

P. W.
DEPT.

(1) Number of pages 12

(2) Date of repair 0

(3) Initials of the Referencer 1

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue DEPARTMENT

G.O. No.
B.P. No.

1433

Press
Mis.

Dated

14.4.1877

197

Not to be folded or roughly handled

Famine Relief.

No. 339. Read the following Proceeding of the Public Works Department, dated 14th April 1877.

ABSTRACT.—Communicating to the Chief Engineer for Irrigation on the estimates for Cuddapah District and intimating that the Government will sanction Relief work if necessary.

No. 340. ORDER THEREON, 14th April 1877, No. 433.

Irrigation, No. 1-A.

Communicated to the Board of Revenue.

2. The Government observe that of the six sections for which estimates have been submitted the Chief Engineer for Irrigation only recommends the execution of the three detailed in paragraph 12 of his Note. The estimated cost of these is, according to the Chief Engineer's estimates, Rs. 61,730, but the Chief Engineer for Irrigation suggests that the expenditure may be cut down to Rs. 667.

3. The Collector of Cuddapah will report whether the execution of these works is needed as Famine Relief. If orders will be passed relative to their commencement when revised estimates are received on the Chief Engineer's suggestions have been received. The work sanctioned will be carried out under the supervision of the Officers of the Department of Public Works and will be exempted from the operation of G.O. of 14th January 1877, Nos. 329 and 330, Financial Department.

(True)

J. H. GARSTIN,
Additional Secretary to Government.

To the Board of Revenue.
„ the Public Works Department.
„ the Collector of Cuddapah.
„ the Financial Department.
„ the Chief Engineer for Irrigation.

Ed. A. S. Rodgers.

Read the following:—

No. 160—W.

No. 119.

Note by the Chief Engineer for Irrigation.

With his letter No. 2,746, of the 1st instant, the District Engineer, Cuddapah, has transmitted estimates for embanking the Cheyair river below the railway bridge.

2. In many respects the way in which these estimates have been prepared is creditable, but there remain several points on which the information afforded is insufficient to allow of the propriety of embanking being determined. It is stated that designs and estimates for sixteen head sluices for river channels have to be completed and submitted. The embankments are in sections which are either connected by high ground or hills or which have no such connection, and these sections are—

Right Bank.

	MLS.	CHS.	RS.
1. Bridge to Railway Bungalow hill, length ...	0	73	15,180
2. East of Railway Bungalow hill, Thallapauk embankment, length ...	2	32	17,830
3. Pennagalore embankment, length ...	7	61	41,560
			74,560

Left Bank.

1. Addipoor embankment, length ...	0	50	2,350
2. Leback embankment, length ...	2	10	11,000
3. Tungateor embankment, length ...	2	5½	38,900
			52,250

Superintendence ... 5,990

Total ... 1,32,800

3. The reasons for proposing the embanking of the several sections are no where sufficiently fully stated, but the undersigned has had an opportunity of conferring with the District Engineer, and the recommendations that will now be made are based partly on the papers and partly on information obtained from Colonel A. S. Moberly coupled with some personal knowledge of the locality. It is mentioned in the report that great expense was incurred in clearing out channels which were filled with sand by the flood of 1874, and the embankments are intended to obviate such expenditure for the future; but though the names of the channels are given, no particulars of the outlay incurred have been shown. Again much land is stated to have been covered with sand by the flood waters, but there is no information as to its area and value or as to the loss of revenue which resulted, and such details are essential to a decision on adequate data as to the need of embankments.

4. It is considered that there is no adequate reason for proposing to run an embankment between the Railway and the Railway Bungalow hill. The ground which such an embankment would protect will on the completion of the flood bank above the Railway bridge on the right side of the river be liable only to submergence and

Chief Engineer, Cuddapah District.—
Requesting the Collector of Cuddapah to report
whether the execution of the works in connection
with the — is needed as famine relief work, and
if so, directing the issue of orders for their com-
mencement when revised estimates based on the
Chief Engineer's suggestions have been received.

REVENUE DEPARTMENT, NO. 68.

No. 839-310.

10th April 1877.

THE BOARD OF REVENUE.

REVENUE.

Copy of 1877.

not to any current of importance. Consequently a flood bank would not be of much value at any time, and might not on the whole be an advantage. The estimate amounting to Rupees 15,180 is therefore not recommended for sanction.

5. The next section on the right bank is the Thallapauk embankment. It is questionable whether any adequate advantage would result from extending the length of the short embankment hitherto in existence to the length of 2 miles 32 chains proposed. It will certainly be desirable to improve the old flood bank from the Railway Bungalow hill to just below the Thallapauk Appayabrajoo channel head, a distance of 32 chains, and it may possibly be well to continue it to Cross Section No. 27, a further distance of 30 chains; beyond this for 50 chains the ground is every where above flood level of 1874, except for about 4 chains between C.S. Nos. 19 and 18, and there is rather a low place at the bandy track to Thallapauk between C.S. 20 and 19, which two places might be raised to 2 or 2½ feet above F.L. The estimate as submitted does not admit of the cost of these parts of the section being stated, but from the general level of the ground it may be assumed that the cost will be about ⅔ of the average for the whole section or say Rupees 4,600.* The exact figures can no doubt be readily given by the District Engineer. It may be added that should a further extension of this flood bank be hereafter shown to be necessary, it is very improbable that any advantage would result from carrying it beyond the high ground between C.S. 7 and 6, for a bank beyond this would be liable to be taken in rear by the Poolungair, which falls into the Cheyair close by and no doubt overflows its banks. The alignment of the section shown on the survey appears to be as good as the circumstances will allow.

*For 66 chains.

6. The lowest section on the right bank is that from Utriala to Pennagaloor, and from the report alone no reliable opinion as to its necessity could be formed; but Colonel Moberly has mentioned that the part from the upper end to just below the Hobly Channel head sluice is greatly needed, and this length appears to include the part formerly but insufficiently embanked. The length of this portion is 3 miles 30 chains, while the old bank measured 2 miles 9½ chains. The alignment will require very careful consideration, as it will occupy a position exposing it to considerable strain, and though the presence of several channels may appear to interpose difficulties in the way of a good alignment it is probable that without extra expense and perhaps with some saving new channels might be cut on a better line, and the flood bank formed with the spoil. The cost of the 3 miles and 30 chains of embankment will be as follows:—

	RS.	A.	P.
Earthworks ...	7,725	10	8
Tamping ...	1,954	5	4
Sundries ...	8,789	0	0
Revetments ...	440	0	0
Backing to do ...	5,272	11	0
Sundries ...	1,866	6	0
	357	15	0
			9,200
			7,491
Total ...	16,717		

An improved alignment will, it is considered, be likely to reduce materially the heavy item for revetments, and give time for the formation of navel plantations to check or altogether stop erosions with ultimately the recovery of land which has been uselessly and prejudicially added to the width of the river bed.

7. On the left bank of the river the first is the Addipoor section, a short length of 50 chains beginning about 2 miles below the line of the railway, and extending to the head sluice of the Ellamarazoopully channel, a distance of 59 chains.

Below this point there is an embankment. The estimate amounts to Rupees 2,350 and on the whole it appears to be desirable to carry out the moderate improvements provided for.

8. The next section is the Leback embankment. In favor of the improvement there is considerable but much too indefinite evidence, and it is thought that the latter may well be made definite and complete before any action is taken. The undersigned has been over some of the ground and does not remember to have seen any signs of extensive damage. The flood water from the river cannot extend far, and this water must nearly all of it return to the river on the level of the latter falling.

9. The last section is the Tungatoor embankment for which the estimate amounts to Rupees 38,900. There was formerly an embankment throughout nearly the whole length along which it is proposed to construct now an efficient flood bank, but the flood of 1874 swept nearly the whole away and the flood waters obliterated or filled up seven river channels, breached the Komar and Pothaper tanks and then returned to the river some 6 miles below the point where they left it. Nine or ten square miles of country appear to have been inundated and also swept by the flood. Very little has been done for the restoration of the irrigation works, it having been considered useless to spend much money on these until an efficient flood bank had been provided for. The longitudinal section shows that the ground level is throughout very low though for 23½ chains from the upper end there is an embankment not much below the proper level. The estimate whether compared with the length of bank 2½ miles, or with the area of country to be protected, say 10 square miles, is very heavy, and singularly enough the report and the District Engineer's letter submitting the estimates are alike silent as to the necessity for spending nearly 20,000 Rupees a mile upon a work of this description, and nothing whatever has been said to show that the particular arrangements estimated for and shown in the cross sections are essential to ensure safety. Had it been proposed to spend one-fourth of the money some explanation would have been desirable, and though the undersigned is of opinion that a flood bank is very much required in this locality he doubts whether any justification could be made out for expending some 4,000 Rupees per square mile of country protected. If therefore this outlay be really necessary it will probably be decided that the country must be left to suffer from floods and at any rate before the estimate, as it stands, can be seriously considered it must be shown very clearly that the interests at stake are such as to warrant any such very unusual outlay. The sections provide for an embankment with apparently a sand core, a covering of good soil, and a substantial stone revetment on the river face to two feet above F.L. of 1874. Land must be very valuable to make it advisable to protect it with works of this costly description.

10. It has to be noticed that the longitudinal sections do not in some cases distinctly show that they abut at their termini on ground well above flood level, but the undersigned understands from Colonel Moberly that such is the case. The survey might have been made more useful had it shown the names of all villages referred to in the papers, and the positions of all irrigation works, roads, &c., affected; there was perhaps no sufficient reason for omitting to ascertain by levels the extent of spread of flood water, while clearly the damage actually sustained in each locality in 1874 should have been assessed as accurately as circumstances would allow. Again the proper alignment of embankments is in part dependent upon ground levels, which would be, and are, entirely of other considerations which have to be taken into account, what is within certain limits the least costly line for a flood bank to follow, and the line selected should be the least expensive with other considerations will allow to be adopted. The longitudinal and cross sections have been very well prepared, but there is no evidence such as should have been afforded in a careful review by the District Engineer himself, after an examination of the ground of every part of the proposed arrangements, of the propriety of these as shown in the papers.

11. The rates are unusually high, and the District Engineer has in his letter requested attention to the data list prepared by the Range Officer. It is difficult however to accept these data which can hardly bear examination. An example will be referred to in detail. For the Tungatoor embankment, 31,980 cubic yards of earthwork are said to be required, and for 31,980 cubic yards the rate shown is 3 Annas and 10 Pies a cubic yard made up as follows:—

	RS.	A.	P.
1 cubic yard excavation in loamy soil	0	1	0
150 yards cartage	0	0	10
6 " lift	0	0	6
2 " clearing sand for pits	0	1	6

Now that 150 yards lead should be a necessary average for nearly 2 miles embankment is very improbable, as also that 2 cubic yards of sand should have to be removed for every cubic yard of good soil to be put in the bank. Moreover as even in the sections of the Tungatoor flood bank which are special a but half the soil to be used is in each half of the height of the bank an average of 6 yards lift would mean a bank 12 to 14 yards high.* Now the highest part of the bank appears to be that shown at C.S. 13, and here the top of the earthwork referred to in the rate is 14.84 feet above the lowest point, but only 9.82 feet above ground level: for the lower 5 feet there is then no lift, for the first yard above ground level there should be no special rate, and the average lift becomes then for this highest section about 4 yards. Probably a general average of 2½ yards would be proper. There is then clearly no justification for an allowance of 6 pies per cubic yard for lift.

* From bottom of pits.

9.84	
3.00	
12.84	
6.42	
Pits ... 5.58	
12.00 feet.	

to the following parts of the embankments being taken up at once if required to afford work to Famine Relief labor.

12. There seems to be no objection

- Right bank.
1. Thallapauk flood bank for 66 chains from the Railway Bungalow hill.
 2. Uttriala bank for 3 miles 30 chains from the upper end.
- Left bank.
3. Addipoor bank, 50 chains,

the estimates require revision; and before any other of the embankments can be recommended for sanction definite information regarding damage done in 1874 is necessary, as also in the case of Tungatoor a full explanation of the need for such costly arrangements.

(Signed) JOHN MULLINS, Lieut.-Colonel, R.E.,
Chief Engineer for Irrigation.

To the Secretary to Government, Public Works Department.

No. 120.

ORDER THEREON, 5th April 1877, No. 1,160.

IRRIGATION, No. 8.

COMMUNICATED to the Revenue Department. It will be seen that the Chief Engineer for Irrigation is of opinion that

the Cheyair embankments mentioned in paragraph 12 of his Note may at once be undertaken as Famine Relief Works if necessary.

(True Extract.)

Amulmullins

Lieut.-Colonel, R.E.,

Secretary to Government, P.W.D.

To the District Engineer, Cuddapah.
" Revenue Department.
" Chief Engineer for Irrigation

Cons. Eng. for Irr.

Exd. T. P. Ryan.
Spare Copies

Relief works for irrigation
to be undertaken as Famine Relief Works
if necessary
18/4/77

Rev. 1877 Sept
H. 2256

Govt. of Madras,
PUBLIC WORKS.

To

The DISTRICT ENGINEER,
CUDDAPAH,
Ac., Ac., &c.

Dated April 5th.

Issued

Recd.

Encl.

G.O. 5th April 1877, No. 1,160.

APRIL

Nos. 119-120.

Copy to be made

circ

with or

26/7

Note by the
Chief Engineer for Irrigation on the esti-
mates for in the Cuddapah District and
intimating that the work may be under-
taken as a Famine Relief work if necessary,
communicated to the Revenue Department.

G.O. 11th April 77 No 1433

Revenue Department

No. 1433

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the

11th April 1877.

Read the following

Proceedings of
Govt. Public Works Dept.

Note by the Chief Engineer
for Irrigation on the estimates
for Cheyair Embankments in
the Cuddapah Dist. & intimating
that the work may be undertaken
as a Famine Relief Work if necessary.

H. E. 5th April 1877, No. 1160.

Communicated to the
Board of Revenue.

2. The Govt. observe that if
the 6 sections for which estimates
have been submitted the Chief
Engineer for Irrigation only
recommends the execution
of the 3 detailed in Para 12
of his note. The estimated
cost of these is according to
the District Engineer's estimate
Rs. 67,30 but the Chief Engineer
for Irrigation suggests that
the expenditure may be cut
down to 23,667.

3. The Collector of Cuddapah
will report whether the execution

if these works is needed as
Famine Relief works if
they may be begun on the
submission of revised
estimates based on the
Chief Engineer's suggestions
but will be exempted from
the operation of G.O. of January
31st No 329, F.D. & will be
carried out under the
supervision of officers of
the P.P.W.

J.H.P.

Sanitation works will be
paid for their commencement
by the P.P.W. when
funds are received

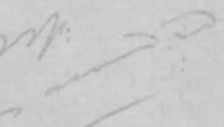
Remarks

If so, orders will be issued
relative to their commencement
the revised estimates based
on the Chief Engineer's suggestions
have been received. The
works, ^{then} sanctioned will be
carried out under the
supervision of the officers of the
P.P.W. with a sum of Rs. 1000
the operation of G.O. of the 31st
Jan. 1911 No. 329 + 330 F.D.

J.H.P.

Ind. Cop. to the P.P.W. on 17th Apr
21 The Secy to Govt
6 The Collector of Gwalior
5 The Secy to Govt
5 The Chief Engineer for P.W.

G. O.

Dwp. 

16 4/7