M.R.O. 1—20,002—12-8-65.

(1) Number of Pages 10

(2) Date of repair 26. 7. 69

(3) Initials of the Referencer ✓

MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue DEPARTMENT

G.O. No. / ~~B.P. No.~~	1724	Press / ~~Mis.~~
331-332		
Dated	20. 11. 1876	-196 .

Not to be folded or roughly handled

Proceedings of the Madras Government, Revenue Department,
20th November 1876.

No. 331. Read the following Proceedings of the Board of Revenue, dated 7th November 1876 :—

Read the following letter from T. D. HARRIS, Esq., District Engineer, Ganjam, to C. G. MASTER, Esq., Collector of Ganjam, dated Camp at Calingapatam, 20th October 1876, C. No. 2.

I have the honor to forward, herewith, copies of reports on the late storm floods as far as I have gone up to date.

No. 3537.

SUBMITTED, with copies of enclosures, for the information of the Board of Revenue.

2. A detailed account of the damage done to the town of Chicacole and neighbourhood is expected daily from the Principal Assistant Collector.

CHETTERPOKE, (Signed) C. G. MASTER,
24th October 1876. *Collector.*

SUBMITTED for the information of Government.

2. The Board await the detailed information promised by Collector.

(True Copy and Extract.)
(Signed) H. E. STOKES,
Acting Secretary.

From T. D. HARRIS, Esq., District Engineer, Ganjam, to Major-General G. W. WALK, Secretary to Government, Public Works Department, Madras, dated Ganjam, 19th October 1876, C. No. 1.

I have the honor to forward, herewith, a copy of a report received from the Executive Engineer, in charge of the Chicacole Division, on the storm and floods which occurred between the 6th and 8th instant, and destroyed the centre arches of the Chicacole Bridge. This bridge consists of 24 segmental arches rise $\frac{1}{4}$ span resting on masonry piers, the span being 30 feet clear between piers, and the height of piers 12' floor; there are two abutment piers, and the arches are therefore in three sets of eight between abutments. Those that have fallen are the 9th, 10th, 11th, 12th, 13th and 14th, commencing from the north abutment, so that the other two, 15 and 16, up to the south abutment pier are likely to come down also, or at any rate must be taken down if ever any attempt is made to restore the bridge. Both the abutment piers are perfectly safe and all the arches on either side, and as soon as I have completed all the necessary observations, I will furnish you with a full detailed report on the storm and bridge with sketch plans, &c. I have seen all myself, and the statements contained in the Executive Engineer's report (accompanying) give all the particulars of the damages done to the roads and irrigation works and what occurred in the town of Chicacole and adjacent villages, the loss of the bridge, a serious one, but all other damages will be speedily restored, and I am glad to find that the Executive Engineer has already opened communication over the river by boats and rafts both for foot and wheel traffic, and the road-damages in all places are being rapidly put in order. The Executive Engineer appears to have done everything possible under the circumstances, and has given general satisfaction. I therefore beg to bring to your notice his zealous and able exertions.

The storm and rains extended throughout the whole Ganjam District, and the roads, irrigation tanks, channels and river embankments have been damaged in many places over the Berhampore and Gumsur Sub-Division, but not in any place to a serious extent or beyond what I hope can be speedily restored. There has been no loss of life (except one at Chicacole doubtful) and the damage to crops is insignificant, as far as I have seen, and I have been over the greater portion of Chicacole and Berhampore Divisions. After seeing all the District, I will report further particulars, if necessary, on this subject also.

From G. R. LEGATT, Esq., C.E., Executive Engineer, Chicacole Division, to T. D. HARRIS, Esq., District Engineer, Ganjam; dated Chicacole, 17th October 1876, No. 138.

In reference to my telegram, dated 10th instant, reporting to you the terrific storm and floods that occurred here between the 6th and 8th instant, I have now the honor to report full particulars of the sad disasters that have befallen the public works in this range.

2. On Friday the 6th, it commenced raining at 12 meridian, and lasted, off and on, during the night. 75 cents of rain measured at 6 A. M. on the 7th.

3. The rainfall and river gauge registers on the subsequent dates are given in the statement shown below :—

From 6 A. M.	To 6 A. M.	Rainfall.		River Freshes.					
		Inches.	Cents.	At 6 A. M.		At 12 A. M.		At 6 P. M.	
				FT.	IN.	FT.	IN.	FT.	IN.
7th	8th	8	90	6	...	10	6	14	9
8th	9th	2	25	20	...	19	9	15	9
9th	10th	...	...	11	9	10	...	9	...
10th	11th	...	43	7	4	7	4	7	...
11th	12th	...	30	6	10	6	8	6	6
12th	13th	...	...	5	...	5	...	4	6
13th	14th	...	...	3	9	3	6	3	3

4. The river rose on the night of the 8th instant to the extraordinary height of over 20 ... height, which it has never attained in the memory of man; it overtopped its banks on ... Palacondah road at about 4-30 A. M., 9th, flooding almost the whole town of ...acole, destroying nearly three-fourths the houses of villages of Balaga, Bonthonpuram, Illixpuram and Patha Chicacole comprising its municipality. Had the floods occurred at night, the loss of human life would have been very considerable.

5. Between the hours of 11 and 12 P. M., of the 8th, Messrs. Grahame, Maltby, C.S., and myself heard a report as it was the discharge of cannon, and we three felt perfectly convinced that it was the result of the bursting of one or more of the arches of the bridge.

6. All communication between Patha Chicacole, where the European houses are situated, and the Fort was completely cut off, the country between being 6 to 10 feet under water; and it was not till 10½ A. M., the 9th, that my Head Accountant by means of offering a large remuneration induced two men to put off on a raft with a note conveying to me the intelligence that the bridge was gone, but, owing to the height at which the river stood, the exact damage done to the bridge could not be ascertained, and it was not till midday of the 10th that, with the greatest difficulty, I could myself reach the Fort, swimming across the country by means of wooden buoys.

7. The sight which the wreck of the bridge presented was sad indeed; the 9th, 10th, 11th 12th and 13th arches were gone, and at 6-20 P. M. on the 12th instant, the 14th arch also caved in.

8. The bridge having gone has no doubt been the saving of the town, and which is the general opinion of all; the floods were so great that the inhabitants of the town and adjoining villages quitted their houses and were taking refuge on hills and other elevated places, only saving such property as they could carry with them.

9. I attribute the destruction of the bridge to the enormous trees and debris of villages that were brought down by the floods completely choking up the arches, and this with the terrific wind blowing up the river for forty-eight hours. A cyclonic wave drove up it at the same time (a distance of four miles from the sea) adding to the piling up of the water, causing a zig-zag commotion towards the centre of the stream, which must have literally burst up the arches.

10. As I mentioned in my telegram, communication on all sides was completely cut off, and it was not till the evening of the 10th idem, I managed to get four days' northern mails across the river south, and three days' southern mails north. I got up two Masula-boats from Maffuz-

bunder on the coast, and restored communication across the river for foot-passengers with every possible despatch; and next day had also a temporary raft constructed on six barrels, by which means carts have been got across. I am getting a ferry-boat from the Vamshadara river at, Byru, which will be placed permanently below the bridge, so that traffic can be got across to and fro.

11. The roads that have been most seriously breached by the floods are the Calingapatam and Palacondah roads. The former has been breached in numerous places between the ... fourth miles, and where it runs over the Babooth Khan tank bund, the bund has been completely washed away, breaches having been formed from 15 feet to 18 feet in depth, and it will be some months before this can possibly be restored to traffic.

12. Accompanying is a statement of other damages to public works, all of which is having my immediate attention, and estimates for their requirements will follow.

Statement of Damages done to Public Works in the Chicacole Range by the heavy Rains and Floods of the 8th, 9th, and 10th October 1876.

1. Chicacole Bridge.—The 9th, 10th, 11th, 12th and 13th arches have been washed away on the 10th, and 14th arch on the 12th evening. Full particulars given in the report.

2. Trunk Road No. 6.—Metalling and gravelling in the 2nd and 3rd miles have been washed away, and road breached in several places from 1 to 3 feet in depth. In the 12th mile, water overtopped the road and breached it near the Chintaravoo calingulah.

3. Calingapatam Road.—Metalling and gravelling in the 2nd, 3rd and partly in the 4th mile have been washed away. Road breached seriously in several places, and four large breaches are made in the bank of Babooth Khan tank; the rest of the miles have suffered slight damage and three large trees have been blown down.

4. Palacondah Road.—Gravelling in the 2nd mile and metalling and gravelling ... and 4th miles have been washed away, and the road breached in the 4th mile in ... places from 2 to 6 feet deep.

5. Gara and Chintada Road.—Gravelling in the 1st, 2nd, 4th, 5th, 6th, 7th and 8th miles for 10, 50, 200, 400, 250, 200 and 400 R. yards, respectively, has been washed away.

6. Alikam and Hiramandalam Road.—Breaches, &c., have been made as below detailed :—

In 2nd mile—

60 × 4 × 3
20 × 22 × 3
26 × 20 × 2
26 × 20 × 2½
} Breaches.

50 R. yards of metal and gravel have been washed away.

In 6th mile—

60 × 6 × 2
30 × 8 × 1½
15 × 4 × 2
30 × 3 × 3
} Breaches.

300 R. yards of earthwork and gravel and 100 R. yards of metal and gravel have been washed away.

In 8th mile—

30 × 4 × 2
200 × 6 × 2
20 × 22 × 2
150 × 15 × 1
30 × 4 × 3
} Breaches.

300 R. yards of metal and gravel have been washed away.

In 10th mile, 300 R. yards of metal and gravel have been washed away. In 16th mile, 800 R. yards of gravel and three heaps of gravel in deposit have been washed away. In the 17th mile, 600 R. yards of metal, 1,200 R. yards of gravel and five heaps of gravel deposits have been washed away. In 18th mile, 1,300 R. yards of gravel have been washed away. In 19th mile, 500 R. yards of gravel have been washed away. In 20th mile, 1,000 R. yards of gravel have been washed away. In 21st mile, 150 R. yards of metal and 300 R. yards of gravel, as well as portion

7. Jagannadhapore Road.—In the 28th, 29th, 30th, 31st, 32nd, 33rd and 34th miles gravelling to the extent of 300, 350, 250, 850, 750, 950 and 300 R. yards have been washed away, and the road breached as below detailed :—

In the 32nd mile—

17 × 3 × 1	15 × 6 × ½
17 × 3 × 1	20 × 3 × ½
8 × 6 × 1	13 × 6 × 3
13 × 6 × ·5	16 × 5 × ½
24 × 6 × 1½	10 × 6 × 2
3 × 2 × 1	150 × 2½ × ½
16 × 6 × 1	12 × 2 × ½
13 × 3 × ½	

In the 33rd mile—

100 × 4 × ½	8 × 2½ × ½
275 × 2 × ½	8 × 2½ × ½
1 × 6 × ½	3 × 2 × ¼
3 × 2 × ¼	

(True Copy.)

(Signed) C. G. MASTER,
Collector.

Irrigation Works.

Villages.	Name of Work.	Remarks.
Batteroo	Pedda Chervoo	Breached in two places.
Patroonivalsa ...	Locasamoodram tank	Do. in two do.
Umpole ...	River channel	Breached in several places.
	Napathy Chervoo...	Do. in two places. Water overtopped the bank and 2 feet of earth washed away all along.
... ...	Akkiah Chervoo	Breached in six places.
Byru	Head sluice	Roughstone revetments on both sides fallen down.
Salihoondam ...	Channel	Thirty R. yards of revetments washed away.
Ponnam	Pedda Chervoo	Earthwork and turfing slipped down.
Nowry	Byru Main Channel	Breached in three places about this village, which are of 50, 20 and 60 R. yards in length.
Pedda Duggam...	Pedda Chervoo	Breached in two places, and the earthwork washed away and the masonry slightly damaged.
Lookalam	Head sluice	From the revetment of the Lookalam head-sluice, a breach of 24 × 18 × 3 yards and two other breaches near Thootikalams occurred.
Purlam	Aqueduct	Near the aqueduct, a breach 10 × 8 × 2 yards occurred.
Polaky	Head sluice	On the east side in front of this sluice, a breach of 50 × 6 × 1½ yards, and on the west side near Anthavaram, Thootikalamma, a breach of 8 × 6 × 1½ yards occurred.
Anthavaram ...	Bridge across Anthavaram Channel	Near this bridge, a breach 15 × 5 feet occurred, and three beams of the bridge washed away, of which two were found and the other gone.
	Aqueduct	A breach of 30 × 6 feet occurred.
Chodavaram ...	Sallagadda Calingula	Near this a breach 45 × 3 yards occurred.
Jalmoor	Polaky main channel	Near this a breach 15 × 2½ yards made.
	Channel bank	Breached up to Therugudu calingula and the Therugudu calingula silted up to the cill.
Dompaka	Jalmoor Channel...	The channel near the old head sluice breached by 15 × 2½ yards.
Nagirikatakam ...	Head sluice and channel ...	On the western side 15 × 10 × 3 yards breached in the revetment, on the east side a breach of 6 × 5 × 1 yards made, the old channel washed into the new one.
Mokalingam ...	Nagirikatakam Channel ...	Near this place, a breach of 44 R. yards formed and water overtopped the banks all along this channel and damaged it.

CHICACOLE,
17*th October* 1876.

(Signed) G. R. LEGATT, C.E.
Executive Engineer.

Proceedings of the Madras Government, Revenue Department,
20th November 1876.

No. 332. ORDER THEREON, 20th November 1876, No. 1,724.

Miscellaneous.

ORDERED to be recorded.

(True Extract.)

(Signed) D. F. CARMICHAEL,
Secretary to Government.

To the Board of Revenue.
„ the Public Works Department.

Exd. A. Raitt.

Revenue Department.

Proceedings of the Board of Revenue.

Dated 7th November 1876.

Read the following:—

C. No. 2.

From. The District Enquirer, Ganjam.

To The Collector of Ganjam.

Encls 2. Sir.

I have the honor to forward herewith copies of report on the late storm & floods as far as I have gone up to date.

Camp Calingapatam
Dist Enqrs office, Ganjam
Date 20th Octr 1876
No. 3537.

(sd) D. D. Harris
Dist Enqr.

Submitted with Copies of Enclosures for the information of the Board of Revenue.

A detailed account of the damage done to the town of Chicacole & neighbourhood is expected daily from the Principal Asst Collector.

Chicacole
24th Octr 1876

(sd) C. G. Masters.
Collector

Submitted for the information of Government.

The Board await the detailed information promised by Collector.

(True Copy & Abstract)

A. L. Clarke
Actg Secretary.

To.
The Secretary to Government R. D.
with 3 Encls. returned.

Nelson Locker
Asst Secretary

Govt. of Madras
1876
REVENUE.

THE BOARD OF REVENUE

&c, &c, &c,

dated November 20th.

Read

Extract

G. O., 20th November 1876, No. 1,724.

NOVEMBER.
Nos. 331 to 332.

Remarks and Index in Miscellaneous Division, Govt. Office.—Recording Proceedings of the Board of Revenue submitting reports &c.—

Bundle 1870 & 1871
Proceedings of the Board of Revenue.

Orderly Book 1870.
Pol. — — —
Cent. —
Proceedings of the Board of Revenue
on 3 Bundles dated 23-11-71.

1724

To the Secretary to the Board of Revenue
Fort St George

Sir

I am directed by the Right Honble the Governor in Council to transmit to you the Inclosed Petition of Thanjavur Raja and to desire that you will lay the same before the Board of Revenue

14 to Bd Revenue 7/23/0
21 Ditto Cash 2/27/11

Department,

(1) Number of Pages
(2) Date of repair
(3) Initials of the Referencer

MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

DEPARTMENT

G.O. No.	Press
B.P. No.	Mis.
Dated	196 .

Not to be folded or roughly handled