M.R.O. 1—79,000—3-6-37.

(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. 1093 (Ms) Press Mis.

Dated 31-3- 1877.

Not to be folded or roughly handled

Read the following :—

No. 145—W.

No. 777. *Note by the Chief Engineer for Irrigation.*

In paragraph 1 of the memorandum printed in Proceedings, Madras Government, No. 2,846, 25th October 1876, will be found the recommendation of the Committee appointed to consider the best way of improving the water-supply and drainage of Cumbum Town, that a new channel should be cut through the high ground north of the road from Nakkalagundi to Cumbum to take the place of the Nakkalagundi old channel, and afford a supply of drinking water to the town, removed from the sources of pollution to which the old irrigation channels are subject.

2. The District Engineer has submitted an estimate of Rupees 15,000 for constructing this channel, the length of which will be 7,883 feet. The cost of the channel itself, irrespective of masonry works, &c., is Rupees 8,290.

3. There is no survey on which the whole course of the old and new channels is shown. There is also no information to show why the particular line estimated for was chosen, or whether it was in any way necessary to locate it where such a considerable depth of cutting was necessary. Apparently until the neighbourhood of the town was reached a line running nearer to the old channel and more conformed to the natural features of the ground might have been selected. The best alignment would have been easily determinable from levels covering all the ground within the probable limits of alignment. On the supposition that the line is substantially that which Major Hasted selected, this part of the arrangements may be accepted as suitable.

4. The channel will have a fall of 1 foot a mile, and the intended sectional area of water-way being 16·58 feet, and the discharge 25 cubic feet a second, the velocity will be 1·5 feet a second nearly, or 1,800 yards an hour, which is lower than is desirable for water which is to afford a supply to the town. The actual velocity is not likely to exceed and may be less than 1·38 feet a second.

5. Head works, consisting of a weir across the surplus channel of the tank, with a head sluice to the new channel and a scouring sluice, have been provided for at an estimated cost of Rupees 3,130. The vent of the scouring sluice should be enlarged to 2×2 at the shutter, and $3 \times 2\frac{1}{2}$ at the back of the wall. If the head of the new channel in rear of the head sluice be only 2 feet wide, the sluice will not discharge the required quantity, the requisite head being dependent upon the channel being large enough to carry the supply at the normal level of $2\frac{1}{4}$ feet above bed level. A cross section of the surplus channel at the site of the weir should have been given.

6. The irrigation sluice or vented wall to be constructed at about 280 feet from the head is not likely to prove efficient, as its sill is only 6 inches below normal supply level.

7. It is presumed that this channel, being intended to improve the sanitary condition of Cumbum, will be chargeable to Provincial Funds. It will be seen that

the excavation of the channel has been commenced in anticipation of the sanction of the estimate.

FORT ST. GEORGE,
15th March 1877.

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

To the Secretary to Government, Public Works Department.

No. 778. ORDER THEREON, 31st March 1877, No. 1,093.

IRRIGATION, No. 51.
Account.

THE estimate for cutting a new channel from the Cumbum tank for the supply of clean drinking water to the town of Cumbum, and in supersession of the old Nakkalagundi channel, is sanctioned.

2. On the general ground that the insanitary state of Cumbum has been mainly caused by the defective condition of the distributaries of the Cumbum tank, of which the Nakkalagundi channel is one, His Grace the Governor in Council is of opinion that the cost of the new channel should be charged to Imperial Funds, and should be provided for under Ordinary Agricultural.

3. The work so far as it may be adapted to employ famine relief labor should be made use of for that purpose and should be pushed forward vigorously.

4. The expenditure up to the 31st March has been fully provided for in G.O., No. 416, dated 6th February 1877.

Ordinary Agricultural.
Irrigation.
Original Works.
Cumbum Tank.
New Nakkalagundi Channel.
Amount of estimate Rupees 15,000.
To be carried out by the Public Works Department.
This sanction has been registered as No. 351—I of 1876-77.
(True Extract.)

Lieut.-Col., R.E.,
Secretary to Government, P.W.D.

To the District Engineer, Kurnool.
" Collector of Kurnool.
" Chief Engineer for Irrigation.
" Examiner of Public Works Accounts.
" Revenue Department.

Exd. S. T. Austin.
Spare Copies

3

P. W. DEPARTMENT.
16th March 1876

READ the following :—

Submitted by the Chief Engineer for Irrigation, P.W.D. No. 445-I, 9/15/1877

FOR ORDERS.

The Funds from which the cost of the new Nakkalagundi channel for supplying Cumbum with clean drinking water is to be met, appears to need decision, and if, as supposed by the Chief Engineer for Irrigation, the work is to be carried out from Provincial funds, it will have to be settled how money is to be provided.

Lieut.-Col.
Secy. to Govt. P.W.D.

FOR ORDERS.

2922

Drainage must be provided from Agricul: ordinary Local Works Estate, for Stat: a Local work, or else Local & Imperial Funds. Irrigation Dept: & Loc. Fds supply at least part of the funds needed for improvement of the supply of drinking water - a House Tax with a fair cess for such purpose & Municipal Schools cess might be imposed & so provide some balance. Mr. Resident to be consulted

L/S M

G.O. 31st March /77 No. 1093

Cir 19.3.77

No. 145-W.

Note by the Chief Engineer for Irrigation.

Encls. 23

In para 1 of the Memorandum printed in Pros: Madras Govt: No. 2846, 25th October 1876 will be found the recommendation of the Committee appointed to consider the best way of improving the water supply and drainage of Cumbum Town, that a new channel should be cut through the high ground North of the road from Nakkalagundi to Cumbum to take the place of the Nukkalagundi [old] channel, and afford a supply of drinking water to the town, removed from the sources of pollution to which the old irrigation channels are subject.

2 The District Engineer has submitted an Estimate of Rupees 15,000 for constructing this channel the length

length of which will be 7883 feet. The cost of the channel itself, irrespective of masonry works &c., is Rupees 8290.

3 There is no survey in which the whole course of the old and new channels is shown. There is also no information to show why the particular line estimated for was chosen, or whether it was in any way necessary to locate it where such a considerable depth of cutting was necessary. Apparently until the neighbourhood of the town was reached a line running nearer to the old channel and more conformed to the natural features of the ground might have been selected. The best alignment would have been easily determinable from levels covering all the ground within the probable limits of alignment. On the supposition that the line is substantially

that which Major Hasted selected this part of the arrangements may be accepted as suitable.

4 The channel will have a fall of 1 foot a mile and the intended sectional area of water-way being 16.58 feet and the discharge 25 cubic feet a second the velocity will be 1.5 feet a second nearly or 1800 yards an hour, which is lower than is desirable for water which is to afford a supply to the town. The actual velocity is not likely to exceed and may be less than 1.38 feet a second.

5 Head works consisting of a weir across the surplus channel of the Tank, with a head sluice to the new channel and a scouring sluice have been provided for at an estimated cost of Rupees 3130. The vent of the scouring sluice should be enlarged

to

to 2×2 at the shutter, and 3×2½ at the back of the wall. If the head of the new channel in rear of the head sluice be only 2 feet wide, the sluice will not discharge the required quantity, the requisite head being dependent upon the channel being large enough to carry the supply at the normal level of 2¼ feet above bed level. A cross section of the surplus channel at the site of the weir should have been given.—

6 The irrigation sluice or vented wall to be constructed at about 280 feet from the head is not likely to prove efficient, as its sill is only 6 inches below normal supply level.

7 It is presumed that this channel being intended to improve the sanitary condition of Cumbum will be chargeable to Provincial funds.

It

It will be seen that the excavation of the channel has been commenced in anticipation of the sanction of the estimate.—

Fort St. George
15th March 1877

Lieut Col R.E.
Chief Engineer for Irrigation

To
The Secretary to Government
P.W.D.

25.10.76. No. 2846.

Irrigation
1877.

From
The Chief Engineer for Irrigation.

P.W.D.
MAR
17 77
No. 2922

Dated 15th
Recd 18th } March 1877

Encls. 23.

No 145. W

17

" "

Ruckkalagundi Channel - Kurnool District - Note submitting, with remarks, estimate for Rs. 15,000 for constructing the new — for supplying Cumbum with clean drinking water.

G. O. 31st March 77 I B No. 777

Cir 19.3.77

No 1093

Irrigation
Sect 4

Public Works Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 31st March 1877

Read the following :—

Note by the Chief Engineer for Irrigation } (H.E. No. 145 W d/ 15th March 1877

1093

The estimate for cutting a new Channel from the Cumbum Tank for the supply of clean drinking water to the town of Cumbum and in supersession of the old Nakkalagundi Channel is sanctioned.

2. On the general ground that the insanitary state of Cumbum has been mainly caused by the defective

defective condition of the distributaries of the Cumbum tank, of which the Nakkalagundi Channel is one, His Grace the Governor in Council is of opinion that the cost of the new channel should be charged to Imperial funds and should be provided for under Ordinary Agricultural.

3. The work so far as it may be adapted to employ Famine relief labour should be made use of for that purpose and should be pushed forward vigorously.

4. The expenditure up to the 31st March has been fully provided for in G.O. No. 416 dated 16th

February 1877.

Ordinary Agricultural
Irrigation
Original Works
Cumbum Tank
New Nakkalagundi Channel
Amount of Estimate Rs 15,000

To be carried out by the Public Works Department

This sanction has been registered as No. 351. I of 1876-77.

Irr. 29/3

J. S. Kennedy
Collector & D.M. for Jr. with 23 Original Enclosures
Ex. P.W.D.
Revenue Dept. Rcpd. 10-4-77
Gratis
In. S. Copy despatched 3rd April 1877.

Cw 2422

Estt. of 1876 Madras.

PUBLIC WORKS.

To The Hon'ble Secretary

Dated

Issued

Recd. Encl.

G. O. 31st March 1877 No 1093

Nos. 777-778

23 Estt. Fin. Dept.

to be pushed forward as expeditiously as possible.

Cumbum Tank Scheme.

Dr. — The estimate of Rs 15,000 for cutting a new channel from the — for the supply of clean drinking water to the town of Cumbum, and to — the cost to be charged to Imperial Funds provided for under Dy Agt