Public Works (1899) Department.

G.O., No. 1826 W

DATED 14th July 1899

Coll 14/7/99

[Despatch Abstract.]

Road from Melathur to Nilambur

The estimate, amounting to Rs 82,150, for constructing a ———, in the Ernad Taluk, Malabar Dt, sanctioned with remarks.

10/0

P
B
C.S.

[P. W. 80.
150—27-6-99]

21/7/99

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

BUILDINGS AND ROADS.
CIVIL WORKS.

Government (1899) of Madras.

PUBLIC WORKS.

Recd. } 1899. *Enclosures*
Regd. *Spare copies*

G.O., No. 1826 W., 14th July 1899.

JULY.

Road from Melattur to Nilambur

The estimate, amounting to Rs. 82,150, for constructing a —, in the Ernad taluk, Malabar district, sanctioned with remarks.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following papers :—

From A. H. GARRETT, Esq., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Camp Ootacamund, 2nd June 1899, No. 311/W.

In continuation of this office No. 242/W., dated 5th May 1899, I have the honour to forward plans and estimates for the Melattur-Nilambur road, amounting to Rs. 82,150, and to inform you that the Executive Engineer reports that the only estimate remaining, viz., that for the Pandikad-Karivarakundu road, will be ready in a few days.

2. The Executive Engineer has not allowed for metalling this road, though it will be seen from my Inspection notes of last January that I considered the road ought to be metalled and only a day or two ago the Superintendent of Police, Malabar district, brought to notice the necessity for having this done.

3. This work, however, and also the bridging of some of the larger rivers, may be provided for in a subsequent estimate.

Note by the Chief Engineer, Public Works Department.

Submitted for the sanction of Government with the following remarks, it being useless to discuss works which have been completed :—

(1) The long delay in the submission of these estimates is not creditable to the late Divisional officer, Mr. Wood.

(2) The minor bridges should be watched, and flood levels taken during heavy rain, to determine whether they give sufficient waterway, of which there is considerable doubt.

(3) Estimates for metalling and bridging large rivers should be submitted, if found to be necessary.

(Signed) W. B. deWINTON,
Chief Engineer.

1st July 1899.

Order—No. 1826 W., dated 14th July 1899.

The estimate, amounting to Rs. 82,150, for constructing a road from Melattur to Nilambur in the Ernad taluk, Malabar district, is sanctioned.

2. The Superintending Engineer will report whether the estimate of Rs. 5,150, sanctioned in G.O., No. 879 W., dated 29th March 1897, is included in the present estimate.

3. Attention is drawn to the Chief Engineer's note read above.

4. The sanction accorded in paragraph 1 has been registered as Provincial No. 40 W. of 1899-1900, and classified as Communications—Original Works.

(True Extract.)

(Signed) W. B. deWINTON,
Secretary to Government.

To the Superintending Engineer, IV Circle, with 86 enclosures.
" Examiner, Public Works Accounts.
" Judicial Department.
" Revenue Department.
" Local and Municipal Department.

Exd. T. K. Narayana Aiyangar.

P.W. DEPARTMENT.

Read the following :—

Letter from the Suptg Engineer, IV circle, No 311 W dy 2-6-99.
Note by the Chief Engineer, P.W.D. dy 1-7-99

Circulated to ~~[illegible]~~

B & R
Civil works

3 P

ORDER. No 1826 W dy 14-7-99

~~Note~~ Plans sent separately

F.E.H.
6-7-99

Flag B

× yes - G.O. 2356 W dy 7.9.99

N.B. It is not clear to me how the sum of Rs. 82,150 is to be provided. The budget appropriation to Melattur road is a grant of Rs. 30,000 only.

F.E.H.
6.7.99

Considerable expenditure has already been incurred, Rs 30,703 in 1897-98 & a further sum, unknown without reference to books, in 1898-99. The 1899 grant is ample to complete this estimate

The S.E. IV circle with 86 enclos.
" Examr. P.W.A.
" Judicial Dept.
" Revenue Dept.
" Local and Municipal Dept.

P. W. 42-A.
1,000—2-3-99.

7.7.99

The estimate, amounting to Rs 82,150, for constructing a road from Melattur to Nilambur, in the Ernad Taluk, Malabar District is sanctioned.

2. The Suptg Engineer will report whether the estimate of Rs 5,150 sanctioned G.O. No 879 W, dated 29th March 1897, is × included in the present estimate.

3. Attention is drawn to the Chief Engineer's note read above.

4. The sanction accorded in para has been registered as Provincial No 40 W 1899-1900, and classified as Communication Original Works.

4.7

P.Ks.

Note. The estimate is dealt with in the accompanying technical note and the Chief Engineer's note read.

4.7

F.E.H.
8.7.99

W

C No. 4597.

With reference to H. E.'s remarks on the draft G.O. it is submitted that against the estimate of Rs 82150, considerable expenditure has already been incurred and the road practically completed. The outlay on the road to end of 1897-98 was Rs 30.703 and information as to the expenditure during 1898-99 is not available here, but can be had in the Madras Office. As the information re past expenditure was incomplete here, no mention was made of it in the draft G.O. Submitted that the file may be sent down for (1) issue and (2) reply to H.E.'s remarks.

P.K.S.
7/7/99

Issue G.O. as [illegible] has been [illegible]

7/7

A

P.W. DEPARTMENT.

READ the following:—

1826 W

Letter from the Supdg. Engineer, IV circle, No. 311W dy 2nd June 1899

Note by the Chief Engineer, P.W.D. dy

Circulated to H. E. the Governor

ORDER.

The estimate amounting to Rs 82,[illegible] for constructing a road from Melattur to Nilam[illegible] in the Ernad Taluk, Malabar District is sanctioned.

2. The estimate of Rs 5150 sanctioned in G.O. No. 879 W, dated 29th March 1897, is cancelled.

3. The attention of the Supdg. Engineer is drawn to the Chief Engineer's note read above.

4. The sanction accorded in para 1 has been registered as Provincial No. W of 1899-1900 and classified as Communications, Original Works.

1.7.99
W

Flag B

PKS

Note The estimate is dealt with ~~in the~~ accompanying technical note, and the Chief Engineer's note read above.

1.7.99
W

PKS

To
the S.E. IV circle with enclos.
" Exam. P.W.A
" Judicial Dept
" Local & Municipal Dept
" Revenue Dept

P. W. 42-A.
1,000—2-3-99.

W/

Kindly see para 2 of the draft G. O.

2. I presume that the estimate of Rs 5150 for constructing a road from Melattur to Kanniyarkundu sanctioned in G.O. No 879 W dated 29-3-97 (Flag B) has been included in the present estimate, but I find nothing in the Report on the point.

P.K.S.
1/7/99

I don't know

1.7.99

[illegible] All the plans [illegible] of the draft have been returned to Office

W/

As it is not known whether the estimate of Rs 5150 has been included in the present estimate, a revised draft G.O. is submitted for favour of approval.

P.K.S.
4/7.

1.7.

P. W. Dept

2 P

Note by the Chief Engineer, P.W.D.

—

Submitted for the sanction of Government with the following remarks, it being useless to discuss works which have been completed :–

(1) The long delay in the submission of these estimates is not creditable to the late Divisional Officer, Mr Wood.

D.G.H.

(2) The minor bridges should be watched, and flood levels taken during heavy rain to determine whether they give sufficient waterway, of which there is considerable dou

(3) Estimates for metalling, and bri large rivers should be submitted, if fo to be necessary.

1.7.08
E.W.

Seen
D.G.H.

To Wt Hll
27/6

+ not put up with the file by the Madras Office

Public Works Department.

Current No. 4597

Letter No 311 W

Dated 2d June 1899.

From the S. E. IV Circle

NOTE BY TECHNICAL SECTION.

Name of work Constructing Mellatur to Nilambur Road. (Ernad Taluq).

Estimate Rs: 82150

This road is reported to have been commenced in Febry: /97 in accordance with G.O No 3006 W 23.10.96. The earthwork is reported to be practically completed and also the minor masonry works. The total length of the road is 24 miles & 4 furlongs and appears to have been worked out in three sections:

Road: The road starting from Mellatur, passes through Karuvarakundu 7th mile - Kalikavu 12th mile Perambayil 19th mile and terminates at Nilambur 24 4/8 mi

The steepest gradients range from 1 in 12 to 1 in 15 - there are a few parts where the gradients are very steep - but it is stated that these are being eased -

No metalling is provided in the Estimate - On this point the S.E remarks, that metalling is very necessary and that it may be provided for in a subsequent Estimate which will also provide for bridging the larger rivers. In the

P. W. 60.
250—5-9-98.

In the report it is explained that the metalling of the road and the bridging of the larger rivers have been purposely deferred, until it can be ascertained what traffic will be developed and until it is finally decided what arrangements will be made to maintain the road.

The Estimate for the earthwork of the road has been prepared from sections taken after the road was completed — so that they are not very accurate.

Provision has been made for metalling the approaches to minor bridges and culverts and for turfing the slopes of the embankments in paddy fields.

As the floods in the Olipozhay and Cherupozhay rivers are of short duration, paved Causeway have been provided for crossing them.

Three rest houses are provided at Kurivarakkunda, Kalettuvoo and Perambayil.

Cost of Road. Rs. 49400

Bridges & other masonry works

The following wooden bridges have been provided for minor streams:

No
2 - of: 2 spans 10 ft each
1 - of. 1 span 15 ft:
6 - of. 1 span 10 ft:
4 of. 1 span 6 ft.
} Total cost .. 10220

× This is the weak point with the design.

I do not think that a coefficient of 900 is much too high — falls of 10" to 11" in 24 hours are not uncommon and as the ground is there saturated most of it runs off. The bridges have stone in mortar floors & a velocity of 10 ft through them may be allowed. I believe that they are built and cannot be altered.

with C = 700 & a vel: of 10' the bridge is too small

The drainage area of these streams vary from $\frac{3}{4}$ to 2 sq: miles — The subsoil is reported to be alluvial.

No calculations accompany the Estimate — no cross sections of the streams are given — The M.F.L. is noted on the plans — The following calculations have been made —

Bridge at $\frac{16}{6}$. 1 span of 15' —
M.W.L above floor. 5 ft

area of waterway 15'×5' = 75 sq ft:

Drainage area given 1·25 sq: miles

Sub soil. alluvial

Calculated discharge. taking C = 900 on the hills.

$$D = CM^{\frac{2}{3}} = 900(1{\cdot}26)^{\frac{2}{3}} = 900 \times 1{\cdot}0817$$
$$= 973 \text{ cft per sec}$$

No details have been given to form the velocity, — soil is reported as alluvial — ×average depth of foundations allowed 3 feet — protected with floor and dry stone aprons, — assuming a limiting velocity of 6 ft per sec the discharge through the Bridge will be only 75' × 6' = 450 cft per sec, and even if we go so far as to allow a velocity 10 ft per sec: the D will only be 750 cft per sec: against 973 calculated discharge. On these hills where the rainfall is very heavy 900 will be a safe coefficient — it would appear ~~what~~ the C. taken is even below 500.

The same remark applies to all the other bridges — which fall short of a calculated discharge based on a coefficient of 900 or even 700.

The section of the beams provided for these bridges is more than sufficient. The tops of the bridges are planked with planks 3" thick – the wood used is Malabar Irul.

The headway provided is only 1 foot above H.F.L., rather small to secure against damage from floating bodies.

Foundations are of concrete in surki mortar – walls of laterite in surki mortar – Floors – rough stone in mortar. Aprons &c of dry rough stone.

Smaller minor streams and cross drainage are carried through small culverts and road-dams &c as detailed on plans accompanying.

It is reported that nearly all the masonry works have been completed.

Larger rivers.

The following are the five larger rivers to be bridged.

		D. area
1.	Oliporshay River ...	26 Sq miles
2.	Kalikavoo – " –	6 – " –
3.	Cheruporshay – " –	5 – " –
4.	Chollottamporshay – " –	11 – " –
5.	Kotaporshay – " –	25 – " –

As the floods in Nos 1 & 3 are of short duration, these are provided with paved causeways.

Land compensation is provided for in the Estimate.

Rates

Detail data accompanying the Estimate and the rates appear fair.

Cost.	Rs:
Road &c ...	49400
Masonry works &c.	32750
Total Rs.:	82150

26.VI.99

As the works are approaching completion criticism of designs appears superfluous. The estimates shd be sanctioned as soon as possible.

HCl
27/6

Dir.

Submitted for orders.

A lump sum provision of Rs 30,000 has been made for the Ernad roads in the current year's Provincial Civil Works Budget.

26/6/99

Submit estimates for sanction it being useless to discuss works which have been completed.

(2) The long delay in the submission of these estimates is not creditable to the late Dr. officers. [illegible]

(3) The minor bridges should be watched & flood levels taken during heavy rain to determine whether they ~~are~~ give sufficient ~~[illegible]~~ waterway. If [illegible] there is considerable drift.

(4) Estimates for metalling & bridging large rivers should be submitted if found to be necessary

Public Works (1899) Department.

CURRENT No. 4597

18th W

S.E. 242/W 85/5 300 6/W 95 23/10/96

From The Suptg. Engineer 4th Circle

Order

No. 311/W

Dated 2nd June 1899
Received } desp. 6th do
Registered } 9. 6. 99
Enclosures 86 (35 plans) One list of enclosures
Spare copies. ✓

SUBJECT.

Mellatur to Nilambur Road.

Forwards estes amounting to Rs. 82,150 for Constructing a — with remarks.

I/ For check
Ma/10/6/99

HC/

0L5242.11/7

BACK PAPERS.

No.	Date.
879W	29-3-97

FURTHER PAPERS.

No.	Date.

No. 311/W

Office of the Superintending Engineer,
FOURTH CIRCLE,
Camp ~~Coimbatore~~ Ooty 2nd June 1899.
Despd 6th do.

18

From
A. H. Garrett Esq
Superintending Engineer,
Fourth Circle, Coimbatore.

To
The Chief Engineer
P. W. D, Madras.

Enclosure~~s~~ 1
1. List of enclosures.

Cm 3747) Sent to Gov 10-5-99

Sir,

In continuation of this offic No. 242/W dated 5th May 1899, I have the honor to forward plans and estimates for the Mellatur. Nilambur Road amounting to Rs 82,150 and to inform you that the Executive Engineer reports that the only estimate remaining viz, that for the Pandikad Karivara-kundu Road will be ready in a few days.

2 The Executive Engineer has not allowed for metalling this road though it will be seen from my

Inspection

Inspection Notes of last January that I considered the road ought to be metalled and only a day or two ago the Superintendent of Police, Malabar District brought to notice the necessity for having this done.

3 This work however, and also the bridging of some of the larger rivers may be provided for in a subsequent estimate.

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

Supg Engineer 4 Circle

4 S