(1) Number of pages 24

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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

PUBLIC WORKS DEPARTMENT

G.O. No.
~~B.P. No.~~ 1398 W Press.
~~Mis.~~

Dated 15. 6. 1885 ~~198~~ .

Not to be folded or roughly handled

Archives I--10,006 I -80.

15TH JUNE 1885, No. 1398 W., PUBLIC WORKS.

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 Under Secretary to Government, Financial Department, dated Naduvatam, 17th April 1885, No. 37 C.-M. :—

I have the honor to forward herewith a letter from the President, Local Fund Board, Nīlgiris, submitting for sanction three estimates for works, for which funds have been provided in the circle budget of 1885-86.

2. The first estimate, amounting to Rs. 15,000, is for remetalling parts of the Karkur ghât, a portion of the main line of road from Mysore to the west coast.

The total length of the road is 25 miles, and the estimate provides for collecting sufficient metal for 7¼ miles, 12 feet broad and 4 inches thick, and for spreading about 2½ miles ; the remainder to be spread the following year.

3. The second estimate is for constructing a bridge over the Kundah river on the road to the Kundahs at a cost of Rs. 10,500.

A road is now being opened out from district funds between Devashola (which is already connected by roads with Ootacamund, Coonoor and Kolacambi) and Meilkundah and Thiashola on the other side of the Kundah river.

The bridge is to consist of three spans, one of 70 feet and two of 20 feet.

The timber, 70 feet trusses, are stated to be almost exactly similar to those on the third mile of the Coonoor road on what is called Law's bridge.

The waterway provided is 1,760 square feet, which should be ample, but the masonry of piers and abutments will require to be particularly good, considering that the river is stated to have a fall of 180 feet a mile at that place.

4. The third estimate amounts to Rs. 10,000 and is for a new road from Fair Lawns, Ootacamund, to Lovedale.

This road, which will be 2 miles and 486 yards long, commences at the Fair Lawns bridge on the Avalanche road and terminates at the Lovedale-Nunjanad road near the St. Lawrence Lake.

There will be two wooden bridges with openings of 9 and 12 feet, two masonry culverts of 4 feet span, and thirteen of 2 feet span. The culverts will be covered with stone slabs 9 inches thick, and the road is to be gravelled 12 feet broad and 3 inches thick.

5. The estimates have been checked and corrected where necessary. The rates appear reasonable.

No. 29, Financial.

Forwarded to the Public Works Department for orders, under paragraph 8 of G.O., dated 6th December 1882, No. 3211 W., Public Works.

(By Order.)

(Signed) M. HAMMICK,
Ag. Under Secy. to Govt.

MADRAS,
1st May 1885.

ORDER—dated 15th June 1885, No. 1398 W., Public Works.

The estimates for the undermentioned Local Fund works in the Nilgiri district are sanctioned :—

	RS.	
1. Remetalling parts of the Karkur ghât	15,000	Local No. 8 W. of 1885-86.
2. Constructing a bridge over the Kundah river on the road to the Kundahs ...	10,500	„ „ 9 W. of „
3. Constructing a new road from Fair Lawns to Lovedale, Ootacamund...	10,000	„ „ 10 W. of „

(True Extract.)

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

To the Financial Department, with thirteen enclosures.
„ Superintending Engineer, IV Circle.

Exd. J. Henricus.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1885) Madras.

PUBLIC WORKS.

Dated June, 15th.

Recd. *Encl.*

G.O., 15th June 1885, No. 1398 W.

JUNE.

Local Fund Works in the Nilgiri District

Estimates for certain —, sanctioned.

1398/3

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Establishment.

Nos. 43 & 44.

Order—dated 6th December 1882, No. 3211 W., Public Works.

In Proceedings of Government in the Financial Department, No. 609, dated 22nd March 1880, it was decided that the examination of plans and estimates of such Local Fund Works as might be of too important a character to be left altogether for disposal by the Local Fund Boards should devolve upon the Chief Engineer, who would be aided by an Executive Engineer of the Public Works Department to be attached to his office.

2. All *New Works* estimated to cost Rs. 2,500 and upwards, and all *Repairs* estimated to cost upwards of Rs. 10,000, as well as such other works as might require special professional scrutiny, were required to be submitted for examination by the Chief Engineer.

3. To meet the cost of the establishment requisite for undertaking the work thus devolving on the Public Works Department, a contribution from Local Funds of Rs. 21,250 yearly was sanctioned.

4. Temporary arrangements were accordingly made by the Chief Engineer for undertaking the work, and these were sanctioned in Proceedings, No. 918 W., dated 10th April 1880.

5. The arrangements thus approved were, however, objected to by the Government of India, who considered (*vide* paragraph 5 of their letter recorded with G.O., No. 2387 W., dated 16th October 1880) "that the Madras Provincial Establishment should be so organized as to permit the Chief Engineer's Office, or the offices of Superintending Engineers of Circles, to examine all important Local Fund Projects; that for conducting these duties no special allowance should be made to any officer, but a fixed contribution sufficient to cover the services performed should be credited to the source from which such establishment is paid; and that the full contribution of Rs. 21,250 should be accepted, and the duties distributed as the Madras Government may consider desirable."

6. After some correspondence with the Government of India the principle of the proposed arrangements was agreed to, and the decision recorded in G.O., No. 1729 W., dated 14th July 1881, paragraph 10.

7. Since then the details of the scheme have been under consideration, and it has now been finally determined that the work shall be distributed between Superintending Engineers and the Chief Engineer in accordance with the principle of the Public Works Code Rules.

8. All Local Fund Projects therefore requiring in future to be scrutinized by the Public Works Department will in the first instance be sent to the Superintending Engineer of the Circle, who will be authorized to deal finally with the professional details of *New Works* estimated to cost above Rs. 2,500 and up to Rs. 5,000. Those costing above this amount will be sent forward by Superintending Engineers to the

Chief Engineer after undergoing the same examination as ordinary Public Works. All *Repair* estimates above Rs. 10,000 will be dealt with by Superintending Engineers as in the case of Public Works Repairs. Any estimate may, however, be sent on to the Chief Engineer, should either the Superintending Engineer or the Local Fund Board concerned desire the opinion of that officer.

9. To admit of these arrangements being carried into effect, it will be necessary to slightly augment the offices of Superintending Engineers and the Chief Engineer, while improving the position of the senior Clerks in the offices of the former. Extra Draftsmen on a rate of pay superior to that hitherto provided for in the Public Works Department are also allowed. It is very desirable that men of superior attainments should be encouraged to qualify for the position of Draftsmen, and it is hoped that the enhanced rate of pay now sanctioned will act as some inducement.

Should the general standard of efficiency hereafter increase, the Government will be prepared to consider the propriety of still further augmenting the scale of pay in the higher appointments open to men of this class.

10. The following increases are now sanctioned to the offices of Superintending Engineers and the Chief Engineer, Public Works Department, the cost being covered by the contribution of Rs. 21,250 from Local Funds, which the Accountant-General will, under orders in the Financial Department, arrange for bringing to account with effect from the current official year :—

Superintending Engineer's Office.	RS.	RS.
(1.) Difference between present salary of Head Clerk and that now sanctioned, viz., between 2nd Class, 1st Grade, and 2nd Class, 3rd Grade = 180 — 110 =	70	
(2.) Difference between present salary of Second Clerk and that now sanctioned, viz., between 2nd Class, 3rd Grade, and 3rd Class, 2nd Grade = 110 — 70 =	40	
(3.) Extra Clerk, 3rd Class, 3rd Grade, Rs. 50 to 60—*mean*	55	
(4.) Extra Draftsman, from Rs. 80 to 100—*mean* ...	90	
Total per mensem ...	255	
Total per annum (Rs. 255 × 12) = ...	3,060	
For six Superintending Engineers (Rs. 3,060 × 6) =	...	18,360
Chief Engineer's Office.		
(1.) Extra Clerk, 3rd Class, 3rd Grade, Rs. 50 to 60—*mean*	55	
(2.) Extra Draftsman (to supervise Technical Section) from Rs. 200 to 250—*mean*	225	
Total per mensem ...	280	
Total per annum (Rs. 280 × 12) = ...	...	3,360
Total of Chief Engineer's and Superintending Engineer's Offices		21,720

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To Superintending Engineers.
To the Examiner, Public Works Accounts.
„ Financial Department.

Exd. W. J. Lewis.
Spare Copies

1398/4

GENERAL.
ESTABLISHMENT.

Govt. of {1883} Madras.

PUBLIC WORKS.

Dated December, 6th.

Recd. *Encl.*

G.O., 6th Dec. 1882, No. 3211 W.

DECEMBER.

Local Fund Works

Plans and estimates for — to be scrutinized by the Chief and Superintending Engineers, and increases to their office establishment sanctioned.

No. 37C/Pr

1398/5 p. 1

Supg. Engineer's Office 4th Circle;
Camp Nidduvattum 17th April 1885.

From
The Superintending Engineer,
IV Circle;

To
The Under Secretary to Government,
Financial Department;

Sir,

Enclos: 10.
1. Letter No. 11 from the Presidt. L. F. Bd. Nilgiris.
1. Board's resolution
3. Estimates
5 Plans
10.

I have the honor to forward herewith a letter from the President L. F. Board Nilgiris, submitting for sanction three estimates for works, for which funds have been provided in the Circle Budget of 1885-86.

2. The first estimate, amounting to Rs. 15000, is for remetalling parts of the Karkur Ghaut, a portion of the main line of road from Mysore to the West Coast.

The total length of the road is 25 miles, and the estimate provides for collecting sufficient metal for 7¼ miles

miles, 12 feet broad and 4 inches thick, and for spreading about 2½ miles; the remainder to be spread the following year.

3. The second Estimate is for constructing a bridge over the Kundah river on the road to the Kundahs, at a cost of Rs 10,500.

A road is now being opened out from District Funds between Devashola (which is already connected by roads with Ootacamund, Coonoor, and Kolacambi) and Meilkundah and Thiashola on the other side of the Kundah river.

The bridge is to consist of 3 spans one of 70 feet, and two of 20 feet.

The timber 70 feet trusses are stated to be almost exactly similar to those on the 3rd mile of the Coonoor road on what is called Law's bridge.

The waterway provided is 1760 Sq. feet, which should be ample, but the masonry of piers and abutments will

require

will require to be particularly good considering that the river is stated to have a fall of 180 feet a mile at that place.

4. The third Estimate amounts to Rs 10,000 and is for a new road from Fair Lawns, Ootacamund to Lovedale.

This road which will be 2 miles, and 486 yards long, commences at the Fair Lawns Bridge on the Avalanche road, and terminates at the Lovedale Nunjanad Road near the St Lawrence Lake.

There will be two wooden bridges with openings of 9 and 12 feet, two masonry culverts of 4 feet span, and 13 of 2 feet span. The culverts will be covered with stone slabs 9 inches thick, and the road is to be gravelled 12 feet broad and 3 inches thick.

5. The Estimates have been checked and corrected where necessary. The rates appear reasonable.

I

I have the honor to be
Sir
Your most obedient Servant.

E. Beatty - Colonel R.E.
Superintending Engineer 4th Circle

133/7

G. O. No. 3211 W. 6.12.82.

p 3

No. 29

Forwarded to the Public works Department for ~~scrutiny~~ orders under para 8 of G. O. dated 6th December 1882, No. 3211 W, Public works.

(By order)

1st May 1885
Madras } Ag. Under Secretary to Govt.
F. D.

L.P.
11/5/85

To
The Secy. to Govt. P. W. Depart with Enclosures plans
11/5/85

O.S. 43/6

---

(1) 3971

W.

From
The Supg. Engineer
IV Circle

Dated 17th }
Desp. 20th } April 1885.
Recd. 4/5 }

No. 1398 W. 15-6-85

No. 37C/M.

Enclosures. 10.

Works for which funds have been provided in the Circle Budget of 1885-86.

Forwards letter with 3 estimates, duly checked, recd. from the President Local Fund Board Nilgiris for certain

(With an Endorsement)

T. Is it within your power to make the necessary calculations for the trusses & beams of this bridge? If so I should like it done,

C.G.

To C. A. W.

1398/8

I presume this disposal is correct — but I presume the estimates are sent to our Depart. "for scrutiny"

1398 W

12-6-85

W.

The disposal is correct.

The rules framed under the new Act contain the old provision that the Ch. Engr. obtain the sanction of Govt. direct in P. W. Dept.

Mr. Hammick has altered the endorsement.

C.
12.6.85

$d = \sqrt{2}\,b$

$120{,}000 = 2 \frac{600 \times b \times (\sqrt{2}\,b)^2}{30}$ ... b^3

b^3

and $b = 10$ inches. — Now

$d = \sqrt{2}\,b = 1.4\,b$

$\therefore d = 14$ inches. — I assume the timber to be Indian teak.

C.H.

C. 10-6-85 C.R. 15-6-85

D.H./6

Public Works Department, 1885-86.

(1) 1398/9

Current No. 3971

Letter No. 29

Dated the 1st May/85

From the Secy. to Govt. — Finl. Dept.

NOTE OF REMARKS.

1. The following three estimates are submitted:—

(a) Remetalling parts of the Karkur Ghât — Rs. 15,000;

(b) constructing a bridge over the Kundah river on the road to the Kundahs — Rs. 10,500;

(c) constructing a new road from Fair Lawns to Lodge Ootacamund — Rs.

Funds have been pro for the above works in Nilgiri Circle Budget of 1885-86.

2. (a) The Karkur Ghât which is a portion of the main line of road from Mysore to the West Coast, is 25 miles long. — It is proposed to collect a sufficiency of metal to cover 7¼ miles length of road

D.H.

G. O. No. 3211 W. 6.12.82.

(1) 3971

From

The Supdg. Engineer
IV Circle

p 3

No. 29

Forwarded to the Public Works Department for ~~sanctioning~~ orders under para 8 of G. O. dated 6th December 1882. No. 3211 W. Public Works.

(By order)

1st May 1885 } Ag. Under Secretary to Govt.
Madras } F. D.

P. S.
4/5/85

To
The Secy. to Govt. P. W. Dept.
with Enclosures & plans.

11
4/5/85

...wards letter with
3 estimates, duly checked, re...
from the President Local Fu...
Board Nilgiris for certain...

T

(With an Endorsement)

O.W. 43/6.

C. 10.6.85 R. 15.6.85

T. Is it within your power to make the necessary calculation for the trusses & beams of the bridge? If so I should like it done,

CG
13.5

D.W.

To determine the scantling of the side beams I take

$$W = 2\frac{pbd^2}{L}$$

here W = (20 × 4 × 150 × 10) lbs. for 1 beam i.e. length of span × half the width of the roadway × weight per 1 sq. ft. × the factor of safety. — Let p = 600, and d = √2 b,

then $120{,}000 = 2\,\frac{600 \times b \times (\sqrt{2}\,b)^2}{20} = 120\,b^3$

$\therefore b^3 = 1000$ inches

and b = 10 inches. — Now

$d = \sqrt{2}\,b = 1.4\,b$

$\therefore d = 14$ inches. — I assume the timber to be Indian teak.

C.H.W.

C. 10.6.85 R. 15.6.85

DW/6

Public Works Department, 1885-86.

(1) 1395

Current No. 3971

Letter No. 29

Dated the 1st May 85

From the Secy. to Govt. – Finl. Dept.

NOTE OF REMARKS.

1. The following three estimates are submitted:—

(a) Remetalling parts of the Karkur Ghât — Rs. 15,000;

(b) Constructing a bridge over the Kundah river on the road to the Kundahs — Rs. 10,500;

(c) Constructing a new road from Fair Lawns to Lovedale Ootacamund — Rs.

Funds have been pro for the above works in Nilgiri Circle Budget of 1885-86.

2. (a) The Karkur Ghât which is a portion of the main line of road from Mysore to the West Coast, is 25 miles long. — It is proposed to collect a sufficiency of metal to cover 7¼ miles length of road

D.W.

and 12 feet wide with a coating 4 inches thick — but to spread the metal on only 2½ miles reserving the remainder for spreading the following year — The reason assigned for the above course is that the working season is not of sufficient duration to allow of a greater amount of metal-spreading to be done with advantage.

3. From (b) and the three accompanying plans, it may be learnt that the [illegible] bridge across the [illegible]dale is to be of three spans — the center one of 70 ft. and the other two of 20 ft. each — The smaller bays are crossed by ordinary beams which bear the planking; the center bay is spanned by trusses of which it is stated that they are "almost exactly similar in design

I regret that there has been so much delay about this [illegible] of these Estimates —
Draft now sanctions for W.C. approval &c.
E.C.S.
8.6.85

"to the girders of the Bridge in 3rd [illegible] Fair Lawns Bridge" — The masonry is to be rubble stone in mortar with granite bed plates on piers and abutments — It must be noted that the width of roadway is 8 feet.

4. Estimate (d) with accompanying levels and plans, provides for constructing a road 2 miles 486 yards long from Fair Lawns bridge on the Ootacamund Avalanche Road to the Lovedale and Kunjanna Road near the St. Lawrence Lake — The road is to be covered with gravel for a width of 10 feet to a thickness of 3 inches — 2 wooden bridges of 9 ft. and 12 ft. span, and 2 masonry culverts of 4 feet span and 13 masonry culverts of 2 ft. span have been provided — It is stated that the proposed

Q. 10. 6. 85 R. 15. 6. 85

line of road was selected
by E.W.

5. The plans and estimates have been evidently prepared with care as to details, and, subject to approval, may be accepted.

6. The plans and estimates have been countersigned by the President of the Nilgiri L. F. Board. –

5th May/85
B.H.

B. F. R.
R. wo. Dy.

No. 1398 W — PUBLIC WORKS DEPARTMENT.

1398/11

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 15th June 85

READ the following

From the Suptg. Engineer II Circle – H. E. No. $\frac{37C}{M}$ d/17th April 1885.
Endorsement thereon by the Financial Deptt. H. Endt. No. 29 d/1st May 1885.

The estimates for the under-mentioned Local Fund Works in the Nilgiri District, are sanctioned:–

1.	Remetalling parts of the Karkur Ghât	Rs. 15,000.	Local No. 8 W of 1885-86
2.	Constructing a bridge over the Kundah river on the road to the Kundahs	Rs. 10,500.	Do – No. 9 W of 1885-86
3.	Constructing a new road from Fair Lawns to Lovedale, Ootacamund —	Rs. 10,000 –	Do – No. 10 W of 1885-86

Cd.
9.6.85

12.6.85

To
(2) The Suptg. Engr. II Circle ✓
(1) " Financial Deptt with 3 enclos. ✓

16/6

W 17/6

1398/12

(1)

No 1398 Way 15-6-85

J – 83/14

13

1376

C. 10.6.83 – R. 15.6.85

3971

Govt. of {1885} Madras.

PUBLIC WORKS.

Dated 16/6/85.

17/6 - 9 am

Recd. Encl.

G.O., 15 June 1885, No. 3980

L. F. works in the Nilgiri D.

Ests. for certain sanctioned.

50

16/6