engr's Office 4th Circle
Camp Erode 3rd December 1894.

1 Plan

J. Hannan, Esq.,
Supdg. Engineer
4th Circle,

To The Chief Engineer
P. W. Department,

Sir,

I have the honor to submit for sanction of Government plans and estimate amounting to Rs. 29,250 for constructing a Pin Trussed Girder Bridge of one span of 100 ft. in the clear, over the Radimbilla Riv. Riv. in the 52nd mile of Road No. 2 in the Uppinangady Taluq, South Canara District.

2. A copy of the Resolution

Enclosures 10

1 File of estimate with report & specification.
1 General plan
1 Plan of details
1 Detail plan of Roller & knuckle bearings...
1 Cross section
1 Sections of stream
1 Section of approach
1 Sketch plan
1 Site plan
1 copy of Resolution of the Dt. Bd. South Canara dt. 22-10-94
10

× Sent per Bullock post

-tion of the District Board
passed at its meeting held
on the 22nd October last is
also herewith sent.

I have the honor to be
Sir,
Your most obed.t Servt

H Hammond
Supdg: Engineer 4th J.

No. 8437

From

The Supg. Engineer
4th Circle

Dated 3rd Dy
Despd 5th } November 1894
Recd: 6.11.94

No 471
W.

Encls: 10. (8 plans)

Pin trussed bridge over the Kadimbilla River, Uppinangadi Taluq, South Canara Distt.

Submits for sanction of Government Plan Estimate &c amtg. to Rs 29,250 for Constg.

a

Exd.
8-xt-94

C.W.S.D
7.94
11

C No. 8437
P.W.D.

20

Note by the Chief Engineer P.W.D.

No hydraulic details are given. But, Calsing falling off the drainage area to scale, it seems to be about 70 square miles, and Calsing falling as high a coefficient as 900, by formula $Q = 900 \times A^{\frac{2}{3}}$, it will be found that a span of 100 feet will suffice.

2. The proportion of mortar to stones provided for the concrete is considered insufficient. There should not be more than 3 of stone to two of the mixture and the largest stones should pass through a 2" ring.

Exd.

C.W.S.D
7.95

& western abutments are also reported to have breached dur:ing the monsoon of last year & that the masonry is in a very dilapidated condition. It is therefore proposed to construct a new bridge of 100 feet span in the clear with a roadway of 16 feet between the wheel guards.

The existing waterway of the bridge is stated to be 109'5" & it is proposed to reduce it to 100 feet, the reduction of 9'5" it is stated, will be compensated by the re:moval of the 3 piers, which is not quite clear.

The bridge is designed some:what as per Standard plan & the roadway is to be carried on two main girders of 104 feet in length each, including a bear:ing of 2 feet on each abutment. The main girders are to be placed 18 feet apart from centre to cen:tre. The roadway flooring is to be of teakwood longitudinal beams 9"x 8" placed 4'1" apart centre to centre & laid over steel cross beams of a section 5"x 12" laid on the main girders & planked with 3" thick planks & the surface covered with 6 inches of ground.

The abutments & wings are to be built of rubble masonry & concrete foundations carried down to a depth of 7 feet below the rivers bed where it is anticip:ated solid rock will be met with.

} In any case they will be carried down to hard & solid clay (side report)

with. The face of the masonry is to be pointed with Portland ce:ment.

The rates for concrete cannot be checked. The other rates are fair except for concrete which is in excess of the Divisi:onal schedule by Rs 6-8-0, if Schedule rates be adopted the saving will be only about Rs 140

The plans & estimates have been countersigned by the President Dist. Board & passed in Dist. Boards Pro:ceedings dated 22nd October 1924 subject to the approval of the SE.

22.24-34

The estimate may be sanctioned with the following note given

Chief Engineer P.W.D.

No hydraulic details are given. But, taking off the drainage area to scale, it seems to be about 70 square miles - and taking as high a coefficient as 900, by formula $Q = 900 \times A^{\frac{2}{3}}$, it will be found that a span of 100 feet will suffice -

The proportion of mortar to stones provided for the concrete is considered sufficient - Stone should not be more than 3 of stones to one of the mixture and the largest stones used pass through a 2" ring.

CWB
4/1.2/95

Public Works Department.

Re 86 W dt 15 January 1895

Current No. 8437

Letter No. 471/W

Dated 30 November 1894

From the Supdg Engineer 1st Circle

NOTE BY TECHNICAL SECTION.

Name of work. Constructing an iron pin trussed bridge over the Kadamballi river in South Canara District

Amount of Estimate Rs 29,250

The Supdg Engineer 1st Circle submits for the sanction of Govt plans & estimates amounting to Rs 29,250 for constructing & erecting an iron pin trussed girder bridge of one span of 100 feet clear over the Kadamballi river in the 52nd mile of road No 2 connecting Mangalore and Chandragiri with Mani via Seerady & Hosangadi in South Canara Dist.

The existing timber platform bridge of 4 spans is stated to have been originally arched, the arches are reported to have collapsed very soon after its completion & a timber platform substituted in 1865-66 the floor of which has repeatedly been renewed, the eastern

$Q = 825 \times 70^{\frac{3}{4}}$

$\log Q = \log 825 + \frac{3}{4} \log 70$

$= 2.91645 + 1.84505 \times \frac{3}{4}$

$1.38384 \quad 4\overline{)5.53527}$

$4.30026 \quad 1.88381$

$\therefore \log Q = 4.30026$

$\therefore Q = 19962$

Say 20000 c.f.s.

By formula for drowned weir

$Q = L c \sqrt{2g}\, d_1 (d_2 + \frac{2}{3} d_1)$

d_1 being difference of water level above and below weir

d_2 = depth of water below weir above crest

c = coefficient in this case = 0.8

Assuming the head to 1 foot, and taking $d_2 = 23.53$.

$20000 = L \times 0.8 \times 8.02 \times 24.19$

$= 155.2 \times L$

$\therefore L = \frac{20000}{155.2} = 128.9$ ~~124~~ or 129 ft

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By formula $Q = 900 \times 70^{\frac{2}{3}}$

$Q = 15286$ Say 15300

$\therefore 15300 = 155.2 \times L$

or $L = \frac{15300}{155.2} = 98.6$

Say 100 ft span

CWB
18/12/94

No. 86 W dy 15 January 1895.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

From the Supdg. Engineer IV Circle No. 471 dy 3rd November 1894

Note by the Chief Engineer P.W.D dy 9th January 1895.

W
12 Jan

The estimate amounting to Rs 29,250 for constructing an iron pin trussed bridge over the Kadimbilla river in the South Canara District is sanctioned.

2. Attention is drawn to the Chief Engineer's note recorded above.

3. This sanction has been registered as Local No. 16 W of 1894-95.

To The S. E. IV Circle
" Local & Municipal Dept.tt
with 10 enclos.

DESPATCH
22 JAN 95

(40—1,000—26-11-94.)

W Roy 95

Sg 9.1

M 10/1

Cw

mej

$ 3/1 2/1 95

c th 2/3

c = 900

a = 64 sq inches

900 ∛64²

900 ∛4096

64 64 / 256 / 384 / 4096

log 4096 = 3.6123599 / 3 = 1.2041199

1.2041199 = 16

900 × 16 = 14,400 Cft

900 ∛70²

70 70 / 4900

900 ∛4900

log 4900 = 3.6901961 / 3 = 1.2300653

1.2300654 = 17

900 × 17 = 900 / 15300 Cft per sec.

Q = 900 × 70 2/3

log a = log 900 + 2/3 log 70

= 2.95424 ✓

1.845 5/2 / 3 | 3.69015 / 1.230 ✓

4.184300 ✓

Q = 15286. ✓

Estimate for an iron fin
tuced bridge over the Ka:
dimbilla river, South
Camara Dt.

T
B

The Honorable the Chief
Secretary for favor of
countersignatals.

Govt. of (1895) Madras.
PUBLIC WORKS.

No. 8437

Dated

Rcd.

&

Encl.

G.O. No. 1571 1895. 86 W

From Town Tuticorin

Bridge

Estimate of Rs 29,280

for Constructing an

over the Kadambilla

river in the South

Canara Dist. forwarded

with remarks.

1.5.96