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 (2) Date of repair 1-22-86
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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Pulwally DEPARTMENT

G.O. No.	2131(w)	Press.
B.P. No.		Mis.
Dated	14-8-1879	197.

229

Not to be folded or roughly handled

2131

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

14th August 1879, No. 2,131 W.

Buildings and Roads.
Civil Works.

Read the following papers :—

No. 91. Endorsement of the Chief Engineer for Irrigation, dated Fort St. George, 1st July 1879, No. 24 E.—W.

From Major H. M. VIBART, R.E., Acting Superintending Engineer, Third Circle, to the Chief Engineer for Irrigation, dated Chepauk, 27th June 1879, No. 3,792.

I HAVE the honor to submit a revised estimate, amounting to Rupees, 76,670, for the Veysarpaudy drainage project, together with a comparative statement showing the causes of the large excess of expenditure over the estimate originally sanctioned in G.O., No. 674 W., dated 31st August 1877.

Three Plans.	
One Revised Estimate with detail measurement for Rupees 76,670.	
One Estimate for constructing weir, Rupees 25,950.	
One Comparative Statement.	

2. The greater part of the earthwork done was carried out under the charge of the Madras Municipality as a famine work. The original estimated section of the embankment was considerably enlarged, and it is shown by the accounts that the cost of a cubic yard of earthwork was nearly five times that of the ordinary rate. Under this item of the estimate alone, an excess of Rupees 34,370 is shown.

3. A further excess of Rupees 1,500 was incurred in excavating a channel from Trivettore bridge to the Red Hills tank surplus, the execution of which as a famine work was sanctioned in G.O., No. 1,079, of 29th March 1877.

4. Owing to the wetness of the sub-soil, Colonel O'Connell directed the officer in charge of the construction of the three-vent bridge at Satankadu to use Morgan's cement instead of the common lime provided in the estimate for concrete and portions of masonry work, thereby causing an excess of Rupees 2,300 under this sub-head.

5. Colonel O'Connell appears to have called for a plan and estimate for constructing a weir on the bank of the East Coast Canal by means of which he proposed to discharge a large quantity of upland drainage into the canal at the point shown on the tracing. I beg to submit herewith the plan and an estimate for the above work, amounting to Rupees 25,950, as received in this office, and included in the revised estimate; but would observe that there appears to be no reason why such an expensive work is required, and if it is the intention of Government to proceed with the project, I think this portion of it might very well be carried out at half the cost of the estimate now submitted.

6. The total expenditure on this project up to the end of March 1879 has amounted to Rupees 42,925. This expenditure has only been met by a provisional sanction of Rupees 11,170, as per G.O., No. 674 W., above mentioned, and I have now the honor to request that Government will be pleased to sanction the excess of Rupees 31,755.

TRANSFERRED to the Chief Engineer, Public Works Department, for disposal.

(Signed) H. D. LOVE, Lieut., R.E.,
for Chief Engineer for Irrigation.

No. 30 E. W.

No. 91-A. *Note by the Chief Engineer for Irrigation.*

For this work an estimate of Rupees 11,170 was sanctioned in G.O., No. 674 W., 31st August 1877, and it was to be carried out as a famine relief work. At the same time the west bank of Cochrane's Canal or that part of the Buckingham Canal between the Railway bridge and Shediankuppam lock was to be raised and strengthened so as to exclude land drainage.

Drainage prior to the undertaking of this work was prevented from flowing northwards into the surplus channel of the Red Hills Tank, and so into the Ennore backwater, by the embankment of the road from Puduvoil to Tiruvettiyur, and it found its way into the canal which was closed near the Railway Station by a bund and at Shediankuppam by a lock. There was therefore no proper line of outfall for the flood water, and it could get away only by breaching the road embankment and the canal bank, while a small portion flowed over the lock gates. There are it appears from Colonel Moberly's letter, No. 271, of the 23rd April 1877, some 15 miles of land drainage to be disposed of, and the quantity is estimated at 3,420 cubic feet a second.

2. The Chief Engineer for Irrigation has not until now seen any of the papers since he was asked to give an opinion on the value of Colonel Moberly's original proposals, and wrote the Note printed in Proceedings, Madras Government, No. 1,079, of the 29th March 1877, and he is not aware what the works as carried out are capable of doing in the way of affording relief to the country to be benefited.

3. The works sanctioned were—

	Estimate.	Spent.	Required.	Total.
	RS.	RS.	RS.	RS.
Culvert of three vents on the Tiruvettiyur road.	4,450	7,788	332	8,120
Strengthening west bank of canal ...	6,300	34,842	5,639	40,480
Metalling two road-slopes (rough road dams to pass water).	420	194	186	350
	11,170	42,824	6,157	48,980

In addition to the above the following entries occur in the Comparative Statement:—

Cutting drainage channel from Trivettore (Tiruvettiyur) bridge to Red Hill surplus channel.	...	...	1,550	1,550
Constructing a weir to discharge into the canal.	...	...	25,950	25,950
Total ...	...	...	33,657	76,480

The work of primary importance was drainage, and it was apparently intended to cut a drain and, with the earth thus obtained, to strengthen the canal bank. The estimate provided for 99,802 cubic yards of earthwork, 119,060 cubic yards have been done, and 16,057 remain to be done, and this too at a very important, viz., the lower, part of the drain. Apart from cost on which it is perhaps unnecessary for the undersigned to remark, it is to be noticed that instead of doing the work intended, the labor was employed in making the canal bank into a road to connect the Tiruvettiyur

road with a Municipal sewage farm, which may have been a very desirable work, but was not a part of the sanction. The value of this extra work at normal rates is Rupees 2,400, and it represents about Rupees 11,340 of the money expended.

4. With regard to the work remaining, or proposed to be done, it is considered that—

1st.—The small item for completing the culvert should be provided ...	RS. 332
2nd.—That the road slopes should be completed ...	186
3rd.—That the drain should be cut to the Red Hills surplus, as without this all that has been done will be of little use ...	1,550

The section does not show what has been done in the way of strengthening the canal bank or where this work is incomplete, and without such information it is impracticable to say whether the work is or is not at all pressing. Possibly some of the work can be done in completing the drain. The proposal for a surplus weir to discharge into the canal is not understood. The object of raising and strengthening the west bank was to exclude land drainage, and a weir would defeat this object. Moreover, so far as the undersigned is aware, water so discharged into the canal could escape only in one of two ways—

- 1st,—southwards into the Cocum, i.e., in just the opposite direction of the flow in the outside drain;
- 2nd,—northwards into the Red Hills surplus near Shediankuppam lock, and to allow of this another weir of the same size to discharge out of the canal would be required.

It is thought therefore that the large item of Rupees 25,950 for a surplus weir may be struck out.

5. It may perhaps be well to remark on the road slopes or extemporized road dams which are to assist in passing flood drainage, that these if placed at a judicious level will be very useful, but that the one in the embankment of the Tiruvettiyur bridge must not be placed too low, or it will allow water to pass from north to south and help to submerge instead of to relieve the lands to the southward. Colonel Moberly proposed to put these dams at ground level; what that level is the papers do

11-00—10-00.

not show precisely, but it would seem to be about 1 foot above M.S.L., and that is too low. Flood level of 1874 is marked on cross section 23 as 16-60 or 6-60 feet above M.S.L. On the weir plan the value of F.L. of 1874 is given as 13-64, but the datum is not stated. Probably 2 to 3 feet above M.S.L. would be the lowest level at which it would be desirable to place the road dams. The exact level should be fixed with reference to flood level outside the canal bank west of Shediankuppam lock in 1874 as compared with flood level further south, i.e., to south of Tiruvettiyur road bridge.

OOTACA MUND,
1st August 1879.

(Signed) JOHN MULLINS, Col., R.E.,
Chief Engineer for Irrigation.

To the Chief Engineer, Public Works Department.

No. 92. ORDER THEREON, 14th August 1879, No. 2,131 W.

THE Superintending Engineer here submits a revised estimate, amounting to Rupees 76,670, for the Veysarpaudy Drainage Projects, the original estimate for which for Rupees 11,170 was sanctioned in G.O., No. 674 W., of 31st August 1877.

2. From the observations made in the Note by the Chief Engineer for Irrigation, it would appear that the main portion of the outlay, (viz., Rupees 34,842 out of a total expended to end of last official year Rupees 42,925,) has been incurred without authority in making the western bank of Cochrane's Canal into a road to connect the Tiruvettiyur road with the Municipal sewage farm, while at the same time the outfall drainage channel, from the last-named road to the Red Hill surplus channel, has been left untouched, although this formed the most obviously essential feature of the project to which the Government originally gave its assent.

3. As the work has been carried out under the orders of the Madras Municipality as a famine work, His Grace the Governor in Council directs that an explanation may be furnished by that body as to the causes which have led to this result, as also to show reason why the cost of the extra work, due to the widening of the bank for the purpose specified, should not now be debited to Municipal funds.

4. Sanction may be accorded to the immediate completion of the three-vent tunnel on the Tiruvettiur road at a cost of Rupees 332, as also for cutting the drainage channel from the Tiruvettiur road to the Red Hill surplus channel Rupees 1,550; but unless distinct reasons can be shown for proceeding with the weir to discharge into Cochrane's Canal at an estimated outlay of Rupees 25,950, the work should not be undertaken. So far as can now be judged the construction of this work would be rather hurtful than otherwise.

5. As regards the items for strengthening the west bank of the canal at an additional cost of Rupees 5,639, and of metalling the road dams (Rupees 186) no further outlay should be incurred till explanations have been afforded by the Superintending Engineer as to their necessity, as also regarding the other points adverted to in the Note by the Chief Engineer for Irrigation.

(True Extract.)

Ag. Under Secy. to Govt., P.W.D.
Major, R.E.,

To the Superintending Engineer, Third Circle.
" Chief Engineer for Irrigation.
" Examiner of Public Works Accounts.
" Financial Department.

Encl. C. Howarth.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1879) Madras.
PUBLIC WORKS.

To
THE SUPERINTENDING ENGINEER,
THIRD CIRCLE,
&c., &c., &c.

Dated August 14th.

Issued

Recd.

Encl.

G. O., 14th August 1879, No. 2,131 W.

AUGUST.

Nos. 91-92.

Vengal Rao Drainage Project.—Orders
on papers submitting a revised estimate
amounting to Rupees 76,670, for the —.

In Hon. W. Huddleston

draft.

For order

2131

As will be observed
in the accompanying
papers the Superintending
Engineer has submitted
a revised Est.
amounting to Rs 76,480 in
a work in which Rs 42,925
were spent up to and of
charge but ~~cost~~ for
which only 11,170 Rs were
originally sanctioned by
Government.

The work was sanctioned
in January 1878, and
the cost of the contract
work during its execution
proportion appears as
stated by the S.E. to have
been nearly five times
the ordinary rates.

Under ordinary cir-
cumstances the irregularity
in estimating and submitting
a revised estimate
and particularly this

Cir. 4. 8. 79. Dtd 11. 8. 79.
O. L. S. Seal. 60 July 1880

Excess of cutting would
no doubt call for a
large amount in the
part of the project, but
I presume that it is
now hardly necessary
to do more than

(1) endeavor to recon-
struct a small portion of the
roads which have, so
far as I can see, been
subsidized without any
claim of authority in
purely municipal
purposes - and

(2) limit the work
to be done and to what
is absolutely indispen-
-sable

Not being myself assisted
with the work I am
-satisfied it would be
more satisfactory to Govt.
to have a note drawn
up by the Ch Engr for
disposition in whose au-
-thority I agree

4/8/79

Atto

No. 3792

3 Circle
Chingleput Superintending Engineer's Office.
Chingleput, 27th June 1879

213/3

From

THE SUPERINTENDING ENGINEER,

Chingleput 3 Circle.

To

The Chief Engineer
for Irrigation.

Sir,

- Enclosures - 6 -
3 Plans.
1. Revised Estimate
with detail
measurement for
Rs 76,670 -
1. Estimate for Canal
Weir. Rs 25,950 -
1. Comp. State

I have the honor to submit a Re-
vised Estimate amounting to Rs 76,670,
for the Koyasapady Drainage Project,
together with a Comparative Statement
showing the causes of the large excess
of expenditure over the estimate origi-
nally sanctioned in G.O. No 6748 dated
31st August 1877.

2. The greater part of the earthwork
done was carried out under the
charge of the Madras Municipality
as a Free Work. The original esti-
-mated section of the embankment
was considerably enlarged, and it
is shown by the Accounts that the
cost of a cubic yard of earthwork
was merely five times that of the
ordinary rate. Under this item of
the estimate alone, an excess of

Rs 34,370 is shown.

3. A further excess of Rs 1,000 was incurred in excavating a channel from Limestone Bridge to the Red Hills Tank surplus, the execution of which as a Drainage Work was sanctioned in G.O. No. 1079 of 29th March 1877.

4. Owing to the necessity of the subsoil. Colonel O'Connell directed the officer in charge of the construction of the 3rd Bent Bridge at Sabankadu to use Morgan's Cement instead of the common lime provided in the estimate for concrete and portions of Masonry Work. thereby causing an excess of Rs 2300 under this sub-head.

5. Colonel O'Connell appears to have called for a plan and estimate for constructing a Weir on the bank of the East Coast Canal by means of which he proposed to discharge a large quantity of upland drainage into the Canal at the point shown on the tracing. I beg to submit herewith the plan and an estimate for the above work amounting to Rs 25,750, as received in this office, and included in the Revised

Estimate; but would observe that there appears to be no reason why such an expensive work is required, and if it is the intention of Government to proceed with the project, I think this portion of it might very well be carried out at half the cost of the estimate now submitted.

6. The total expenditure on this Project up to the end of March 1879 has amounted to Rs 42,925. This expenditure has only been met by a provisional sanction of Rs 11,170 as per G.O. 674th above mentioned, and I have now the honor to request that Government will be pleased to sanction the excess of Rs 31,755.

I have the honor to be
Sir

Your most obedient servant
Henry W. Stuart Major R.E.
Agstuz Eugueres P. Ariz.

N. 24-EW.

1879

Transferred to the Chief
Engineer, P. W. D. for disposal.

From the Supt's Office.

H. D. Love. L. R.

For Chief Eng. & Irrigation.
1st July 1879

Q. 8-674 N-81-8-44 Original
1079-29-8-44

N. 3792

doted 27th } June 1879
B. D.

Enc: 6.

Veyasarpady Drainage
Project — Submitting
for sanction Revised
estimate of amounting to
Rs 76670 ft —

Cir 4-8-79. Tel 11-8-79.
So Doly 28-7 1879

N. 30-EW.

Note by the Chief Engineer for Irrigation

Drainage of the land between the
village of Veyasarpady and Cochran's
Canal. 213/7

For this work an estimate of
Rs 11,170 was sanctioned in G. O.
No. 674 N. 31st August 1874 and it
was to be carried out as a famine
relief work. At the same time
the west bank of Cochran's Canal
or that part of the Hastingham
Canal between the Railway bridge
and Shediankuppam lock was
to be raised and strengthened
so as to exclude land drainage.

Drainage prior to the undertaking
of this work was prevented from
flowing northwards into the sur-
plus channel of the Red Hills
Tank, and so into the Eunoore back-
water, by the embankment of
the road from Pudurvoil to Tiru.

vetting, and it found its way into the canal which was closed near the Railway Station by a bund and at Shediankuppam by a lock. There was therefore no proper line of outfall for the flood water and it could get away only by breaching the road embankment and the canal bank, while a small portion flowed over the lock gates. There are it appears from Colonel Moberly's letter No. 271 of the 23rd April 1877 some 15 miles of land drainage to be disposed of and the quantity is estimated at 3,420 cubic feet a second.

2. The Chief Engineer for Irrigation has not until now seen any of the papers since he was asked to give an opinion on the value of Colonel Moberly's original proposals and wrote the note printed in P.M.G. No. 1079 of the 29th March 1877 - and he is not aware what the works as carried out are capable of doing

P.M.G. No. 674. dt
31 August 1877

in the way of affording relief to the country to be benefited.

3. The works sanctioned were

	Estimate.	Spent.	Required.	Total
			2131	
Culvert of 3 vents on the Tiruvallur Road —	Rs 4450.	7768	332	8120
Strengthening West bank of Canal —	6300	34842	5639	40480
Metalling 2 Road slopes (rough road dams to pass water) —	420	194	180	380
	11170	42824	6157	48980

In addition to the above the following entries occur in the Comparative Statement.

Cutting drainage Channel from Tiruvethore (Tiruvallur) Bridge to Red Hill Sur. Hill Channel —	—	—	1550	1550
Constructing a weir to discharge into the canal —			25950	25950
			33,657	76480

The work of primary importance was drainage, and it was apparently intended to cut a drain and, with the earth thus obtained, to strengthen the canal bank. The estimate provided

for 99,802 cubic yards of earthwork.
119,060 cubic yards have been done
and 16,057 remain to be done, and
this too at a very important,
viz the lower part of the drain
spent from cost on which it
is perhaps unnecessary for the
undersigned to remark, it is to be
noticed that instead of doing the
work intended the labour was em-
ployed in making the Canal bank
into a road to connect the Tiruvettiguru
road with a Municipal sewage
farm, which may have been a very
desirable work, but was not a part
of the sanction. The value of this
extra work at normal rates is
Rupees 2,400, and it represents about
Rupees 11,340 of the money expended.

4. With regard to the work
remaining or proposed to be done
it is considered that

1st the small item for completing
the culvert should be provided Rs. 332

2nd that the Road slopes should
be completed

3rd that the drain should be cut
to the Red Hills surplus as with-
out this all that has been done
will be of little use

1550

The section does not show what
has been done in the way of
strengthening the Canal bank
or where this work is incomplete,
and without such information
it is impracticable to say whether
the work is ^{or is} not at all pressing.
Possibly some of the work can be
done in completing the drain.

The proposal for a surplus weir
to discharge into the Canal is
not understood. The object of
raising and strengthening the
west bank was to exclude land
drainage and a weir would de-
feat this object. Moreover so far
as the undersigned is aware water
so discharged into the Canal could
escape only in one of 2 ways

1st Southwards into the Coom i.e.
in just the opposite direction of
the flow in the outside drain.

2nd northwards into the Red Hills surplus near Shediankuppam lock and to allow of this another weir of the same size to discharge out of the canal would be required.

It is thought that at the large
It is thought therefore that the large item of Rs. 25,950 for a surplus weir may be struck out.

5. It may perhaps be well to remark on the Road slopes or extemporized road dams which are to assist in passing flood drainage, that these if placed at a judicious level will be very useful, but that the one in the embankment of the Tim-vethiyur Bridge must not be placed too low or it will allow water to pass from north to south and help to submerge instead of to relieve the lands to the southward. Colonel Moberly proposed to put these dams at

11.00 - 10.00

ground level, what that level is the papers do not show precisely, but it would seem to be about 1 foot above M.S.L. and that is too low. Flood level of 1874 is marked on cross section 23 as 16.60 or 6.60 feet above M.S.L. On the weir plan the value of F.L. of 1874 is given as 13.64, but the datum is not stated. Probably 2 to 2½ feet above M.S.L. would be the lowest level at which it would be desirable to place the road dams. The exact level should be fixed with reference to flood level outside the canal bank west of Shediankuppam lock in 1874 as compared with flood level further south i.e. to south of Tim-vethiyur road bridge.

Cotacamund }
1st August 1879 }

2137
10

Colonel Moberly
Chief Engineer for Irrig.

To The Chief Engineer P.W.D.

5964

Aug 1879

Cir 4.8.79. P. 11.8.79
O. L. Sheel copy 8.13

7

Shore map to B...
No. 2131 Wd/14 Aug 79

Have enter
Letter from Superintendent
3. Circle No 3792 d. 27th
June 1879.

Note in the same by the
Chief Engineer for Irrigation
d. 12th August 1879

June 21/31

The S.E. have submitted
a Revised Estimate
amounting to Rs 76,670 for
the Very satisfactory drainage
project the original estimate
in which for Rs 11,170 was
sanctioned in 20 to 674 W
of 31st August 1877

From the observations
made in the note by the
Chief Engineer for Irrigation
it would appear that
that the main portion of
the outlay (viz. Rs 34,000
out of a total expended
to end of last April 1879
was Rs 42,925) has been
incurred in making the

Is it does not the completion
of the drain & the Red Hill
trophies, need sanction
as estimated?

N.B. I have now
added this to the
order which may
be made issue

11/8/79

1012 3-

western bank of Coch-
-ranis Canal into a
road to connect the
Zimvestigues road with
the Municipal Sewer form,
while at the same time
the outfall drainage channel
from the last named road
to the Red Hill surplus
Channel, has been left
untouched, although this
formed the most obviously
essential feature of the
project to which the Govt.
originally gave its assent.

As the work has been
carried out under the orders
of the London Municipality
as a private work this fact
in P. C. directs that an
Explanation may be fur-
-nished by that body
as to the causes which
have led to this result,
as also to show reasons
why the cost of the

2131
-2
As also for cutting
the drainage channel
from the Zimvestigues road
to the Red Hill surplus
Channel Rs 1550

extra work due to the
widening of the bank in
the purpose specified,
could not now be debited
to Municipal funds

Sanction ^{may be} accorded to
the immediate completion
of the 3rd trench in
the Zimvestigues road
at a cost of Rs 332 but
unless distinct reasons
can be shown for proceeding
with the view to discharge
into Coleraines Canal at
an estimated outlay
of Rs 25,950, the work
should not be undertaken.
As far as can now be
judged the construction of
this work would be
rather wasteful than
otherwise -

As regards the items
for strengthening the west-
bank of the Canal at
an additional cost of Rs
5639, and of installing
two road dams (Rs 186)
no further action could

be increased till en.
-Plumation have been
Abolished by the Supp
Engraved as to the necessity
as also regarding the
other points advocated
to in the note by the
Ch. Sup. to Migration

W.H.

4/8/79

50
6

S.E. 3.0 inch in 10 inch
Ch. E. for 9.7
in 10.0 A. 1.7
Final - Sept 17
21
Dec 26.879

Crossed 9. ②

Govt. of Madras

PUBLIC WORKS

To
Dated
Issued
Recd. Encl

G.O. 16 Aug 1879 No 2131 W

Nos. 91-92

Veyar Pandiy Drainage
Project Orders in papers
submitting a revised estimate
amounting to Rs 76,670 for
the —

Received with the
order 19 Aug 1879
6