M.R.O. 1—77,006—8-6-37.

(1) Number of pages 26

(2) Date of repair 22-9-42

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

public works DEPARTMENT.

G.O. No. 1152 Press ~~Mis.~~

528-529

Dated 22-6- 1864.

Not to be folded or roughly handled

No. 528. Read the following letter from Lieutenant-Colonel J. C. ANDERSON, R. E., Superintending Engineer, 2nd Division, to Colonel C. A. ORR, R. E., Secretary to Government, Department Public Works, dated Masulipatam, 25th March 1864, No. 76:—

SIR,

1 General Abstract Estimate.
6 Abstract Estimates for masonry works.
6 Specification reports.
5 Plans of bridges,
1 Do. of tunnel,
1 Survey sketch,
1 Section of levels,
} by banghy.

ABSTRACT.

	Rs.
Earthwork	10,439
Gravelling, &c.	6,561
5 Bridges with aggregate number of bays 25 of 18 feet span each.	51,400
1 Tunnel of 3′ vent	230
Total Estimate...	68,630

† 2nd December 1862.

1. Referring to G. O. No. 3,278, dated 12th November 1863, I have the honor to submit for sanction Estimates for the completion of Trunk Road No. 6 across the Moosoonoor Valley, amounting to Rupees 68,630, together with the plans and documents as per margin.

2. The Estimates have been prepared by Captain Moberly. While the instructions conveyed in G. O. No. 2,877,† paragraphs 4 and 5, to the effect that bridges were to be substituted for two road dams proposed by Captain Mullins, have been carried out, the whole of the works have been designed afresh, and carefully estimated for. The probable cost of the whole project exceeds that of Captain Mullins by only Rupees 3,800.

3. The width of the Moosoonoor Valley is 2 miles and 1,500 yards, and the whole of it is submerged in high floods to a depth of from 1 to 3 feet. The road-way is proposed to be raised to a height of 1½ yards above the maximum flood level, and the water-way of the bridges across the several channels which intersect the Valley is on a scale which I believe will be amply sufficient. The area of the drainage basin is only 220 square miles, the area of water-way of the proposed bridges counted to the springing of the arches is 4,722 square feet, and assuming that the flood-water is to be discharged with the moderate velocity of 4 feet a second, a quantity exceeding a fall of 3 inches of rain in the 24 hours over the whole basin, would be passed off in the same time; and a much larger quantity could be disposed of without endangering the bridges. As a large proportion of the actual rain-fall must be absorbed by the soil, and a considerable quantity in addition be drawn off for tanks, and as, moreover, very heavy falls of rain rarely extend at one time over a large area, I conclude that the proposed water-way is as liberal as can, with due regard to economy, be admitted.

4. The completion of this portion of the road is indispensable to bring the portions to the north and south into use throughout the year. Although the principal rivers between Nellore and Ongole are still unbridged, they do not offer a serious impediment to traffic unless when actually in flood, as the beds of nearly all are sandy; but otherwise this portion of the road is far advanced to completion and the greater part of it is in excellent order.

5. The Government entered into the subject of funds for the proposed works in their Order No. 381, dated 6th February 1864, paragraph 29, and observed that an allotment for them would if possible be made in the Income Tax Budget for the ensuing year; but in the event of funds not being available, I would beg to recommend that a portion of the sum allowed for masonry works on the same road, Rupees 24,580, be appropriated; and that in short that allotment may be considered to hold good for both projects as both lie within the same limits.

No. 529. ORDER THEREON, 22nd April 1864, No. 1,152.

1. In their Proceedings of the 2nd December 1862, the Government reviewed the various schemes proposed for carrying Trunk Road No. 6 across the Moosoonoor Valley, in the Nellore District, and decided on adopting Captain Mullins' proposal, with the substitution of bridges for the two long road dams which it included.

two road dams proposed by Captn. Mullins, have been carried out; the

Proceedings of the Madras Government, Public Works Department, 22nd April 1861.

2. The Estimates now submitted by the Superintending Engineer provide for the work then ordered, and amount to Rupees 68,630, comprising the following items :—

	Rs.
Earthwork	10,439
Gravelling, &c.	6,561
Bridge of 6 arches	15,400
Do. do.	14,800
Do. of 5 arches	9,600
Do. do.	7,800
Do. of 3 arches	3,800
Road Tunnel	230
	68,630

3. The Governor in Council resolves to sanction the above Estimates. An allotment will, if possible, be made for the work in the Income Tax Budget for 1864-65.

(True Extract.)

(Signed) CHARLES, A. ORR, Colonel, R. E.,
Secretary to Government.

To the Superintending Engineer, 2nd Division.
„ Accountant General.
„ Controller and Auditor of Public Works Accounts.

Exd. S. T. Augustin.

No 76

Supt Engrs Office 2nd D
Masulipatam
25th March 1864.

+By Bayly.

From

Lieut Col. J. C. Anderson RE
Supt. Engineer 2nd Dn.

To

Colonel C. A. Orr RE
Secretary to Government
D. P. W.

Sir

Enclosures.
1 Sheet Abstract
1 Sheet Estimate
1 Sheet Specification
1 Sheet Report
*5 Plans & Sections
*1 Plan
*1 Sheet Estimates
*1 Sheet Calculations
*1 Sheet Specifications
*1 Sheet Report

Referring to G. O. No 3278 of 12th November 1863, I have the honor to submit for sanction Estimates for the Completion of Trunk Road No 6 across the Moosoonoor Valley amounting to Rs 68,630, together with the plans and documents as per margin.

2. The Estimates have been prepared by Captain Moberly. While the instructions conveyed in G. O. 2nd December 1862 No 2877, para 4 & 5. to the effect that Bridges were to be substituted for two road dams proposed by Captn Mullins, have been carried out, the

Abstract
Earthwork ... Rs 10,439.
Gravelling &c ... " 6,561
5 Bridges with Approach
Number & Span 25 ft 5,400
18 feet span each 2,310
1 Tunnel 53 feet 230
Total Estimate Rs 68,630

whole of the works have been designed afresh and carefully Estimated for. The probable Cost of the whole project, exceeds that of Captain Mullins by only Rs. 3,700-8-3 The width of the Moosoonoor Valley is 2 Miles and 1500 yards and the whole of it is submerged in high floods to a depth of from 1 to 3 feet. The road way is proposed to be raised to a height of 1½ Yards above the Maximum flood level, and the water way of the Bridges across the Several Channels which intersect the Valley, is on a scale which I believe will be amply sufficient. The area of the drainage basin is only 220 square miles, the area of water way of the proposed Bridges counted to the springing of the arches, is 4722 square feet, and assuming that the flood water is to be discharged with the moderate velocity of 4 feet a second, a quantity exceeding a fall of 3 inches of rain in the 24 hours over the whole basin, would be passed off in the same time, and a much larger quantity could be disposed of without endangering the Bridges. As a large proportion of the actual rain fall must be absorbed by the soil, and a considerable quantity in addition be drawn off for Tanks; and as moreover very heavy falls of rain rarely extend at one time over a large area, I conclude that the proposed waterway is as liberal as can, with due regard to economy, be admitted.

4. The Completion of this portion of the road is indispensable, to bring the portions to the North and South into use throughout the year. Although the principal rivers between Nellore and Ongole are still unbridged, they do not offer a serious impediment to traffic unless when actually in flood, as the heads of nearly all are sandy, but otherwise this portion of the road is far advanced to Completion and the greater part of it is in excellent order.

5 The Government entered into the subject of funds for the proposed works, in their order No 381 dated 6th February 1864 para 29 & observed that an allotment for them would if possible be made in the Income Tax Budget for the ensuing year; but in the event of funds not being available. I would beg to recommend that a portion of the sum allowed for masonry works on the same road. Rs 24,580 be appropriated; and that in short that allotment may be considered to hold good for both projects as both lie within the same limits.

I have the honor to be
Sir
Your most obt Servt

J. Anderson Lieut Col R.E.
Superintending Engineer 2nd Dn

5 [illegible] Dist

12 Nov/62 N 214-215

1st Feb 1864 Despt
From Secy to Govt Genl
No 401
The Superintending Engr
2d Division
Masulipatam
To The Secretary to Govt
of Madras.
Dated 25 March 1864
Rd. 28th April.
Forwarding Plans
and Estimate for Constructing an Embanked Road
& Masonry works on
Trunk Road Rs 6 am
Nursaveer Valley - amounting to Rs 68,630 for the
Sanction of Government.

No. 528.

No 1152 - 22nd April 64

C. 15th April 1864 N. 185

Abstract Estimate No. of

District Nellore—Taluq Kavali

Work Constructing a Bridge of 5 Arches over the Mungamuru Tank Supply Channel

Quantities	Description of Work.	Rate.	Amount.	Total.
7293	Cubic feet of Concrete	- 2 -	911 12 -	
21961 ~~25019~~	Ditto Laterite in Chunam	- 3 8	5715 10 4 ~~6260 8 4~~	
3450	Ditto Ditto Arch	- 3 11	846 8 6	
320 ~~346~~	Running feet of Cornice	- 4 -	80 - - ~~86 8 -~~	
2640	Cubic feet of Rough Stone	- 2 3	371 4 -	
4	Square Stones (granite)	5 8 -	22 - -	
	Excavation	- - -	150 - -	
	Scaling	- - -	500 - -	
	Centring	- - -	300 - -	
	Superintendence & Sundries	- - -	688 9 2 72 3 2	
				9,600

Examined
Guntur
22nd Dec 1863
Superintending Engr's Office
Masulipatam
26th March 1864 -

A. S. Ellerby Captain R.E.
Executive Engineer 1st class N.

J. Walker Lieut Colonel R.E.
Superintending Engineer
2d Division

P.W. No 1/64.

Rain Komatachy
a Bridge &c &c
over the Channel
Tank Supply Channel
in the Taluk of
Nellore Collectorate
Estimate for Rs 7800.

Abstract Estimate No. of 1863-64

District Nellore—Taluq Kavali

Work Constructing a Bridge over the Talapalem Tank supply Channel

Quantities	Description of Work.	Rate.	Amount.	Total.
7370	Cubic feet of Concrete	- 2 -	921 4 -	
21936 ~~22031~~	Do. Calcinte in Chunam	- 3 1	422 4 ~~426 4~~	
3450	Do. Do. Brick	- 3 3	700 13 6	
312 ~~340~~	Running Feet of Cornice	- 1 -	12 - -	
2688	Cubic feet of Rough Stone	- 1 9	294 - -	
14	Guard Stones	5 8 -	22 - -	
	Excavation	- - -	150 - -	
	Puddling	- - -	500 - -	
	Spouting	- - -	300 - -	
	Superintendence & Contingencies	- - -	605 3 6 ~~490 15 6~~	
				7800

Ex. Engr's Office
Nellore
22nd December 1863.
Superintending Engr's Office
Madras
24th March 1864

A. S. Abbey Captain R.E.
Executive Engineer 1st Class Nellore
H. Anderson Lieut. R.E.
Superintending Engineer
2d Division

Abstract Estimate No. of 1863-64

District Nellore—Taluq Kavali

Work Constructing a Culvert of 3 feet Clear for Irrigation Channel near Gowravaram Trunk Road No 6 Musunuru Valley

Quantities	Description of Work.	Rate.	Amount.	Total.
733·125	Cubic feet Calcrete in Chunam	- 3 -	137 - -	
169	Do. Do. Arch Work	- 3 6	31 - 6	
162	Do. Concrete	- 2 3	23 - -	
	Centring	- - -	15 - -	
	Coarse Work Superintendence and Sundries	- - -	18 - -	
	7½ Per Cent			
			230.	

A. S. Addams Captain &c.
Executive Engineer & Superintendent

Examined & passed
Nellore
23rd February 1864.

Superintending Engineer
2d Division Nellore
25th March 1864.

Henderson Lieut Colonel &c.
Superintending Engineer
2d Division Nellore

Passed for Rs 230

P.W. Dept 1864.

Accepted Contractor
Bridges over the Culvert
Culvert over the Channel
Remarks if Cash Rs 7 Pags
in the Hands of Engr
for Non Receipt

(Duplicate in a Book)
For M. Rds

P.W. 1160/64

Bank & Soonthurtrup
to Sumarkoy 3 feet
Bund for Irrigation
Channel & new Sluice
various Sum Rs

Road Rpd. Museum
Collegiu to the Canal
Killapo Kallaveddi
Estimate No 230 &c &c

Abstract Estimate No. of 1863-64

District Nellore—Taluq Kavali

Work Constructing a Bridge of 6 Arches over the Pillivagu Channel

Quantities	Description of Work.	Rate.	Amount.	Total.
9013	Cubic feet of Concrete	2	1126 10 -	
41970 / 42000	Do Laterite in Chunam	3 9	9836 11 6	
4140	Do Do Do Arches	6	1035 - -	
394 / 3408	Running feet of Coursing	4	98 8 -	
5040	Cubic feet of Rough Stone	26	787 8 -	
4	Guard Stones granite	5 8	22 - -	
	Excavation		250	
	Packing		750	
	Centring		500	
	Superintendence & Sundries		296 11	
				15,400

Ex. Engr. Office
Cuddapah
23rd December 1863.
Superintending Engr. Officer
Masulipatam
24th March 1864.

A. S. Abbey Captain R.E.
Executive Engineer 1st Class N.D.

J. Haldane Lieut. Colonel R.E.
Superintending Engineer 2d Do.

Abstract Estimate No. 1 1865/64

District Pellare Taluq Ravelé

Work Constructing a Bridge of 6 Arches over the Edalavagu Channel

Quantities	Description of Work	Rate	Amount	Total
9060	Cubic feet of Concrete	. 2 4	1321 4 -	
44735	Do. Laterite in chunam	. 3 4	9319 12 8	
4140	Do. Do. Archwork	. 3 8	948 12 -	
356	Running feet of Coornice	. 4 -	88 8 -	
5040	Cubic feet of Rough Stone	. 2 -	630 - -	
6	Guard Stones	5 8 .	22 - -	
	Excavation	- - -	250 - -	
	Baling	- - -	750 - -	
	Centring	- - -	500 - -	
	Superintendence & Sundries	- - -	969 11 4	
				14,800

A. S. Addams Captain R.E.
Executive Engineer 1st class M.D.

H Anderson Lieut & Colonel
Superintending Engineer 2d Div

Ex: Engr Office
Cuddapah
22: December 1865

Superintending Engr Office
2d Division Madakpeta
24th March 1864
Ex: Engr

Estimate in abstract
from the Superintending
Engineer 2d Division
Dated

Work Constructing a
Bridge of 6 Arches
over the Edalavagu
Channel in the Taluq
of Pellare District
Rupees Rs. 15,24,000

1864 March 1801

Abstract, Estimate No. of
District Nellore Taluq Kavali
Work Constructing a Road across the
Musunuru Valley on Trunk Road No 6.

Quantities	Description of Work	Rate	Amount	Total
38550	Cubic Yards of Earthwork	- 1 1	2610	
70526	Do Do of Do	- 1 2	5143	
25387 416	Do Do of Do	- 1 3	1983	
13464	Do Do Lamping	- - 1	700	
46870	Sq yards of Turfing	- - 5	1221	
5012	Cubic Yards of Metalling	- 14 -	4386	
	Superintendence and Sundries		827	17050
				16870
1	Irrigation Channel		230	
1	Bridge across the Pillivagu Channel		15400	
1	Do Munganuru Do		9600	
1	Do Ubalaraju Do		14800	
1	Do Talapalem Do		7800	
1	Do Munnuru Do		3800	
				51330
	Grand Total Rupees			68200

Ex. Engr's Office
Branchanaka
13th February 1864.

Ex. Engr
Mr

Capt. R.E.
Executive Engineer 1st class

Superintending Engineer's Office
Masulipatam
25 March 1864

Superintending Engineer
2d Division

Lieut. R.E.

Executive Engineer
Nellore

Ex. Engr's Office
Branchanaka
13th February 1864.

Ex. Engr
Mr

Superintending Engineer's Office
Masulipatam
25 March 1864

P.W. 1401/64

Abstract Estimate of a Bridge & Approaches across the Ubalaraju Channel.
Amount Rs. 14800
with Work. Taluq
Nellore District

P.W. Book 1/64.

Estimate Construction
of a Road across
the Mutwanee Valley
Nawalee Valley
Bellary District
Amount of Est. Rs 68,200

Abstract Estimate &c of 1863-64

District Bellary. Valley Nawalee

Work. Constructing a Bridge of 3 Arches over the Immunder Supply Channel

Quantities	Description of Work	Rate	Amount			Total		
4438	Cubic feet of Concrete	..	1	10	508	8	4	
10348	— D — Laterite in Chunam	..	2	9	1778	9	..	
2174	— D — D — Arches	..	3	4	407	10	..	
184	Running feet of Cornices	..	4	..	46	..	..	
1680	Cubic feet of Rough stone	..	1	6	157	8	..	
4	Guard stones (Granite)	5	8	..	22	..	..	
	Excavation				100	..	..	
	Paving				300	..	..	
	Centring				200	..	..	
	Superintendence & Sundries				279	12	8	
							3800	.. ..
	Total Rupees ..						3800	.. ..

Superintending Engineers Office
2d Division Madrespatam
25 March 1864 -

J Anderson Lieut RE
Superintending Engineer
2d Division

No 1152 Public Works Department

Proceedings of the Madras Government
Dated 20th March 1865
No 208 in March 64

Letter from Superintending Engineer 2nd Division
Dated the 20th January 1865

Forwarding Plan and Estimate
for Construction of Culvert
Road No 6 across Channel
Road No 6 between Ch 67 & 68
amounting to Rs 68,630 for the sanction
of Government.

Read letter from Superintending Engineer 2nd Division
Dated the 2nd December 1864
Forwarding the Estimate for
Construction of Culvert
Road No 6 across Channel
Road No 6 between Ch 67 & 68
amounting to Rs 68,630 for the sanction
of Government.

Read letter from Superintending Engineer 2nd Division
Dated the 20th January 1865
Forwarding the Estimate for

	Rs-
Earthwork -	10,439
Gravelling do -	6,561
Bridge of 6 arches..	15,400
do do	14,800
do of 5 arches.	9,600
do do	7,800
do of 3 arches	3,000
Road Fund -	230
	68,630.

The Governor in Council resolves to sanction the above Estimates. An Allotment will, if possible, be made for the Work in the Income Tax Budget for 1864-65.

W.C.

To
The Sup[t] Eng[r] 2[n]d Div. with the specifications, Survey & Section of Roads √
" Rockhead √
" Controller √

Dear[r] 23[rd] April -

P.W. 1864 Dept.
Rec: of Govt. for Apl 65

No 1152.

Rec: of the Collr. of
Nellore 22 April 65

P.W.D. Rp. 3865/64

C. No 1743/65

Estimate amounting to Rs. 68,630 for the completion of Trunk Road No 6 across the Moosnoor valley in the Nellore District.

Nos. 528-529

C. 1743 dated April 1865