

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 Chief Engineer, Public Works Department, dated Coimbatore, 27th August 1885, No. 360 E.W. :—

I have the honor to submit herewith the second of the estimates mentioned in paragraph 7 of the late Mr. Nordmann's letter, No. 27 V., of 25th January 1884, and referred to at paragraph 11 of G.O., No. 524 W., of 26th February 1884. The estimates for the first of the series, the Calicut-Vayitri road, were sanctioned in the following G.Os. :—

No. 3043 W., of 12th December 1884.

No. 155 W., of 19th January 1885.

No. 1527 W., of 1st July 1885.

2. The estimate now submitted is for the 46 miles of road from Vayitri to Gúdalúr, on the line approved in G.O., No. 3109 W., of 18th December 1884, and includes the following items :—

	RS.
Reformation, including tunnels	2,55,510
Five large bridges having waterways varying from 50 to 120 feet...	71,044
Fifteen minor bridges having waterways varying from 10 to 20 feet	26,092
Rest-houses, &c.	7,728
Compensation for land	650
Repairs while the improvements are in progress	41,400
Total	4,02,424

3. The estimates are accompanied by a survey and sections of the road in 62 sheets, 8 plans of bridges, a sketch-map, and a report, which have all been prepared with much care by Mr. A. B. Todd, Assistant Engineer. A general abstract estimate, framed in this office, is sent with them.

4. The estimates for road-making, bridges and buildings provide $2\frac{1}{2}$ per cent. for contingencies and $2\frac{1}{2}$ per cent. for superintendence ; and the only item of the sufficiency of which I am doubtful is that for "compensation." I think Mr. Todd may be mistaken in supposing that owners will make presents of land to the road, and that it will be safer to raise the total of the estimate by an item of Rs. 7,576 on account of unforeseen demands and other contingencies. This item has accordingly been entered in the general abstract estimate, making the total to come to Rs. 4,10,000.

Note by the Chief Engineer, Public Works Department.

The estimates now before Government provide for improving, and placing in good order, the road between Vayitri and Gúdalúr in Wynaad, a distance of 46 miles. The estimates amount to Rs. 4,10,000, being at the rate of about Rs. 8,900 per mile.

2. These estimates provide for the third and last portion of the through road between Ootacamund and Calicut. The improvement of the portion between Ootacamund and Gúdalúr, 31 miles, has now been nearly

* G.O., No. 1527 W., dated 1st July 1885. completed at a cost of Rs. 1,83,250 ; and
" " 2373 W., " 12th October 1885. estimates, amounting to Rs. 3,19,788,*
have been sanctioned for improving the portion between Vayitri and Calicut.

3. The estimates now laid before Government have been prepared in a manner highly creditable to Mr. A. B. Todd. The line adopted is that approved in G.O. of 18th December 1884, No. 3109 W. The gradients on the new line will be considerably easier than those on the old road, while at the same time the through distance is shortened by $2\frac{1}{2}$ miles.

4. The points in the estimate which appear to require notice are—

- (1) The width of roadway allowed is 16 feet, of which it is proposed to metal 12 feet. The width should be increased to 18 feet, the metalled portion remaining as proposed.
- (2) The proposal to omit check-drains where the line runs through plantations is not approved.
- (3) The estimates for rest-houses should be revised and reduced in accordance with the Superintending Engineer's letter, No. 384, dated 24th September 1885.
- (4) The Superintending Engineer's suggestion, to add a sum of Rs. 7,576 to cover the cost of compensation for land, is approved.

3rd October 1885.

(Signed) J. SHAW-STEWART, Col., R.E.,
Chief Engineer, P.W.D.

ORDER—dated 15th October 1885, No. 2412 W., Public Works.

The estimates, amounting to Rs. 4,10,000, for improvements to the road between Vayitri and Gúdalúr, are sanctioned for execution when funds are available.

2. The remarks of the Chief Engineer should receive attention.

3. The Government concur in the Chief Engineer's commendation of the creditable manner in which the project has been submitted by Mr. Todd.

4. The question of transferring the charge of the road to the Public Works Department, while the improvements are in progress, will be a matter for future consideration.

5. The sanction accorded in paragraph 1 of these proceedings has been registered as Provincial No. 149 W. of 1885-86, and classified as Communications, Original Works.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, IV Circle, with enclosures.
 „ Examiner, Public Works Accounts, with general abstract estimate.
 „ Financial Department.
 „ Honorary Secretary, Wynaad Planters' Association.

Exd. J. Henricus.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of 1885 Madras

PUBLIC WORKS.

Dated October, 15th.

Recd.

Encl.

G.O., 15th Oct. 1885, No. 2412 W.

OCTOBER.

Road between Vayitri and
Gudalur

Estimates for improvements to the —,
sanctioned with remarks.

26TH JANUARY 1888, No. 311 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following letter from J. W. MARTIN, Esq., Officiating Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 10th January 1888, No. 13 E.W. :—

Adverting to G.O., No. 152 W., of 18th January 1886, sanctioning the commencement of work for constructing the Sholadi bridge on the Vayitri-Gudalur road, I have the honor to inform you that the provision made for this bridge and its approaches in the general estimate of that road will be greatly exceeded, and that consequently a revised estimate has become necessary.

2. The general estimate of the Vayitri-Gudalur road was sanctioned in G.O., No. 2412 W., of 15th October 1885, and it provided Rs. 15,551 for the Sholadi bridge and Rs. 4,449 for the approaches.

3. Work was started in 1886, but stopped by the monsoons of that year. Early in the present year the iron-work arrived from England, and the work was again started. It was, however, soon found that the rate for masonry—roughly hammer dressed coursed rubble—was much too low; the reason being that the site is in the centre of the Wynaad, in an exceedingly feverish tract of country where no labor or carriage is available except what is imported from Mysore or the coast, and lime has to be carted up from Calicut. An increased rate had therefore to be given for the masonry which will cause an excess of Rs. 1,715.

4. Another cause of excess was the iron-work. This, as sent out from England, was totally different from, and about 50 per cent. heavier than, what was provided in the original estimate. This alone causes an excess of Rs. 2,456.

5. Again, the whole of the site and its approaches were so covered with dense jungle when the original estimate was framed that the sections of the ground taken appear to have been insufficient for the preparation of an exact estimate, and when the jungle was cleared it was found that the steepness of the hill sides necessitated the substitution of splayed for straight wings.

The splayed wings were necessary to reduce the heavy cutting for the approaches immediately adjoining the bridge, and in this way it was possible to found nearly the whole of the wings on rock. But the splayed wings contain a greater quantity of masonry, and this adds to the excess on the masonry which comes to Rs. 2,143.

6. Also, owing to the insufficiency of the sections originally taken in the thick jungle on the approaches, the quantities of earthwork for the approaches were greatly under-estimated. On this item there is an excess of Rs. 1,552.

7. No provision was made in the estimate, by oversight, for revetments (which will be indispensable in the neighbourhood of the bridge), nor for blasting rock, painting the iron-work, and hutting. These omissions have been rectified in the revised estimate.

8. Owing to the excesses and omissions above mentioned, together with a corresponding increase in contingencies and superintendence, the total of the revised estimate comes to Rs. 32,751 as explained in the comparative statement.

9. The different items of excess will be briefly as follows:—

	RS.
Excess on masonry partly due to extra quantity and partly to extra rate	3,858
Excess on iron-work owing to the design having been altered by the Consulting Engineer to the Secretary of State	2,456
Excess on earthwork in the approaches insufficiently estimated for. Extra works of revetments, blasting rock, painting the iron-work, and hutting	1,552
Contingencies	2,636
Superintendence	954
	1,295
Total Excess	12,751

10. The progress made up to date is as follows:—

- I. The iron-work has been received and carted to site.
- II. The left abutment and the centre pier have been completed.
- III. The foundations of the right abutment have been commenced.
- IV. And the approaches on both sides of the river are nearly completed.

The work has been stopped pending sanction to the revised estimate.

11. I should mention that the bridge has been built in the precise site selected for it by the Special Engineer who prepared the road estimate, and that the site was no doubt chosen because there only solid rock is met with in the bed; at other places lower down the river and nearer the old bridge there is rock, but in the form of large boulders which have been carried down by this mountain torrent in great floods. The site and the position of the approaches were indicated by the trace cut through the jungle by the Special Executive Engineer.

12. As regards quantities those for the earthwork are the actual measurements of work done, as checked by the present Executive Engineer, and the solid rock at the site of the bridge having been laid bare, there can now be no error in regard to the quantities of the masonry work.

13. In reference to the description of work, it was necessary to adopt the most substantial kind readily obtainable, as the stream in flood often brings down large trees, which, as the Local Fund Engineer informed the Superintending Engineer, had more than once severely damaged the present wooden bridge.

14. The insufficiency of the rates provided in the original estimate is also partly accounted for by the fact that this one isolated work out of the whole line from Vayitri to Gúdalúr (about 45 miles) has been taken up, and that it is about equidistant from both ends; it is also about 57 miles from Ooty and 62 from Calicut, the nearest large centres of population. If the whole line of road from Vayitri to Gúdalúr had been taken up instead of only this one work, some experienced contractor from a distance might have come forward, and, being able to give continuous work for a year or two, could have imported his own labor, both skilled and unskilled.

15. That the rates provided for masonry are not unreasonable for such an exceptional case as that of Sholadi bridge has been proved by the experience lately gained on the Barliyár bridge of the Coonoor ghât. There very similar work in an equally unhealthy locality but more favorably situated in being within 9 miles of a railway station is estimated to have cost Rs. 53 per 100 cubic feet.

ORDER—dated 26th January 1888, No. 311 W., Public Works.

The estimate, amounting to Rs. 32,751, for constructing the Sholadi bridge and its approaches on the Vayitri-Gúdalúr road, as revised by the Superintending Engineer, is sanctioned; and, as the general estimate for the road sanctioned in

G.O., No. 2412 W., dated 15th October 1885, is said to include a provision of Rs. 20,000 only for this bridge, the excess Rs. 12,751 will be added to the general estimate, which will now amount to Rs. 4,22,751.

2. This sanction has been registered as Provincial, No. 155 W. of 1887-88, and classified as Communications, Original Works.

(True Extract.)

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

To the Superintending Engineer, IV Circle, with six enclosures.
,, Examiner, Public Works Accounts, with the general abstract estimate.
,, Local and Municipal Department.

Exd. J. Moses.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1888) Madras.
PUBLIC WORKS.

Dated January, 26th.

Recd.

Encl.

G.O., 26th Jan. 1888, No. 311 W.

JANUARY.

Sholadi Bridge

Estimate for constructing the — and its
approaches on the Vayitri-Gúdalúr road,
sanctioned.

From the Secy
WYNAAD PLANTERS



ASSOCIATION.

SOUTH WYNAAD.

To the Under Secretary
to Government P. W. D.
Madras.

Vazhian
Aug. 21, 1888.

Sir I have the honor to
acknowledge receipt of
G.O. No 2506 Public Works
Department d/16 Aug. 1888.
which shall be duly laid
before the next meeting of
this Association on the
5th prox. I have the honor to be
Sir yours most obedient servant
William Hocking
Secy. W. P. A.

S. No 2506 W. 16-8-88

(5)

1888.

P. W. DEPARTMENT.

Current No. 8576

From

The Hon: Secretary
Wynaad Phanters
Association
ENCLOS.—

No. —

Dated 21st August 1888

Received 28 — do —

SUBJECT.

Acknowledging receipt
of S.O. No 2506 W 2/16 Augt
1888 & stating that it will
be laid before the next
meeting of the Association
on the 5th proximo.

DISPOSAL.

No.

Dated

No. 2771 W 2/8th Sept 1888

B

Recorded
Recorded

WCM
29.8.88

Jul
31/9/88

12/9-
279
166:8
me 6:7.
29.8.88