

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	152	Press ~~Mis.~~
Dated	20 — 1 —	1868.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Revenue Department,
20th January 1868.*

No. 301. Read the following letter from the Superintending Engineer, 7th Division, to the Secretary to Government, Department Public Works, dated Coonoor, 31st December 1867, No. 160 :—

1. In submitting, for the consideration of Government, the accompanying Memorandum on the subject of bridges on the West Coast generally, I have the honor to request sanction for the accompanying plans and estimates of two bridges on the road from Munjeshwar to Pootoor, in South Canara, which were excepted from the general sanction accorded in G. O. No. 3,271, of 22nd October 1867, viz. :—

Annaykul bridge Rupees 8,530

Kullookuttay bridge „ 4,090

2. Mr. Thomas must have requested their suspension in ignorance of their having been selected by me (from those nullahs being the chief obstructions on the line of road), as the first works for which materials were to be collected, in accordance with his predecessor's requisition No. 180, of 4th March, and the last paragraph of my letter No. 21, of 26th February 1867. Also, that the draft plan of the former bridge, if not also that of the latter, was shewn by me to Mr. Cadell, and approved by him between the abovementioned dates, when we were in daily personal communication at Mangalore. Both have accordingly been proceeded with, at sites chosen by me, in anticipation of sanction, the new Collector's objections coming too late to be attended to. Independently of which, I see no reason for undertaking the trouble and expense of bridging, with iron, nullahs of such minor importance.

3. The Puchamogur bridge, on the road from Buntwal to Moodbidderee, thrown out in the Revenue Board's Proceedings, printed with G. O. No. 3,385, of 1st November 1867, has not been undertaken. But I regret it, as that nullah is the main obstruction on the line, and indefinite will be the delay in overcoming it, if iron girders and the funds to pay for them are to be waited for. I would strongly urge that it should at least be commenced, for its position and nature are such that, even if iron is to be the material of its spans, I would not have those wider than 30 feet, and the same piers would do.

Memorandum.

1. It would appear from the Proceedings of the Revenue Board, printed with Government Orders in the Revenue Department, Nos. 2,437 of 17th October and 2,525 of 28th October, that something is expected of me in the way of estimating for iron-girder bridges in Canara, and that some pressure is necessary to elicit them, as if I were in any way opposed to such structures.

2. Such is by no means the case. It is upwards of twelve years since I advocated the use of iron for bridging the rivers in Bellary District, where timber is scarce and very dear, and even firewood, for making bricks and burning stone and lime, with difficulty procurable; and with the letter printed with G. O. No. 3,447, of 30th October 1866, I supplied specifications and estimates for girder bridges over two of the largest rivers in Canara, most requiring to be made passable. The Board were supplied with copy of that G. O. when it was issued, and again with G. O. No. 1,937, of 19th August 1867; and yet in the second of their Proceedings quoted at the head of this Memorandum, I find them saying that they are not aware whether any report has been made by me on the subject. Collectors also persistently ignore, not only what I have said on the subject, but also what the Revenue Board confirm me in saying; for instance, that Oopinangady, and not Pane-Mangalore, is the site for bridging the Mangalore river. I desire, therefore, to place on record

*Annaykul bridge on the
St. road from Pootoor by P. V. V.*

*Proceedings of the Madras Government, Revenue Department,
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my views on the subject of bridges on the West Coast generally, for it is one which I have considered not only with reference to Canara, but to Malabar and Wynaad also.

3. Where laterite is procurable of good quality, and semi-circular spans of 30 feet are unobjectionable, I much prefer that most convenient material to any other. If really good, it may be trusted up to 40 feet spans with a rise of only 10 feet, as I have personally tested; but the superintendence must be unremitting. For bridges away from first-rate laterite and across wide streams of second rate magnitude, i. e., of depths not requiring piers above 20 to 24 feet in height, I still adhere to laterite as the material for the piers, and to 30 feet as a convenient span; and I hold it an absurdity to neglect the use of the natural product of the district, viz., timber in abundance and of first-rate quality. But as seasoned timber cannot be got, and the general conditions of public work do not admit of timber being stored for seasoning, except where a constant large demand may be reckoned on, I avoid the use of trusses; and by the adoption of a pattern suited to the rude carpentry of the district, secure the timbers of my bridges seasoning in position; if only their ends be not built up in masonry, as is so often done by unthinking executives. It only shews the Collector's ignorance, when in a report like that printed with G. O. No. 2,950, of 14th September 1866, he condemns such bridges as "exceedingly expensive" and "very thriftless," and couples them with wooden bridges in Mysore, in which province I am not aware of there being one of the same pattern, while they have existed for years in North and South Canara, with occasional repairs to their planked road-way; probably the only part of them that the Collector ever attempted to examine. It is not till we get to the crossing of salt water creeks, or of rivers of first class magnitude, that I can recommend the disuse of the cheap and good material ready at hand, and the substitution of one costing twice or thrice as much, procurable from a distance only and with great delay, and requiring skilled labor to be imported with it to put it together; and even then, for the bridges on or near the coast, I would use iron only for the piers, and adhere to timber platforms in spans of 30 feet; while for the large inland streams only would I use iron, both in 60 feet spans and for the piers.

5. In a letter to the address of the Collector of Malabar, No. 16, of 20th June 1866, I have furnished information of the probable cost of iron-girders, of spans from 30 to 60, and 100 feet. It rests with Collectors, who desire to have such works undertaken, to obtain the sanction of the Board of Revenue and of Government, to have plans and estimates drawn up for bridges at particular sites, and the promise of the requisite funds. As a preliminary arrangement for such provision, it would be wise to set apart for a year or two the net revenue derived from tolls at the ferries which such bridges are proposed to supersede; and the Superintendent of Public Works Stores might at once be authorized to obtain from England, or to make up in the Workshops, a supply of 30 and 60 feet girders of simple patterns, in pieces capable of easy transport, and to be put together entirely without recourse to rivetting.

(Signed) G. W. WALKER, Colonel, R. E.,
Superintending Engineer, 7th Division.

COOXOOR,
31st December 1867.

Referred to the Revenue Department, with a remark by the Secretary in this Department that iron-girders, being costly and requiring for their erection skilled labor of a special description, cannot economically be employed for the construction of bridges of small spans, and are only suitable for large openings or streams which do not afford sufficiently good foundations for masonry piers. Arrangements are being made for placing the Workshop at Chepauk very shortly in a position to supply iron-girders of any lengths, according to order.

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

10th January 1868.

*Proceedings of the Madras Government, Revenue Department,
20th January 1868.*

No. 302. ORDER THEREON, 20th January 1868, No. 152.

Miscellaneous.

1. The Government readily accept Colonel Walker's conclusions as to the comparative advantages of iron-girder-timber platform and masonry arched bridges in the District of Canara, his long and intimate acquaintance with which renders his testimony unimpeachable, and accordingly sanction the estimates for the Kullookuttay and Annaykul bridges on the district road from Pootoor by Vitla to Munjeshwar, aggregating Rs. 12,620, which were excepted from the proposals of the Board in their Proceedings dated 9th October 1867, No. 6,480, but which it appears having been approved by the Collector before the Acting Collector's objections were raised, have been proceeded with in anticipation of sanction as surmounting the chief obstructions on the line of road.

2. The Board of Revenue will arrange for the provision of funds to complete the works in question.

3. The Government request that the estimate for the Puchamogur timber bridge on the district road from Buntwal to Moodbiddere, which was excepted from the Board's proposals in their Proceedings dated 10th October 1867, No. 6,510, may be submitted for sanction, and that provision be made for its early execution.

(True Extract.)

(Signed) W. HUDLESTON,
Secretary to Government.

To the Public Works Department.
,, the Board of Revenue.
,, the Accountant General.

Exd. F. R. Bantleman.

Annaykul bridge on the

Revenue Department

W-152.

Proceedings of the Madras Government
under date the 20th July 1868-

Read the follow-
ing letter from the Subj.
Eng^r, 7th Divⁿ -

Submitting a Memo
on the subject of Bridges on
the West Coast generally &
plans & estimates for Anaykul
and Kullookutty Bridges on
the road from Manipalwar to
Puthoor for sanction; and re-
commending the commenc-
ement of the work of Duchano-
gur Bridge on the road from
Puthoor to Mood. Biddorel.

(Here enter 31st
Dec^r 1867 No 160)

Wd
N.
by

The Govt readily
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for the Kullookutty and
Anaykul bridges on the
W. Coast from Puthoor by Biddorel to

to Munjeshwar, aggregating Rs 12,620, which were accepted from the proposals of the Board in their Pro: dated 9th Decr 1867, No 6480 - but which appear having been approved by the collector before the ~~Ag~~ Collector's objections were raised - had been proceeded with in anticipation of sanction as surmounting the chief obstructions on the line of road -

The Board of Revenue will arrange for the provision of funds to complete the works in question -

The Govt request that the estimate for the Kuchanogur timber bridge on the District road from Runtwal to Hoodbidderi, which was accepted from the Board's proposals in their Proceedings dated 10th Decr 1867, No 6510, may be submitted for consideration that pro-

4.
its early execution -

L.R.

Copies To the Mr. Secy to Govt
By Mr. Secy to Govt
By Mr. Secy to Govt

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