Public Works (1898) Department.

G.O., No. 262 I

DATED 21st March 1898

28/3/98

Questions answered 6/4/98

[Despatch Abstract.]

Tambraparni river. Estimate of Rs. 6,700 for
raising and strengthening the left flood bank
of the — above the Srivaikuntam anicut
Tinnevelly Dt. sanctioned and the S.E. requested
to report the amount that should be provided by
the District Board for the maintenance of certain
road.

110

781
26.3.98

Regd
24/3/98

Indexed. 25/3

[P. W. 36. 1,000—12-2-98.]

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

IRRIGATION.
ACCOUNT.

Government {1898} of Madras.
PUBLIC WORKS.

Recd. } 1898. *Enclosures*
Regd. *Spare copies*

G.O., No. 262 I., 24th March 1898.

MARCH.

Tambrapurni river

Estimate of Rs. 6,700 for raising and strengthening the left flood bank of the above the Srivaikuntam anicut, Tinnevelly division, sanctioned, and the Superintending Engineer requested to report the amount that should be provided by the District Board for the maintenance of certain road.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

From Lieutenant-Colonel O. V. BODDY, R.E., Superintending Engineer, VI Circle, to the Chief Engineer for Irrigation, dated Tuticorin, 8th February 1898, No. 81 T.N.

I have the honour to forward, for your approval and sanction, an estimate, amounting to Rs. 6,200, for raising and strengthening the left flood bank of the Tambrapurni river above Srivaikuntam anicut from the Srivaikuntam-Periakulam supply sluice to the north main channel head sluice.

2. The work proposed is to raise the bank to a height of 5½ feet above the flood level of December 1895, for the first half mile above the head sluice. The bank in the portion breached, that is between 9,040 and 10,880, has been already raised to an uniform level of 57·75 except that portion for a length of 400 feet in front of the temple wall, which has been kept to the level 56·25, as the width there is 15 feet. The portions now to be raised will slope down to 56·90, which level is 5½ feet above the flood level in front of the north main channel head sluice. The remainder of the bank, that is, from 8,640 to 7,385, and 7,385 to 0 point will be raised to the heights 4¾ and 3¾ feet, respectively. Full details of the work proposed is given in the report attached to the estimate, and I recommend that sanction be accorded to the same. The estimate has been countersigned by the Collector.

ENCLOSURES.

REPORT to accompany the estimate of Rs. 6,200 for raising the left flood bank of Tambrapurni river above Srivaikuntam anicut.

This bank commences from Srivaikuntam-Periakulam supply sluice at the end of the Kilakal channel of Marudur anicut system and carries Local Fund Road No. X for a length of 7,400 feet. The road then leaves off the bank and the bank alone continues along the margin of the river for a further length of 3,880 feet up to north main channel head sluice. In paragraph 66 of inspection notes of the Chief Engineer for Irrigation printed with G.O., No. 197 I., dated 16th March 1881, orders were given to raise the bank for half a mile immediately above the anicut to 5½ feet above the flood level of 1877, the highest flood level till then recorded and for the remaining portion higher up to 4¾ feet. Accordingly, an estimate, amounting to Rs. 2,470, was prepared and sanctioned by the Superintending Engineer in 1882–83. In the course of execution which appears to have been dragging on for three or more years, the estimate provision was exceeded and therefore a final revised estimate, amounting to Rs. 6,654, was sanctioned in G.O., No. 203 I., dated 17th March 1887. According to this estimate, in addition to the bank having been raised to the levels prescribed by the Chief Engineer, the portion carrying the Local Fund road was made 18 feet wide at top and the surface metalled and gravelled for a width of 12 feet and depth of 9 inches. The road has been under the maintenance of the Local Fund department and it appears to have been allowed to deteriorate, but not to any serious extent, for the first three-quarters of a mile as the following levels will show :—

Point on the road from commencement.	Level to which the road was raised as per estimate of Rs. 6,654 sanctioned in G.O. No. 203 I., dated 17th March 1887.	Present level of road.	Flood of December 1895.
FEET.			
At 900	58·66	58·29	57·29
,, 1,800	58·25	56·86 (more exactly at 1,780)	56·53
,, 2,700	58·27	57·12 (more exactly at 2,660)	55·77
,, 3,600	57·71	57·00 (more exactly at 3,540)	55·11
,, 4,400	57·06	57·22	54·71
,, 5,300	56·26	56·72	54·31
,, 6,180	56·11	56·98	53·91
,, 7,060	55·42	56·09	53·51
,, 7,280	56·03	56·18	53·41

So when a flood higher than that of 1877 and shown in the above statement came in December 1895, a portion of the bank from 2,000 to 2,600 feet which had deteriorated from the state it was put in, and which probably had been rendered weaker than the other portions by erosion caused by waves in Srivaikuntam-Periakulam gave way and breached. Portions of bank lower down, on both sides of Srivaikuntam temple and opposite the Munsif's Court also breached to a serious extent. The breach in the road has been closed up to the present level of bank on either side, and the breaches lower down, which are within the first half a mile above the anicut, have also been closed, the bank having been made up to one horizontal level at about 5½ feet above the recorded flood level of 1895 as prescribed by the Chief Engineer, except the portion against the temple wall which being made 15 feet wide at top was kept 1½ feet lower. Estimates for all these have already been prepared and sanctioned. This estimate provides therefore for raising the bank from commencement to the upper end of the breach above the temple and from the lower end of the breach opposite to Munsif's Court to north main channel head sluice to the prescribed levels above the recorded flood levels of 1895. The road portion will be made 18 feet wide at top and the surface metalled and gravelled to a width of 12 feet and depth of 8 inches, but kept down to 3½ feet above the flood level as ordered by the Superintending Engineer in his inspection notes dated 27th February 1897, and approved by the Chief Engineer for Irrigation. The slope on the tank side in the breached portion will also be revetted as per further orders therein. The top of bank lower down will be gravelled to a thickness of 3 inches. Other details regarding the execution of the work will be found in the report of the Sub-Divisional officer herewith attached.

2. As from present orders regarding the maintenance of Local Fund roads over irrigation works and Memorandum No. VI. 36/T.N., dated 7th July 1897, of the Chief Engineer for Irrigation communicated with Superintending Engineer's No 581 T.N., dated 14th July 1897, it does not appear the Local funds can be called on to contribute towards raising and metalling the road portion of the bank, no calculation as to the amount by which the amount of the estimate will be low if there was no road over the bank has been made. But, it is considered very essential, for the proper maintenance of the bank, that the road must, in future, be in charge of this department, the Local funds contributing for the upkeep of the surface and the slopes as per rules. The orders of Government must accordingly be obtained.

3. From this office letter No. 3749, dated 12th November 1897, to the Superintending Engineer, it would appear that the flood levels of 1895 would have been much higher than have been recorded if breaches had not occurred. But as the anicut and head-works may not be safe if water rose much higher in front of them than it actually did, *i.e.*, 20 feet on gauge on the floor of the head sluices or 12 feet over crest of anicut and it is better that the flood banks breach than that they get seriously damaged, it has been considered enough to raise the banks to the heights proposed in this estimate.

(Signed) S. GOPALAKRISHNA AIYAR,
Executive Engineer.

11th December 1897.

Report on raising and strengthening the Tambrapurni river left flood bank above Srivaikuntam anicut.

This estimate was called for by the Superintending Engineer for raising the flood bank as directed in Irrigation Chief Engineer's notes of 1881, that is, the first half mile above the Srivaikuntam anicut; the flood bank is to be 5½ feet above the highest recorded flood.

For the remaining length above the anicut the flood bank is to be 4¾ feet above Srivaikuntam anicut, but where it goes over a local fund road 1¼ feet less. Accordingly the estimate is prepared. The top width of that portion of the bank which runs over a Local Fund road is to be 18 feet and both slopes 1½ to 1. The bank to be widened from centre of existing road. The local fund road extends from 0 Kelakal channel right bank to 7,385 feet. From this point, the flood bank is continued along the river margin of the river and joins the breach of 1895 near the west corner of the Srivaikuntam temple wall. The length of this portion of the flood bank is 1,655 feet. The top width is proposed to be 6 feet. Front slope 2 to 1 and rear slope 1½ to 1.

The bank will be raised and strengthened in rear; no earth to be placed on front slope (river side). From the end of this flood bank (9,040 feet) the bank was breached for a length of 1,840 feet which is now closed and revetted.

From the east end of the closed breach near the Munsif's Court house the old bank exists for a length of 400 feet.

This piece of bank is proposed to be raised in a slant that is from level 57.75 (the level of the newly raised bank, to level 56·90 which is 5½ feet above the flood level in front of north-west channel head sluice.

Top width is proposed to be 6 feet, front slope 2 to 1, rear slope 1½ to 1.

The bank is to be raised and strengthened in rear; no earth is to be placed on the front or river side slope.

Material on existing road.—The material on the existing road is proposed to be removed. One-third of it is expected to be of use again.

Remetalling.—A layer of metal 12 feet wide and 6 inches thick is proposed to be laid as foundation.

Over this a layer of gravel 2 inches thick is proposed to be laid.

No. 97 I.

Note by the Chief Engineer for Irrigation.

The left flood bank of the Tambrupurni above the Srivaikuntam anicut is 11,280 feet in length and for nearly 7,400 feet of this distance carries a road. After the floods of 1880, Colonel Mullins, then Chief Engineer for Irrigation, ordered that the bank should be raised for half a mile from the anicut to 5½ feet above the level of the 1877 flood, which was the highest then recorded, and that the remainder should be made up to 4¾ feet above flood level. An estimate for this was sanctioned in 1882, but being found insufficient, a revised estimate of much larger amount was sanctioned in G.O., No. 203 I., dated 17th March 1887. It has lately been found that the orders had not been properly carried out, as the flood of December 1895, which was not more than 2 feet higher than the 1877 flood, at the anicut, reached the top of the flood bank at about 2,000 feet from the upper end and breached into the Srivaikuntam tank. This caused the whole chain of tanks to breach and involved great loss to Government and to the people. It is sometimes extremely difficult to get flood levels correctly, and when banks are breached, the effect of this on the flood level cannot be estimated. It would appear that the height of the 1877 flood from the anicut upwards had been under-estimated in 1882 when the first estimate for raising the bank was made and possibly also sufficient allowance was not made for settlement of the bank.

2. From local inquiry made soon after the 1895 flood, it would appear that the breach referred to above and the still more extensive breaches between the Srivaikuntam temple and the anicut occurred at about the time that the water on the anicut gauge reached its highest level. Coupling this with the fact that at Tinnevelly the flood level was about the same as in 1877 and at the Marudur anicut lower than in 1877, it seems probable that the flood had about reached its maximum at Srivaikuntam when the bank gave way.

3. The margin ordered by Colonel Mullins was intended to allow for the reduction of flood level by the breaching of the banks in 1877. Now that the flood level is more correctly known, the margin provided in the present estimate, viz., 3½ feet to formation level and 6 inches of metal (in all 4 feet) for the road portion of the bank is sufficient, but steps will have to be taken to ensure the bank being kept up to this level and the maintenance of the road should therefore be in the hands of the Public Works Department. The Superintending Engineer should report what amount the District Board should provide.

4. The margin of 5½ feet between the end of the road and the temple is suitable. There is some error in regard to the portion between the temple and the anicut. It should be made up to 5½ feet above the flood line of the river not above the flood level at the anicut.

5. Owing to the correction of errors found in the calculations and to alterations made in this office, the amount of the estimate submitted by the Superintending Engineer, VI Circle, has been raised from Rs. 6,200 to Rs. 6,700.

The estimate, as modified, may be sanctioned.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

16th March 1898.

Order—No. 262 I., dated 24th March 1898.

The following estimate is sanctioned :—

Irrigation.
43. Minor Works and Navigation.
Agricultural Works.
Original Works.
Tinnevelly Division.

Raising and strengthening the left flood bank of the Tambrapurni river above the Srivaikuntam Anicut.

	RS.
Estimate	6,700

2. This sanction is registered as No. 191 I. of 1897–98.

3. The Superintending Engineer, VI Circle, will report what amount should be provided by the District Board, Tinnevelly, for the maintenance of the road referred to in paragraph 3 of the foregoing note of the Chief Engineer for Irrigation.

(True Extract.)

Under Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, VI Circle, with 11 enclosures.
" Examiner, Public Works Accounts.
" Local and Municipal Department.

Exd. Shaik Karim.

Public Works (1898) Department.

CURRENT No. 2674

From The Chief-Engr for Irrgn

Order

No. 978

Dated 16 - 3 - 98

Received
Registered } 23. 3. 98

Enclosures 14 (4 plans)

Spare copies

SUBJECT.

Raising and Strengthening the left flood bank of the Tambrapurni river above the Srivaikuntam anicut Estimate of Rs 6,700 as modified in this office for — note recommending for sanction the —

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

His Excellency the Governor.

PUBLIC WORKS DEPARTMENT,
IRRIGATION BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Raising and strengthening the left flood bank of the Tambraparni river above the Srivaikuntam Anicut — &c. recommending for sanction estimate of Rs 6700 for —

UNDER date the

READ the following

From the Superintending Engineer, Sixth Circle. (H.E. No. 81-T.N. dated 8.2.98).
No 97 I dt. 16.3.98

(Note by the Chief Engineer for Irrigation

Issue

22.5.98

21/3/98

vide Pro. G.O. No. 197 I dt 16-3-81 flagged E

⊗ flagged F

The left-flood bank of the Tambraparni, above the Srivaikuntam Anicut is 11,280 ft. in length and for nearly 7,400 ft. of this distance, carries a road. After the floods of 1880, Col. Mullins, then Chief Engineer for Irrigation, ordered that the bank should be raised for half a mile from the Anicut to 5½ feet above the level of the 1877 flood, which was the highest then recorded, and that the remainder should be made up to 4¾ feet above flood level. An estimate for this was sanctioned in 1882 but being found insufficient, a revised estimate of much larger amount was sanctioned in G.O. No. 203-I⊗ dated 17 March 1887. It has lately been found that the

the orders had not been properly carried out, as the flood of December 1895 which was not more than 2 feet higher than the 1877 flood at the Anicut, reached the top of the flood bank at about 2000 ft. from the upper end and breached into the Srivaikuntam tank. This caused the whole chain of tanks to breach and involved great loss to Government and to the people. It is sometimes extremely difficult to get flood levels correctly, and when banks are breached, the effect of this on the flood level cannot be estimated. It would appear that the height of the 1877 flood from the Anicut upwards had been under-estimated in 1882 when the first estimate for raising the bank was made and possibly also sufficient allowance was not made for settlement of the bank.

2. From local inquiry made soon after the 1895 flood, it would appear that the breach referred to above and the still more extensive breaches between the Srivaikuntam temple and the

Anicut

Anicut occurred at about the time that the water on the Anicut gauge reached its highest level. Coupling this with the fact that at Tinnevelly the flood level was about the same as in 1877 and at the Marudur Anicut lower than in 1877, it seems probable that the flood had about reached its maximum at Srivaikuntam when the bank gave way.

3. The margin ordered by Col. Mullins was intended to allow for the reduction of flood level by the breaching of the banks in 1877. Now that the flood level is more correctly known, the margin provided in the present estimate, viz. 3½ feet to formation level and 6 inches of metal (in all 4 feet) for the road portion of the bank is sufficient, but steps will have to be taken to ensure the bank being kept up to this level and the maintenance of the road should therefore be in the hands of the P. W. Dept. – The Superg. Engineer should report what amount the District Board should provide.

4. The margin of 5½ feet between the end of the road and the temple is suitable. There is some error in regard to the portion between the temple and the Anicut. It should be made up to 5½ ft. above the flood line of the river not above the flood level at the Anicut.

5. Owing to the correction of errors found in the calculations and to alterations made in this Office, the amount of the estimate submitted by the Supdg. Engineer, Sixth Circle, has been raised from Rs. 6,200- to Rs. 6,700.

The estimate, as modified, may be sanctioned.

16/3/98

V-262 I, 26-3-98

Order thereon.

The following estimate is sanctioned:-

Irrigation.

43, Minor Works and Navigation.

Agricultural Works.

Original Works.

Tinnevelly division.

Raising

Seen.
A.SH

× vide letter flagged G

A.SH

A.SH
20.3.98

9P

Raising and strengthening the left flood bank of the Tambrapami river above the Srivaikuntam Anicut.

Estimate. ———— Rs. 6,700.

2. This sanction is registered as V. 191 I. of 1897-98.

3. The Supg. Engineer, Sixth Circle, will report what amount should be provided by the District Board, Tinnevelly, for the maintenance of the road referred to in para 3 of the foregoing note of the Chief Engineer for Irrigation.

WH
16.3.98

16/3/98

7.E.I
23.3.98

To
The Chief Engineer for Irrigation
" Supg. Engineer, Sixth Circle, with 11 enclos.
" Examiner, P.W. Accts.
" Local and Municipal Dept.

D 27/4/98

15/3/98

H.E. 8/3 R 22/3

C.E.I.
22-2-98

Public Works (1898.) Department.

CURRENT No. 6 T.N.

Order

From

The Supg. Engineer
VI. Circle

No. 81. T.N.

Dated 8th February 1898.

Received 11 — do —

Enclosures 4. (3 plans)

Spare copies

SUBJECT.

Left Flood Bank of the Tambraparni above S.A. Forwards with remarks for sanction an Este of Rs 6200 for raising & strengthening — from the Srivaikuntam Periyakulam Supply Chl. to the North main Channel Head Sluice. D.E.I.

1 o.c. 11/2/98

P. 14.2.98

BACK PAPERS.

No.	Date.
I 36 I.N	7-9-97
R 12 I.N	16-2-97

FURTHER PAPERS.

No.	Date.

Report to accompany the estimate of Rs 6200 for raising the Left Flood Bank of Tambraparni River above Srivaikuntham Anicut.

1 This bank commences from Srivaikuntham Periakulam Supply Sluice at the end of the Kilakal channel of Marudur anicut system and carries Local Fund Road No. X for a length of 7400 ft. The road then leaves off the bank and the bank ~~above~~ alone continues along the margin of the river for a further length of 3880 ft. up to North Main Channel head Sluice. In para 66 of inspection notes of the Chief Engineer for irrigation printed with G.O. No. 197 I dated 16th March 1881 orders were given to raise the bank for half a mile immediately above the anicut to 5½ ft. about the flood level of 1877, the highest flood level till then recorded and for the remaining

Flagged B/

portion higher up to 4¾ ft. Accordingly an estimate amounting to Rs. 2470 was prepared and sanctioned by the Supt. Engr. in 1882-83. In the course of execution which appears to have been dragging on for three or more years the estimate provision was exceeded and therefore a final revised estimate amounting to Rs. 6654 was sanctioned in G. O. No. 203 I dated 17th March 1887. According to this estimate, in addition to the bank having been raised to the levels prescribed by the Chief Engineer, the portion carrying the Local Fund Road was made 18 ft. wide at top and the surface metalled and gravelled for a width of 12 ft. and depth of 9 inches. The road has been under the maintenance of the Local Fund Department and it appears to have been allowed to deteriorate, but not to any serious extent, for the first three-quarter of a mile as the following levels will show.

Point on the road from commencement	Level to which the road was raised as per Estt. of Rs. 6654 sanctioned in G. O. No. 203 I / 17-3-87	Present level of road	Flood of December 1895
At 900 ft.	58·66	58·29	57·29
1800	58·25	56·86 (more exactly at 1780.)	56·53
2700	58·27	57·12 (" " 2660)	55·77
3600	57·71	57·00 (" " 2540)	55·11
4400	57·06	57·22	54·71
5300	56·26	56·72	54·31
6180	56·11	56·98	53·91
7060	55·42	56·09	53·51
7280	56·03	56·18	53·41

So when a flood higher than that of 1877 and shown in the above statement came in December 1895, a portion of the bank from 2000 to 2600 ft. which had deteriorated from the state it was put in, and which probably had been rendered weaker than the other portions by erosion caused by waves in Srivaikuntham Periakulam gave way & breached. Portions of bank lower down, on both sides of Srivaikuntham Temple & opposite the Munsiff's Court also breached to a serious extent. The breach in the road has been closed upto the present ~~levels~~ level of bank on either side, and the breaches lower down, which are within the first half a mile above the anicut, have also been closed, the bank having been made upto one horizontal level at about 5½ ft. above the recorded flood level of 1895 as prescribed by the Chief Engineer, except the portion against the temple wall which being made 15 ft. wide at top was kept 1½ ft. lower. Estimates for all these have already been prepared and sanctioned. This estimate provides therefore for raising the bank from commencement to the upper end of the breach above the temple and from the lower end of the breach opposite to Munsiff's Court to North main channel head sluice to the prescribed levels above the recorded

flood

flood levels of 1895. The road portion will be made 18 ft. wide at top and the surface metalled and gravelled to a width of 12 ft. & depth of ~~7~~ 8 inches but kept down to 3½ ft. above the flood level as ordered by the Supdt. Engr. in his inspection notes dated 27th February 1897 and approved by the Chief Engineer for irrigation. The slope on the tank side in the breached portion will also be revetted as per further orders therein. The top of bank lower down will be gravelled to a thickness of 3 inches. Other details regarding the execution of the work will be found in the report of the Sub Dn. Officer herewith attached.

flagged H

2 As from present orders regarding the maintenance of Local Fund Roads over Irrigation works and Memorandum No. XVI/365 N 7-7-97 of the

g 957 TN
4-12-97

Flagged A.

4568 TN
97

8

Chief Engineer for Irrigation communicated with Superintending Engr's No. $\frac{581\ T.N.}{14-7-97}$ it does not appear the Local Funds can be called on to contribute towards raising & metalling the road portion of the bank, no calculation as to the amount by which the amount of the estimate will be low if there was no road over the bank has been made. But, if it is considered very essential, for the proper maintenance of the bank, that the road must, in future, be in charge of this department, the Local Funds contributing for the upkeep of the surface & the slopes as per rules. The orders of Government must accordingly be obtained.

3 From this Office letter No. $\frac{3749}{12-11-97}$ to the Superintending Engineer, it would appear that the flood levels of 1895 would have been much higher than have been recorded if breaches had not occurred. But as the anicut

No. 911 T.N.
17-11-97

and

8

From enquiry made
at the time it appears
probable that flood
has nearly reached the
may ~ when the
banks breaching

and head-works may not be safe if water rose much higher in front of them than it actually did i.e. 20 ft. on gauge on the floor of the head sluices or 12 ft. over crest of anicut and it is better that the flood banks breach than that they get seriously damaged, it has been considered enough to raise the banks to the heights proposed in this estimate.

11-12-97
Executive Engineer

Inclosures

1 Sketch map
1 Report of the S.D. Officer
2 Data sheets
1 Detailed Estimate
1 Abstract Estimate
3 Land sections -

Tambraparni River left flood Bank above S. A. – Raising & Strengthening the 6A

Report.

This estimate was called for by the Supdg. Engineer for raising the flood bank as directed in Irrigation Chief Engineer's notes of 1881

That is

The first half mile above the S. A. the flood bank is to be 5½ ft above the highest recorded flood.

For the remaining length above the anicut the flood bank is to be 4¾ ft above S. A. but where it goes over a local fund road ~~½~~ 1¼ foot less. – Accordingly the estimate is prepared.

The top width of that portion of the bank which runs over a local fund road is to be ~~15~~ 18 feet and both slopes 1½ to 1. The bank to be widened from centre of existing road. The local Fund Road extends from 0 Kilakal Channel Rt Bank to 7385 feet. From this point, the flood bank is continued along the river margin of the river ~~to~~ and joins the breach of 1895 near the west corner of the Srivaikuntham temple wall. The length of this portion of the flood bank is 1655 ft. The top width is proposed to be 6 feet. Front slope 2 to 1 & rear slope 1½ to 1.

The bank will be raised and

Oks.1 / 2624 (PJ)

strengthened in rear no earth to be placed on front slope (River side)

From the end of this flood bank (9040 ft) the bank was breached for a length of 1840 ft which is now closed and Revetted.

From the East end of the closed breach near the Munsiff Court house the old bank exists for a length of 400 feet.

This piece of bank is proposed to be raised in a slant that is from level ~~54.25~~ 57.75 (the level of the newly raised bank) to level ~~55.20. the~~ 56.90 which is 5½ ft above the flood level in front of ~~existing work of the old bank at the~~ N. M. Channel Head Sluice, ~~wing walls. because it is well protected by the old flood wall & masonry temples on the berm between the bank & flood wall.~~

Top width is proposed to be 6 feet front slope 2 to 1; rear slope 1½ to 1.

The bank is to be raised and strengthened in rear no earth is to be placed on the front or river side slope.

The ~~metal~~ material on the existing road is proposed to be removed. One ~~third~~ ~~fourth~~ third of it is expected to be of ~~some~~ use again.

~~Metal~~ Material on existing road

A layer of metal ~~8~~ 12 feet wide and 6 inches thick is proposed to be laid as foundation.

Remetalling

Over this a layer of gravel 2 inches thick ~~and 12 feet wide~~ is proposed to be laid.

The old ~~metal~~ material ~~is proposed to be laid~~

1p

No. 81. T.N.

Office of the Supg. Engr. 6th Circle
Camp. Tuticorin 8th February 1898
D/10.

From,

Lieutt. Col. O.V. Boddy R.E.
Supg. Engineer, 6th Circle.

To,

The Chief Engineer
for Irrigation.

Sir,

Enclosures. 4
3. Level sections
1 Estimate with 2 reports. sketch plan &c complete.

I have the honor to forward for your approval and sanction an Estimate amounting to Rs. 6,200 for raising and strengthening the left flood bank of the Tambrapurni river above Srivaikuntham anicut from the Srivaikuntham Periyakulam supply Sluice to the North Main Channel Head Sluice.

2. The work proposed is to raise the bank to a height of 5½ feet above the flood level of December 1895, for the first half mile above the Head Sluice. The bank in the portion breached, that is between 9040 + 10,880, has been already raised to an uniform level of 57.75 except that portion for a length of 400 feet in front of the temple wall, which has been kept

to

to the level 56·25, as the width there is 15 feet. The portions now to be raised will slope down to 56·90, which level is 5½ feet above the flood level in front of the North Main Channel Head Sluice. The remainder of the bank, that is from 8640 to 7385, and 7385 to 0 point will be raised to the heights 4¾ and 3¾ feet respectively. Full details of the work proposed is given in the report attached to the Estimate, and I recommend that sanction be accorded to the same. The Estimate has been countersigned by the Collector.

I have the honor to be

Sir

your most obdt. servt.

Lieutt. Col. R.E.

Supg. Engineer, 6th Circle.

CHIEF ENGINEER FOR IRRIGATION. 11 FEB. 1898 6 TN

Q.11 / 2634/98

N.C.I.