

No. 4712 C 427 Nov 1888

FROM,

Lt Col R. E. Drake ¹²⁶¹⁰
THE SUPERINTENDING ENGINEER

To
C

FIRST CIRCLE.

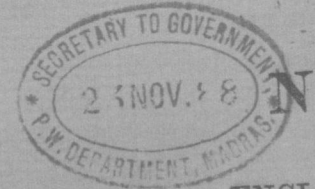
For note and return.
The G.O. quoted &
sanctioned the
purchase of the
mortar mills
from Burn & Co
of Calcutta

TO,

THE CHIEF ENGINEER

FOR IRRIGATION.

DATED 15th
DESPTCHED 16th November 1888.
RECEIVED 9/12



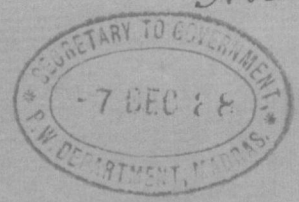
No. 4244

ENCLOSURES.

SUBJECT.

To W. No. 2706 of 6.12.88

Noted and returned.



W. C.

Bullock mortar mills

Inform that the sanction
of Government - for the
purchase of - has already
been obtained.

No. 3856 W of 8.11.88
B

Recorded

W. C.
8.12.88

3/12
W. C.
8/12/88
Mr. acco.

W. C.
30

No. 424 V.Z.

FROM,

Lt. Col. R. R. C. Drake Brockman R.E.

THE SUPERINTENDING ENGINEER

FIRST CIRCLE.

TO,

THE CHIEF ENGINEER

P. W. D.
FOR IRRIGATION.

DOWLAISHWARAM, th 15 November 1888

SIR,

With reference to G. O. No. 2760 W dated
6.9.88, I have the honor to report that sanction
has already been applied for, in this Office letter
No. 54 V.Z. dated 11.5.87 to purchase the articles
noted in the margin from Messrs. Burn & Co. Calcutta
& obtained. Vide G. O. No. 1513 W dated 4th June 1887.

Bullock Mortar
mills 15 ft dia.
- meter.

I have the honor to be

Sir,

Your most obedient servant

R. R. C. Drake Brockman Lt. Col. R.E.
Superintending Engineer 1st Circle.

JK

4712 C 7 27/4/80
2760 W 7 6/9/80
1573 W 7 4/6/87
2365 W 7 10/10/85

No 1513 W 4/4-6-87

FROM,

No 1513W 44-6-87
" 1679W - 2-7-86
" 2365W - 10-10-85
" 2760W - 6-9-88

1888.

P. W. DEPARTMENT.

Current No. 12052

From

The Suptg. Engineer
I circle

ENCLOS.—

No. 424V. 3.

Dated 15 Nov. 1888

Received 23 - do -

SUBJECT.

S.O. 2760W 46-12-88

Informing that the sanction
of Govt for the purchase
of Bullock mortar mills
from Messrs. Burn & Co.
Calcutta has already
been applied for. (vide
S.O. 1513W 44 June 1888)

DISPOSAL.

No. 4712C Dated 27 Nov. 1888

To
C

For note & return.

The S.O. quoted sanction
ed the purchase of the
mortar mills from Burn
& Co. of Calcutta.

(21) W. L. C. R.
26-11-88
20/11

2572W 7 21/0/00

No. 2760 W of 6 Sept. 1888

B

Communicated to
Suptg Engrs concerned
for early necessary
action

WV
1.9.88

See
11/9/88

KEEP-WITH

Genl. No.

dated

188

B 11/9

Suptg Engrs I to I circles
Ex: p.w.a. ✓ Des
6/9

1,000-7-2-88.

P.W.C. No. 8701
[C. No. 8.]

GOVT.
OF MADRAS.

1888.

P.W.
DEPT.

EXAMINER, P. W. ACCOUNTS.

Madras, 27 August 1888.

OFFICE NOTE No. 2156.

Ry 30-8-88

To

No. 2760 W of 6 Sept. 1888
W.

I beg to report, with
reference to Madras G.W.D. Code,
edition of 1886, para. 1699, and
Appendix G, Rules 2 & seq., that
it appears from the Divisional
accounts for the month of June 1888
that stores of European manu-
facture as detailed below have
been brought in India without
the sanction of Government.

WV

11/9

interior

Item No.	Division	Name of Article	No. of quantity	Unit	Value
1	2	3	4	5	6
1	Kistna Western	Square Bar Iron	1339	lbs	Rs 2 10 1/2
2	Bellary	Wrought Iron	491.82	lbs	141 7 3
3	P. W. Work shops	Iron pig English (made up of 4 different items each for Rs 55/-)	2	Tons	140 - -
4	West Coast	3 Bundles standards for stumps & line fencing	30	do	75 - -
		C. I. Angle post with strays	6	do	180 - -
		W. I. Field gate with posts	1	do	38 - -
		" Straining posts	3	do	105 - -
		Total Ampers			418 - -
5	Godavari Central	English Cement	150	bags	1778 2 -
6	Vizagapatnam	Bullock mortar, wells 15 ft Diameter	2	each	1144 - -
7	Godavari Eastern	Glazed Stone ware pipes	57	Nº	104 10 0

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of 1885 Madras.
PUBLIC WORKS.

Dated October, 10th.

Recd.

Encl.

G.O., 10th Oct. 1885, No. 2365 W.

OCTOBER.

Chennai
August 1888

[Signature]

Mr. 29/8

Road from Pottinghi to Koraput
and Bridges on the Pottinghi
Ghat

Estimates for —, sanctioned with remarks.

Item No.	Division	Name of Article	Qty or Durability	Unit	Value
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10TH OCTOBER 1885, No. 2365 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers:—

From Lieutenant-Colonel P. MONTGOMERIE, R.E., Superintending Engineer, I Circle, to the Chief Engineer, Public Works Department, dated Waltair, 26th May 1885, No. 64 C.

I have the honor to submit, for the approval and sanction of Government, the plans, estimates, and other documents connected with the construction of the Potinghi-Koraput road, together with plans and estimates for two iron girder bridges required for the Potinghi ghât in the Vizagapatam district.

2. The estimates for the Potinghi-Koraput road amount to Rs. 2,72,700, and those for the two bridges on the Potinghi ghât to Rs. 31,190. The latter, it is understood, were ordered by Colonel Sankey, R.E., C.B., the late Chief Engineer of the department, and will be required for crossing the Sunki and Rallagedda streams, which at present are passed by means of roughstone causeways. The Potinghi-Koraput road is a work urgently required for opening out the Jeypore country and the districts beyond, and is absolutely necessary to enable the Potinghi ghât, which has lately been completed at some considerable cost, being properly utilised.

3. As these estimates have been urgently called for by you, I have thought it advisable, in order to save further delay, to submit to you direct the whole of the documents with my corrections noted on them, instead of returning them once more to the divisional officer for revision.

4. The hydraulic information regarding the streams to be bridged has been arranged in the accompanying tabular statement, from which you will observe that the waterway allowed is in proportion to the areas drained; the discharges being calculated by allowing a co-efficient of 700 in the formula $D = C.M^{\frac{2}{3}}$. This method is considered the safest in ascertaining the maximum flood discharges from small hill streams when there is very great difficulty in observing accurately the highest flood level. The co-efficient of 700 gives a discharge approximating to the observed discharges in the larger streams, and may be accepted as a safe margin to be allowed in the smaller nullahs.

5. Owing to the great difficulty in constructing masonry bridges of any size on the Jeypore plateau, I have thought it advisable to allow iron girder bridges for the four largest streams. The designs for those which are submitted by Mr. Harris are similar to the bridges which he has already constructed in the Wynaad and Western Coast, and which, it is understood, have answered well. The details of the girders have been furnished by Mr. W. Maylor, of the firm of Messrs. Peirce, Leslie, and Company of Calicut, who supplied the bridges for the Wynaad and Western Coast. The design seems suitable for the Jeypore plateau, but before sanctioning them it might be as well to have the details checked at the Government Workshop, Madras.

Note by the Chief Engineer, Public Works Department.

The estimate for the Potinghi-Koraput road, submitted by the Superintending Engineer, I Circle, amounts to Rs. 2,72,700, or Rs. 9,128 per mile.

2. In addition, an estimate of Rs. 31,190 for two bridges on the Potinghi ghât is submitted. It is recommended that the latter be sanctioned as supplemental to the

original estimate for the Potinghi ghât. For this work the total sanction accorded will then stand as follows:—

G.O., No. 3255 W., of the 16th November 1883	...	...	...	RS. 4,25,391
The two bridges now proposed	...	...	...	31,190
Total	...	...	...	4,56,581

3. *New Road.*—The new line from Potinghi to Koraput, the second link in the line of communication between the plains of Vizagapatam and the interior of the Jeypore plateau, apparently follows a track already opened out as a pack-bullock road by the Agency authorities; the first 2 miles or so only of this track being superseded by a favorable diversion 3 miles 2 furlongs in length.

4. The conversion of the existing pack-bullock track into a metalled road, in preference to an altogether new trace, is apparently adopted for the sake of economy. Labor and earthwork will be saved thereby, while the survey and estimating have probably been much easier; but it seems doubtful whether, in a country such as that described, some improvements on the exact alignment of the old track could not have been discovered. The gradients, however, are easy throughout, the steepest being 1 in 20. The Superintending Engineer approves the project as prepared by Mr. Harris, and the alignment may perhaps be accepted without further inquiry.

5. *Width.*—The formation width of the new road is to be 15 feet, of which 12 feet will be metalled. In the opinion of the undersigned, for a first-class metalled and bridged road, a width of 18 feet should be adopted. In the open and on the level, a width of 18 feet will add but a small amount to the cost, and for the tops of high embankments and approaches to bridges, 15 feet is hardly a safe width.

6. *Bridges.*—The iron bridges, four for the new road and two for the ghât, are from designs by Mr. Maylor, of the firm of Peirce, Leslie, and Company of Calicut. They are of the Warren girder type, and similar bridges are said to have answered satisfactorily in Wynaad and on the West Coast. It is apparently intended that this firm should supply them, but the undersigned considers the better course would be to indent on the India Office for Warren girder trusses of the spans required, to have a planked road of given width (15 feet) and to carry a specified load. If this course be adopted, it will not be necessary to have the calculation for these designs checked in the Public Works Workshops, as suggested by the Superintending Engineer.

7. The stone masonry should certainly *not* be plastered, for to plaster stonework simply means to conceal bad work.

8. Splayed wings seem preferable to the long return wings designed for all the bridges, and would be more economical.

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Chief Engineer.

25th September 1885.

ORDER—dated 10th October 1885, No. 2365 W., Public Works.

The undermentioned estimates are sanctioned:—

	Amount of Estimate.	Register Number.	Classification.
(1) Road from Potinghi to Koraput.	RS. 2,72,700	Provincial No. 142 W. of 1885-86.	} Communications, Original Works.
(2) Two bridges on the Potinghi ghât.	31,190	Provincial No. 143 W. of 1885-86.	

2. The second estimate is supplemental to the estimate for the Potinghi ghât, which will now stand at Rs. 4,56,581.

3. The current year's budget grant of Rs. 20,000 for the Potinghi-Koraput road was surrendered in G.O., No. 1533 W., dated 1st July 1885, and no allotment of funds can be made for the work at present. If possible, however, provision for it will be made in the Provincial budget of 1886-87.

4. The Chief Engineer's remarks should receive attention.

(True Extract.)

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

To the Superintending Engineer, I Circle, with ¹⁶ enclosures.
" Examiner, Public Works Accounts, with general abstract estimate.
" Financial Department.
" Revenue "

Exd. E. Fernandez.
Spare Copies