

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 2736	Press
653-654	Mis.
Dated 29-8-1868.	

Not to be folded or roughly handled

No. 653. Read the following letter from the Superintending Engineer, 6th Division, to the Secretary to Government, Department Public Works, dated Camp, Tritrapundi, 13th August 1866, No. 544:—

1. With reference to G. O. No. 2,365, dated 26th July, directing me to push on with the construction of the Vedarniem Canal in anticipation of an allotment of funds later in the year,

1 Enclosure. (To be returned.)

I have the honor to inform you that the delta is now one sheet of water. The channels which are to form the southern portion of the canal are full of water, and though work could be commenced on the northern section above high-water mark, it would not be prudent to excavate a ditch which would only fill during the north-east monsoon, while, if we attempted to excavate to the full depth of the channel, the percolation would now be excessive, and it is more than probable that the work would be arrested, and would have to be resumed under disadvantages in December or January next.

2. Until the receipt of the G. O. under reply I was not aware that there was any very great distress in the Tritrapundi Taluq. I immediately addressed the Tahsildar of Tritrapundi, and requested him to make it generally known throughout his Taluq that one thousand coolies per diem could be provided with employment at Tranquebar on the Salt works till the north-east monsoon commenced, and I shall be much surprised if two hundred coolies avail themselves of the offer of employment, and as the Range Officer complains that he cannot obtain labor for the works in progress within the range, the distress in Tritrapundi cannot be very great.

3. Pending the receipt of orders on my letter No. 65, nothing has been done towards the carrying out of the works

12th May.

19th October 1865.

provided for in the estimate of Rupees 64,000 sanctioned for the canal in G. O., No. 3,101, but the three under-tunnels for the Poyoor, Karoovalungudi, and Karapadugay channels. The two last have been completed. In the first, the wings are not completed, nor have the courses of laterite to weight the arch been laid. This work should have been completed long ago.

4. It was anticipated that the foundations of the Poyoor and Karoovalungudi tunnels would be laid without much trouble, but that baling, on account of percolation, in laying the foundations of the Karapadugay under-tunnel, would be very heavy; exactly the contrary proved to be the case, and there is a considerable excess in the estimates for the former, on account of baling; it will however, it is anticipated, be covered by savings on other portions of the estimate.

5. On the 7th instant the Chundra Nuddi was freshened, and the anticipations* that the syphon† sluice under the canal would not be able to bear the upward thrust of a column of from eight feet to nine feet of water, have, I regret to say, been realised. As soon as the water began to pass through the sluice, there were indications that water was bubbling up through the arch into the canal; of the extent of the injury

* Paragraph 10 of letter No. 960, 5th September 1865.

† 1 foot 10½ inches of masonry.

*Proceedings of the Madras Government, Public Works Department,
29th August 1866.*

I am unable to inform you, but this is of little importance as there could have been no doubt from the first what must inevitably have been the result of attempting to make 1 foot 10½ inches of masonry resist a thrust of a column of water of from seven feet to nine feet. The front wall of the basin of the syphon-sluice, which is on a level with the bed of the Chundra Nuddi, is twelve feet above the floor of the sluice, or seven feet above the intrados of the arch, and during floods the depth of water in the Chundra Nuddi would probably exceed that in the canal.

6. As I informed you in person in March or April 1865, the Chundra Nuddi should not, in my opinion, have been passed under the canal. The level of its bed at the point where it crosses the canal is 5 feet 1½ inches above the proposed bed of the canal, while the tidal high-water is 4½ feet above the same point; the bed of the Chundra Nuddi is therefore 7½ inches above tidal high-water, and, in my opinion, while an under-tunnel was provided for the supply of the 60 vaylies of land irrigated by the Chundra Nuddi east of the canal, the bulk of its waters during floods should have been allowed to escape by the canal to the Velliyaaur, instead of joining the canal near the junction of the latter with the Velliyaaur.

7. In order to take advantage, as much as possible, of the work executed, I would suggest that two arches should be turned, as shown in the enclosed section, that the arches should be loaded with three layers of laterite, and that the Chundra Nuddi should be diverted into the canal, a wall or dam being raised across the under-tunnel. Dam stones should be supplied on this wall to retain water for the lands on the east of the canal in times of scarcity, while the wall being 7½ inches above tidal high-water mark, would prevent salt water from backing up the Chundra Nuddi and finding its way through the syphon-sluice to the detriment of the lands on the east of the canal.

8. The wall would, in point of fact, act the part of a surplus calingulah for the Chundra Nuddi, and liable as the stream is to heavy floods during the north-east monsoon, when the fall of rain near the coast is often considerable, it would not be safe to endeavour to pass its waters through the under-tunnel without a surplus or escape above, for the waters would be arrested by the under-tunnel, the basin of which was only 13 feet by 6 feet, and would back up till they breached the bank above.

9. The east wings of the syphon-sluice for the Chundra Nuddi, and the west wings of the syphon-sluice of the Keela-karapudugay have settled, and will probably have to be rebuilt. This is owing to false economy on the part of the designer, who gave the wings a depth of foundation of only four feet, while the under-tunnel was laid at a depth of 12 feet, the wings adjacent to the tunnels were, therefore, built on new earth, for the excavation for the foundations for the tunnel could not have been made without some slope in a depth of 12 feet.

10. The two under-tunnels for the Maila and Keela-karapudugay channels are only divided by a 1½ foot wall, and it will be impossible to keep the two streams

*Proceedings of the Madras Government, Public Works Department,
29th August 1866.*

separate. The central wall both above and below the canal, and the wing-walls which have cracked, are not long enough, and will have to be extended.

11. The following are the works now proposed, and their probable cost is entered opposite to them; and I would solicit orders as to whether estimates should be submitted for them, or whether Government would wish any other plan to be adopted:—

	RS.
Alteration and re-construction of syphon-sluice of Chundra Nuddi	3,650
Constructing of dam or retaining wall across new cut...	1,060
Diverting Chundra Nuddi	450
Land for-diversion	450
	5,610
Re-building and extending wings and wall of separation between Keela and Maila-karapudugay, and forming a recess to receive extremity of bank...	800

The last work might be postponed till complaints on the subject are received from the villagers, or the two under-tunnels may be regarded as one, and the channels be separated after they cross the canal.

12. The excavation of the northern section of the canal may probably be commenced in December, and of the southern section in February; and a special Executive Officer should be appointed to superintend the work. At present there is no body available for the work in the District.

13. In paragraph 20 of my report dated 5th September, I pointed out that the width allowed for the canal was insufficient to admit of two boats passing each other at low-water; this difficulty will be considerably increased if the canal is not kept well cleared; and after careful consideration of the subject, I am still of opinion that a small dredge should be provided to clear the channel, and I deem it right to reiterate my opinion as, I regret to find, it differs from that expressed by Government in paragraphs 7 of G. O. No. 3,799.

19th December.

No. 654.

ORDER THEREON, 29th August 1866, No. 2,736.

CIVIL WORKS, No. 95.

1. As the Vedarniem Canal is of so much importance in connection with the Salt Revenue the Government

regret to learn that its construction cannot be pushed on with until later in the year.

2. The Government approve of Captain Oakes' proposals for altering the design of the Chundra Nuddi under-tunnel, so as to convey by it only so much water under the canal as may be required for cultivation, and to divert the rest by a cut, and they sanction the estimates for the work, amounting to Rupees 5,610, as also the estimate for re-building and extending the wall separating the Keela and Melakarapudugay Channels, amounting to Rupees 800. The estimate for the canal sanctioned in G. O., No. 3,101, dated the 19th October 1865, for Rupees 64,000 will be increased by the aggregate of these sums, and will now stand at Rupees 70,410.

*Proceedings of the Madras Government, Public Works Department,
29th August 1866.*

3. The Government regret that they have no dredge at their disposal for employment in the Vedarniem Canal.

4. No Officer can be spared for the superintendence of the work, but a qualified Subordinate will, if possible, be detailed for it.

(True Extract.)

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

To the Superintending Engineer, 6th Division, with one Enclosure.
,, Revenue Department.
,, Controller of Public Works Accounts.
,, Accountant General.

Exd. S. T. Augustin.

N^o 544-

From

Superintending Engineer Office
Camp Tritrapundi 13th August/66.
5th

Captain R. F. Oakes. R. E.
Superintending Engineer
6th Division

To

Colonel C. A. Orr R. E.
Secretary to Government D. P. W.

Sir,

1 Enclosure
Not returned

With reference to G. O. N^o 2365 dated 26th July directing me to push on with the construction of the Vedarniem canal in anticipation of an allotment of funds later in the year, I have the honor to inform you that the Delta is now one sheet of water. The channels which are to form the Southern portion of the canal are full of water and though work could be commenced on the Northern Section above H. W. mark, it would not be prudent to excavate a ditch which would only fill during the N. E. Monsoon, while, if we attempted to excavate to the full depth of the channel, the percolation would now be excessive, and it is more than probable that the work would be arrested and would have to be resumed under

disadvantages in December or January next.

2. Until the receipt of the G.O. under reply, I was not aware that there was any very great distress in the Tritrapundi Talug. I immediately addressed the Tahsildar of Tritrapundi and requested him to make it generally known throughout his Talug that 1000 coolies per diem could be provided with employment at Tranquebar on the salt works till the N.E. monsoon commenced, and I shall be much surprised if 200 coolies avail themselves of the offer of employment; and as the Range Officer complains that he cannot obtain labor for the works in progress within the Range, the distress in Tritrapundi cannot be very great.

3. Pending the receipt of orders on my letter No. 65, nothing has been done towards the carrying out of the works provided for in the estimate of Rs. 64,000 sanctioned for the Canal in G.O. No. 3101, but the three undertunnels for the Poyoor Karovalungudi and Karapadugay channels. The two last have been completed - In the first, the Wings are not completed, nor have the Courses

of laterite to weight the arch been laid. This work should have been completed long ago -

4. It was anticipated that the foundations of the Poyoor and Karovalungudi Tunnels would be laid without much trouble, but that baling, on account of percolation, in laying the foundations of the Karapadugay undertunnel would be very heavy, & exactly the contrary proved to be the case, and there is a considerable excess in the estimates for the former, on account of baling; it will however, it is anticipated, be covered by savings on other portions of the estimate.

5. On the 7th Inst., the Chundra Muddi was freshed, and the anticipations that the Syphon sluice under the canal would not be able to bear the upward thrust of a column of from 8' to 9' of water, have, I regret to say, been realized. As soon as the water began to pass through the sluice, there were indications that water was bubbling up through the arch into the

* Para: 10 of
Letter No. 9601.
5th Sept/65
1. 10¹/₂ " of
masonry.

12th May

60-161
17 200/10

19th October/65

Canal; of the Extent of the injury), I am
unable to inform you, but this is of little
importance as there could have been no
doubt from the first what must inevitably
have been the result of attempting to
make $1' 10\frac{1}{2}"$ of masonry resist a thrust
of a Column of water of from 7' to 9'.
The front wall of the basin of the Siphon-
sluice, which is on a level with the bed of
the Chundramuddu, is 12' above the floor of
the sluice or 7' above the intrados of the
Arch, and during floods, the depth of
water in the Chundra muddu, would
probably exceed that in the canal.

b. As I informed you in person in
March or April 1865, the Chundra muddu
should not, in my opinion, have been
passed under the Canal. The level of its
bed at the point where it crosses the
Canal is $5' 1\frac{1}{2}"$ above the proposed bed
of the canal while the tidal H.W. is $4\frac{1}{2}'$
above the same point, the bed of the
Chundramuddu is therefore $7\frac{1}{2}"$ above
tidal H.W., and in my opinion while an
undertunnel was provided for the supply
of the 60 Vaylies of land irrigated by

Vide Survey
and Para: 9 of
Letter No 960
5th Sept 1865

60 Vaylies
1865

95
the Chundra muddu east of the canal, the
bulk of its waters during floods should
have been allowed to escape by the Canal
to the Velligaun instead of joining the
Canal near the junction of the latter with
the Velligaun
7. In order to take advantage as
much as possible of the works executed, I
would suggest that 2 arches should be
as shown in the enclosed Section that
the arches should be loaded with three
layers of laterite, and that the Chundra
muddu should be diverted into the canal
a wall or Dam being raised across the
Chundra muddu to the level of the bed
just below the diversion of the Stream
to the undertunnel. Dam stones should
be supplied on this wall to retain water
for the lands on the east of the Canal
in times of scarcity, while the wall
being $7\frac{1}{2}"$ above tidal H.W. mark, would
prevent salt water from backing up
the Chundra muddu and finding

its way through the Syphon Sluice
to the detriment of the lands on the East
of the Canal

8. The wall would, in point of
fact, act the part of a surplus Culvert
for the Chundraw Nuddi and liable
as the Stream is, to heavy floods during
the N. E. Monsoon when the fall of rain
near the Coast is often considerable, it
would not be safe to endeavour to pass
its waters through the undertunnel without
a surplus or escape above, for the waters
would be arrested by the undertunnel,
the basin of which was only 18' by 6', and
would back up till they breached the
bank above

9. The East Wings of the Syphon
Sluice for the Chundraw-Nuddi, and
the west wings of the Syphon Sluice of
the Keela-Kurapudugay have settled,
and will probably have to be rebuilt.
This is owing to false economy on the
part of the designer who gave the wings

115
a depth of foundation of only 4 feet, while
the undertunnel was laid at a depth
of 12 feet, the wings adjacent to the tunnel
were therefore built on new earth for the
excavations for the foundations for
the Tunnel could not have been made
without some slope in a depth of 12 feet.

10. The two undertunnels for the Maila,
and Keela Kurapudugay channels are
only divided by a 12' wall, and it will
be impossible to keep the 2 Streams separate.
The central wall both above and below
the canal and the wing walls which
have cracked, are not long enough, and
will have to be extended

11. The following are the Works now
proposed and their probable cost is entered
opposite to them, and I would solicit orders
as to whether Estimates should be submitted
for them or whether Government would
wish any other plan to be adopted:-

Alteration and reconstruction
of Syphon Sluice of Chundra-
nuddi _____ // 3750

Constructing of Turn over
retaining wall across new
cut ————— // 1060
Diverting Chundra Budda // 450
land for Diversion ————— // 450 — 115610.
Rebuilding and extending
Wings and wall of separation
between Keeta and Maila.
Kara pudugay and forming
a recess to receive extremity
of Banks ————— // 800

The last work might be postponed till
complaints on the subject are received
from the Villagers or the two undertakings
may be regarded as one, and the channels
be separated after they cross the canal
12. The excavation of the Northern
Section of the canal may probably be
commenced in December, and of the
Southern Section, in February; and a Special
Executive Officer should be appointed to
superintend the work. At present there
is nobody available for the work in the
District.

No 960/

Para. 23.

19 Decr

13. In para 20 of my Report dated
5th September, I pointed out that the width
allowed for the canal was insufficient to
admit of 2 Boats passing each other
at L.W.; this difficulty will be considerably
increased if the Canal is not kept well
cleared; and after careful consideration of
the subject, I am still of opinion that
a small Dredge should be provided
to clear the channel, & I deem it right
to reiterate my opinion as, I regret to
find, it differs from that expressed by
Government in para. 7 of G.O No 3799.

I have the honor to be
Sir,

Your most obedient servant
A. F. Gates Capt. R.E.
Superintending Engineer
6th

Public Works Department.

no. 2736

PROCEEDINGS of the MADRAS GOVERNMENT
Under date the 29th August 1866.
Read the following

From the S. Engrs 6th Div.
(Here enter No. 544 dated 13 Aug/66.)

As the Vedarum Canal
is of so much importance
in connection with the Salt
Revenue the Govt Engrs to
learn that it is comparatively
current:

The Govt are glad to learn
that the circumstances of the
people in the neighborhood
of the Vedarum Canal are
not such as to make it
necessary to increase the
rate of expenditure on that
work, in order to provide
them with labor as a
means of procuring sub-
sistence, but, as the early
completion of the work
is of so much importance
in connection with the
Salt Revenue, it is to be
regretted that it cannot
be pushed on with until
later in the year.

W.D.W.

26 July 1866 no. 2365.

By Order of the Govt Engrs to
the S. Engrs 6th Div.

Capt. R. F. Carter R.E.

Engr. C. & J. R. R.E.
Secretary to Govt

Dated 13th August 1866

Received.

By order

No. 544

Reporting on
Vedarum Canal

no. 2736 - 29th August 1866

2. The Government approve of Capt. Oakes' proposals for altering the design of the Chundra muddie under tunnel, so as to convey by it only so much water under the Canal as may be required for cultivation, and to divert the rest by a cut, and they sanction the estimates for the work, amounting to Rs. 5,610, as also the estimate for rebuilding and extending the wall separating the Keela and Melakrapudugay Channels, amounting to Rs. 800. The estimate for the Canal sanctioned in G. O. N^o. 3101 dated the 19th October 1865 for Rs. 64,000 will be increased by the aggregate of these sums, and

175
and will now stand at Rs. 70,410.

3. The Government regret that they have no dredge at their disposal for employment in the Vedarnam Canal.

4. No Officer can be spared for the superintendence of the work, but a qualified subordinate will, if possible, be detailed for it.

6 To The Supt Eng^r 6 Division with enc. 
21 - " - Revenue Dep^t ✓
4 - " - Controller ✓
3 - " - Accountant General ✓
Dep^t 30th Sept 44

5

170
P. W. 186 O. Department.

Pro. of Govt for Paper
No. 2436

PROCEEDINGS OF GOVERNMENT. *of Madras*

Dated *29 August 06*

Further to Pro No 552 of 13-2-01

*Contains estimate for works
in connection with Nedumkudi
Canal in the Tanjore Dist. same
to be per-*

A 53. 54.