M.R.O. 1—77,006—8-5-37.

(1) Number of pages 16

(2) Date of repair 5-1-38

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No. 3466 Press ~~Mis.~~

572-73

Dated 28-10 18[illegible].

Not to be folded or roughly handled

5/1169

No. 572. Read the following letter from the Superintending Engineer, 7th Division, to the Secretary to Government, Public Works Department, dated Ootacamund, 7th October 1869, No. 108 :—

I HAVE the honour to report, for the information of Government, on the subject of the road and bridge work below the Carcoor ghaut, and to submit revised estimates for the completion of the same.

1 Abstract Statement.
1 Abstract of the revised Estimate, No. 33, of 1869-70, Rupees 40,083.
1 do. do. No 34, of 1869-70, Rs. 71,000.

The accompanying abstract statement condenses all the information required as to dates and amounts.

2. Of the sum of Rupees 32,550 entered under the first head of that statement, Rupees 11,400 was the amount of original sanction for a timber bridge of two spans over the Eddakara river, near the foot of the Carcoor ghaut; and the balance, Rupees 21,150, provided for the earthwork and minor bridges as far as Mambat, but excluding the Nellumboor and Cherrapoya bridges: of which more hereafter. It is entirely on the Eddakara bridge that the estimated excess of Rupees 7,533 is incurred, attributable to the following causes—namely,

I.—Increase of masonry in foundations to the extent of 3,291 cubic feet; and increase in cost by fifty per cent., in consequence of the necessary substitution of brick for laterite not obtainable of good quality, and the deadly nature of the locality, which caused frightful loss of life and involved extreme rates, Rupees 4,653.

II.—Addition of cut-stone to cut-waters of pier, Rupees 1,478.

III.—Increase of wood-work, owing to revision of plan and to decay of what had been laid in in a former season for two years, after which completion was delayed by the nature of the locality. I am doubtful of the strict accuracy of the figures given me, as the rate is alleged to have remained as low as 13 annas per cubic foot of jungle-wood; but I have nothing to say against the accuracy of the total excess charge of Rupees 544 under this head, including fitting and fixing.

IV.—The remaining excess is made up of extra cost of iron work, including carriage, cost of laterite quarried before the quality was fully ascertained and condemned, and sundries, Rupees 686.

3. I regret to say that after all that has been spent on this bridge, it has been ruined in the very first monsoon after its construction, by the accumulation of drift-wood in large logs against the pier, blocking up the water-way and so causing an accumulated flood, which ended in carrying all but the abutments before it. So dense is the jungle and so large in size the timber, that the Executive Engineer in charge of Calicut Range is afraid that nothing short of one clear span of 90 feet will answer in future. But a regular plan and estimate will be submitted after due consideration, meanwhile the unspent Rupees 2,036 of the revised estimate need not be provided, but the work considered as closed at a total outlay of Rupees 38,047; and provision for the excess of Rupees 1,731 over the current year's allotment may be made by transfer from the unspent balance of allotment for the work between Mambat and Coondotty, Item No. 342 of the Budget.

4. Of Rupees 54,600 entered under the second head of the statement, Rupees 40,100 and Rupees 14,500, respectively, were the original sanctions for the Nellumboor and Cherrapoya bridges, and the increase of Rupees 16,400 is charge-

able entirely against the former work, one of considerable magnitude and difficulty, but which promises to be a complete success. The latter sum is thus accounted for—namely,

I.—Foundations, none provided; but necessitated, by final choice of site, to the extent of 20,700 cubic feet, which, with a rise of Rupees 3 per 100 cubic feet throughout for brick instead of laterite, makes a total debit against masonry of Rupees 8,277.

II.—Teak-wood and carpentry demanded an increase of Rupees 1,919, which I can attribute to nothing but one considerable clerical error in figures, and erroneous taking out of the quantities from the drawings. The Estimators and Draughtsmen, both of my own and the Range office, have always been inferior men, or these miscalculations would not have occurred and been unchecked.

III.—Increase to strength of cut-waters and faces of piers by large addition of cut granite stone-work, cost Rupees 3,258.

IV.—Extra scaffolding, excavations, approaches, sundries, and rejected laterite, make up the balance of Rupees 2,946.

5. The Cherrapoya bridge was finished and thrown open to traffic some years ago, but has always been a source of anxiety from the very great height of its abutments and piers, cracks in which from time to time made their appearance, indicative of the inability of the laterite of which they were composed to sustain a heavy pressure. And this monsoon the east abutment has fairly subsided, but without breaking up the timber superstructure of that span. Arrangements for the restoration of the work will be made and reported hereafter. To complete that fine work, the Nellumboor bridge, this season is a most desirable object, and I propose the following transfers to effect the purpose—namely, Rupees 1,668 from the allotment for the work between Mambat and Coondotty, and Rupees 9,000 from that of the new Coonoor ghaut (Budget Item No. 336), from which it can be spared. These two sums, with the Budget allotment of Rupees 4,800, will meet excesses already incurred, and the sum of Rupees 5,717, required for completion, may be taken from the balance of allotment of Rupees 10,000 (Budget Item No. 362) for the earthwork of the inland road between Mangalore and Cannanore by Vitla and Hossdroog in the Canara district, already sufficiently open for traffic, the remainder of that latter item being added to the bridge allotment of the same line (Item No. 405), which is too small.

6. The entire line of road below Carcoor ghaut was opened for cart traffic before last year's coffee crop came down; and no hindrance will be caused this year by the yet incomplete state of the bridge work, as temporary but substantial structures are provided wherever the permanent bridges are unfinished. It will be a great relief to get the works out of hand, as it is most difficult to supply materials and labour for them at and eastward of Nellumboor.

No. 573. ORDER THEREON, 28th October 1869, No. 3,466.

CIVIL WORKS, No. 69.

UNDER the explanations furnished in paragraphs 2 and 3 of this letter His Excellency the Governor in Council authorizes the Controller to pass the outlay of Rupees 38,047 incurred on the earthwork* from the foot of the Carcoor ghaut to Mambat, and on the Eddakara bridge on the same line of road, in the Malabar district; and to adjust the expenditure in excess of the current year's allotment, the Government approve of the transfer to the road and bridge in question of Rupees 1,731 from Budget Item No. 342.

* Item No. 343.

2. His Excellency in Council also sanctions the revised estimate of Rupees 71,000 for the Nellumboor and Cherrapoya bridges; but before supplementing the grant for these bridges, the attention of Colonel Walker will be drawn to G. O., No. 3,247, dated 8th October 1869, and he will report whether, seeing that Rupees 3,000 have been already surrendered to the Government of India from the grant for the road from Pani-Mangalore to Hoosdroog, he will be able to divert the whole of the 5,717 rupees proposed to be appropriated to the Nellumboor and Cherrapoya bridges.

Item No. 399.

Item No. 362.

3. As it appears that Rupees 9,000 can be surrendered from the allotment* for the new Coonoor ghaut, and funds are urgently required for works of the greatest importance, the Government resolve to hold that amount at their disposal.

* Item No. 336.

(True Extract.)

Colonel, R. E.,
Secretary to Government.

To the Superintending Engineer, 7th Division, with three Enclosures.
,, Controller of Public Works Accounts.
,, Accountant-General.

Exd. S. T. Augustin.

Govt. of {1869} Madras.

PUBLIC WORKS.

To

THE SUPERINTENDING ENGINEER,

7TH DIVISION.

&c, &c, &c.

Dated October, 28th.

Recd. Encl.

G. O., 28th October 1869, No. 3,466.

OCTOBER.

Nos. 572-573

Road and bridge work below the Carcoor ghaut.—Passing orders on the letter from the Superintending Engineer of the 7th Division, reporting on the subject of the road and bridge work below the Carcoor ghaut, and submitting revised estimates for the completion of the same.

5

Supg. Engineer's Office 7th Dn.
Ootacamund 7th October 1869.

No. 108.

From,

Colonel G. W. Walker R.E.
Supg Engineer 7th Dn.

To

Colonel C. A. Orr R.E.
Secretary to Govt. D.P.W.

Sir,

Enclosures - 3.
1 Abstract Statement
1 Abstract of the Revised Estimate No. 233 of 1869-70. Rupees 40,083.
1 Do Do No. 34 of 1869-70 Rupees 7,000.

1. I have the honor to report for the information of Government on the subject of the Road and Bridge work below the Karkoor Ghaut, and to submit Revised Estimates for the completion of the same. The accompanying Abstract Statement condenses all the information required as to dates and amounts.

2. Of the sum of Rupees 32,550 entered under the 1st head of that Statement Rs 11,400 was the amount of original sanction for a Timber Bridge of 2 spans over the Eddakara River near the foot of the Karkoor Ghaut; and the balance Rs 21,150 provided for the Earthwork and Minor Bridges as far as Chumbat, but excluding the Nellumboor and Cheriapoya Bridges, of which more hereafter. It is entirely on the Eddakara Bridge that the Estimated excess of Rupees 7,533 is incurred, attributable to the following Causes, viz.-

1. Increase of Masonry in foundations to the extent of 3291 Cubic feet; and increase in cost by 50 per Cent, in consequence of the

necessary substitution of Brick for Laterite not obtainable of good quality, and the deadly nature of the locality which caused frightful loss of life and involved extreme rates - Rupees 4,653.

II. Addition of Cut Stone to Cut waters of Pier - Rupees 1,478.

III. Increase of Woodwork, owing to revision of Plan, and to decay of what had been laid in in a former season, for 2 years after which completion was delayed by the nature of the locality - I am doubtful of the strict accuracy of the figures given me, as the rate is alleged to have remained as low as 13 Annas per Cubic foot of jungle wood; but I have nothing to say against the accuracy of the total excess charge of Rs 544 under this head, including fitting and fixing.

IV. The remaining excess is made up of extra Cost of Iron Work including Carriage, Cost of Laterite quarried before the quality was fully ascertained and condemned; and sundries - Rupees 686.

3. I regret to say that after all that has been spent on this Bridge, it has been ruined in the very first Monsoon after its construction, by the accumulation of drift-wood, in large logs, against the pier, blocking up the waterway, and so causing an accumulated flood, which ended in carrying all but the abutments before it - So dense is the Jungle and so large in size the timber, that the Executive Engineer in charge of Calicut Range is afraid that nothing short of one clear span of 90 feet will answer in future - But a regular Plan and Estimate will be submitted after due consideration - Meanwhile the unspent Rupees 2036 of the Revised Estimate need not be provided, but the work considered as closed at a total outlay of Rs 38,047 - And provision for the excess of Rupees 1,731 over the current year's allotment may be made by transfer from the unspent balance of allotment for the work between Manbat and Coondotty, Item No 342 of the Budget.

4. Of Rupees 54,600 entered under the 2d head of the Statement, Rupees 40,100 and Rupees 14,500 respectively were the original Sanctions for the Nellumbur and Cherapoya Bridges, and the increase of Rupees 16,600 is chargeable entirely against the former work, one of considerable magnitude and difficulty, but which promises to be a complete success. The latter sum is thus accounted for viz:-

I. Foundations - None provided - but necessitated, by final choice of site, to the extent of 20,700 Cubic feet; which with a rise of Rs 3 per 100 Cubic feet throughout for Brick instead of Laterite makes a total debit against masonry of Rupees 8,277.

II. Teakwood and Carpentry demanded an increase of Rupees 1,919, which I can attribute to nothing but one considerable clerical error in figures, and erroneous taking out of the quantities from the Drawings - The Estimators and Draftsmen - both of my account and the Range -

Office have always been inferior men, or these miscalculations would not have occurred and been unchecked.

III. Increase to strength of Cutwaters and faces of Piers by large addition of Cut Granite stone work, Cost Rs. 3,258-

IV. Extra Scaffolding, Excavating, approaches, Sundries and rejected Laterite to make up the balance of Rs. 2946.

5. The Cherrupoya Bridge was finished and thrown open to traffic some years ago, but has always been a source of anxiety from the very great height of its abutments and Piers; cracks in which from time to time made their appearance, indicative of the inability of the Laterite of which they were composed to sustain a heavy pressure - Last this Monsoon the East abutment has fairly subsided, but without breaking up the Timber Superstructure of that span - Arrangements for the restoration of the work will be made, and reported hereafter - To complete that fine work the Nellamboor Bridge this season is a most desirable object, and I propose the following transfers to effect the purpose, viz. Rupees 1,668 from the allotment for the work between Manabat and Coorlotty, and Rupees 9,000 from that of the New Cannor Ghaut (Budget Item No. 336) from which it can be spared. These 2 sums with the Boodget allotment of Rupees 4,800 will meet

[illegible] required

required for completion may be taken from the balance of allotment of Rs. 10,000 (Budget Item No. 362) for the Earth work of the Inland Road between Mangalore and Cannanore by Vitla and Hosdroog in the Canara District, already sufficiently open for traffic, the remainder of that latter item being added to the Bridge allotment of the same line (Item No. 405) which is too small.

6. The entire line of road below Karkoor Ghaut was opened for Cart traffic before last year's Coffee Crop came down; and no hindrance will be caused this year by the yet incomplete state of the Bridge work, as temporary but substantial structures are provided wherever the permanent Bridges are unfinished. It will be a great relief to get the works out of hand, as it is most difficult to supply materials and labour for them at & Eastward of Nellamboor.

I have the honor to be,
Sir,
Your most obt. Servant,

C. Manuel Coll R.E.
Supg. Engineer Jr. Dn.

Public Works Departt
No. 3466

Proceedings of the Madras Govt
Under date the 28 October 1869
Read the following

From

The Supg: Engr
4th Divn

} Here enter No. 1008
4th Octr 69.

Under the explanations furnished in Paras 2 and 3 of this letter His Excellency the Governor in Council authorizes the Controller to pass the outlay of Rs. 38,047 incurred on the earthwork from the foot of the Cauvery Ghat to Mombat, and on the Eddakara Bridge on the same

Item No 343

From
The Supg: Engr
4th Divn

To
The Secretary to Govt
P.W.D.

Dated 4th Octr 69.
Rec'd 6th Octr 69.
No. 3466 of 69.
No. 1085
Enclosures 3.

Sir,

With reference to the subject of the Road and Bridge work between the Harbour Flank and Mombai and the Eddakara Bridge, and Estimates for such Revised Estimates for work Completion and Repairs certain Drawings & Estimates for the same.

I have &c.
Sd/-

c. 16 Oct 1869 No. 2342

line of road, in the
Malabar District;
and to adjust the
expenditure in excess
of the Current years
allotment, the Govt
approve of the transfer
to the road and bridge
in question of Rs. 1731
from budget item No.
342.

His Excellency
in Council also sanctions
the revised estimates of
Rs. 71,000 for the
Pellumboor and

Item No. 399

Cherraloya bridges;
but before supplementing
the grant for these
bridges, the attention of
Colonel Walker will
be drawn to G.O.
No. 3247 dated 8th
October 1869, and
he will report whether,
seeing that Rs. 3,000
have been already
surrendered to the
Govt. of India
from the grant for
the road from Pani-
-mangalore to Moodshoog
he will be able to divert

Item No. 362

(13)

the whole of the 5717
Rs. proposal to be
appropriated to the
Vellumboor and
Cherrapoja bridges.

As it appears that
Rs. 7000 can be surrendered
from the allotment for Item No. 336
in the new Coolie or Chunt,
and funds are urgently
required for works of
the greatest importance
the Govt. resolve to hold
in that amount at their dis
the road.

Urgent 23/10/69

25
4

To the Inspt Engineer with 3 Tenders.
Controller
Accts General
Desp 29/10/69

2. 16 Oct 69 (A-230)

13

Cue 4290.

Govt. of {1869} Madras.

PUBLIC WORKS.

To The Superintending Engr.
7th Division

Dated

Rcvd. Encl.

G. O. No. 66 1869

Nos. 572-573

Road & bridge works below the Harbour
Thanks Papers noted on the letter
from the Engr. in Chief dated 7th Oct. re-
porting on the subject of the road and
bridge works below the Harbour pro-
ceeded to submitting revised estimates for
their completion and same

Further Proc. in 709-710 D/
9 March 71
— " — 729 D/6-3-71
— " — 962 D/31-3-71

16 Beth/69 A-230