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(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 1702.	Press
420-471	Mis.
Dated 19. 6. 1865.	

Not to be folded or roughly handled

No. 470. Read the following letter from Captain J. MULLINS, R. E., Consulting Engineer for Irrigation and Canal Company, to Colonel C. A. ORR, R. E., Secretary to Government, Department Public Works, dated Madras, 7th June 1865, No. 20:—

SIR,

Enclosures 6.

- 2 Letters in original from Agent, General Nos. 1,097, 117.
- 1 Letter from this Office to Government, General No. 1,117.
- 1 Copy of letter No. 448, to Agent.
- 1 Plan.
- 1 Estimate.

Letter to Agent No. 448, dated 2nd March.
From do. „ 70, „ 2nd June, with one plan and one estimate.

Also for reference

Letter No. 211 of 21st February last, and its enclosure.
Letter No. 91 of 17th idem, from Agent.

it is probably strong enough, though as the curve of the extrados falls outside the back of the abutment, it would be better, I think, to construct the upper part of the abutment as shown in dotted pencil lines.

3. The arrangement of the ends of the two vent culvert is, I think, unsightly, and as it is likewise more expensive than the termination of the abutments and pier at the point where the embankment slope cuts the crown of the culvert, and the construction of splayed wings, beyond that, to retain the lower part of the slopes, the advantage of the arrangement shown is not apparent.

4. In the original estimate for the 8th Section, two 2-arch bridges, unconnected with locks, were provided, and the width of roadway over them was 15½ feet. In the present design the width is only 11 feet. In their Order of the 3rd July 1862, No. 1,555, the Government concurred in the opinion of the late Consulting Engineer that 12 feet were

Paragraph 7.

an ample width, except where trunk roads would be provided for, but I would remark that as 12 feet do not admit of two carts passing on a bridge without difficulty and risk of damage to the parapets, it seems to me that bridge widths should be arranged with reference to the intention of providing for a single or double string of carts. If the former, a width not less than 8 feet will be ample, and if the latter, 14 feet would be the most convenient breadth.

At Dipaguntla.

5. In the case under notice, as at present intended, the nearest bridge above Lock No. 7 will be 11 miles distant, and the next below at Lock No. 14, the tail lock of the section, and also about 11 miles off, and even supposing, therefore, that it should hereafter be found requisite, in laying out the communications of the country, to build one or two additional bridges, it may nevertheless be expected that there will be a considerable concentration of traffic at these crossings, when the numerous cross country tracks, now made use of come to be closed by the canal, and it appears to be advisable, therefore, to provide for carts passing on the bridges of Locks Nos. 7 and 14 by giving a width of 14 feet between the parapets.

Proceedings of the Madras Government Public Works Department,
19th June 1865

6. The supplemental sanction given in Proceedings of the Madras Government, No. 514 of the 22nd February last, provides for these bridges, but the sums entered on their account were:—

Bridge at Lock No. 7	Rs.
Do. do. „ 14	4,623
2 Culverts	4,623
	3,262
	12,508

And those in the revised estimate now submitted are:—

2 Bridges at Rupees 3,763	7,526
2 Culverts „ 1,526	3,052
	10,588

showing a reduction to the extent of Rupees 1,920, so that probably, without any increase of the sanction already given, the Chief Engineer would be able to increase the width of these bridges from 11 to 14 feet in the clear, seeing that the lower parts of the abutments on either side already exist in the side walls of the tail bays of the locks, and under these circumstances, should the Government consider that the increased width would be an improvement, I would recommend that the sanction be allowed to remain as at present.

No. 471.

ORDER THEREON, 19th June 1865, No. 1,702.

CIVIL WORKS, No. 77.

1. With this letter the Consulting Engineer of the Madras Irrigation and Canal Company forwards a revised plan and estimate for bridges in connection with Locks Nos. 7 and 14 on the Company's Main Canal. The estimate now submitted amounts to Rupees 10,588.

* G. O. No. 514.

2. The revised estimate for the 8th Section of the Main Canal, sanctioned by the Government* on the 22nd February last, included provision for these works to the extent of Rupees 12,508, being in excess of the present estimate by Rupees 1,920. Captain Mullins, however, points out that the width of the bridges, according to the plan now submitted, is insufficient, there being only 11 feet of roadway provided; and he recommends that this should be increased to 14 feet.

3. The Government agree with the Consulting Engineer in considering the width of the bridge, according to the present plan, insufficient; and they are of opinion that it should be increased so as to allow a roadway of 16 feet. The plan and estimate will accordingly be returned for revision.

4. The attention of the Company's Engineers will be called to the arch of the bridge, which seems to be deficient in strength at the haunches. The wing walls appear also to be of insufficient section, and unequal to the weight which they will have to sustain.

(True Extract.)

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

To the Consulting Engineer for Irrigation and Canal Company.
„ Manager for do.
Ed. S. T. Augustin.

Enclosures 6.
2. Letter in reply
1097 & 117.
N^o 20
3N
Consulting Engineer's Office,
Irrigation & Canal Company,
Madras, 7th June 1865.

1. Letter from this
to agent
Copy of letter No. 448

Captain, J. Mullins, R. E.
Consulting Engineer, R. E. Co.

The Secretary to Government,
Department of Public Works.

1. With reference to your endorsement of the 21st February last to my letter No. 211 of the 21st idem, I have the honor to transmit a revised plan for the proposed Bridge in connection with Lock No. 7 in the 8th Section of the Main Canal, and for the culvert on the main channel under the Bridge approach. A similar arrangement is intended to be adopted at Lock No. 14 in the same Section of the Canal.

2. The Bridge right abutment has been modified, and taking into account the short length between the wing walls, it is probably strong enough, though as the curve of the approach falls outside the base of the abutment, it would be better, I think, to construct the upper part of the abutment as shown in dotted pencil lines.

3. The arrangement of the ends of the 2 vent culvert is, I think, unweighty, and as it is likewise more expensive than the termination of the abutments and pier at the point where the embankment slope enters the crown

74

No 4702

(Here enters 7 June 1865
p. 20)

750. 2514.

27 1845 to 24th
 Sept of 1845 (don't know)
 Nov. 20 42
 the Connecticut Co.

Colony } June 1865
Dec. 8

2 in separate parcel.
1 Plan
1 Estimate

14th June 1865 A. 157.

insufficient, there being only 11 feet of roadway provided; - and he recommends that this should be increased to 14 feet.

The Govt agree with the Consulting Engineer in considering the width of the bridge, according to the present plan, insufficient; and they are of opinion that it should be increased so as to allow a roadway of 16 feet.

The plan submitted will accordingly be returned for revision.

The attention of the Company's Engineers will ~~be~~ be called to the arch of the bridge, which seems to the Govt to be deficient in strength at the haunches. The wing walls appear also to be of insufficient section, & unequal to the weight which they will have to sustain.

W.B.

To
The Comdg Engr J.H. Comfy Halls & London.
" Managers S. & S.

Sept 20th 1860

207 1865-2 24th
Wm. J. Goodwin

201 1862
Wm. J. Goodwin

201 1862
Wm. J. Goodwin

201 1862
Wm. J. Goodwin

201 1862
Wm. J. Goodwin