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G.O. 2341. W a/22-9-84

P.W. No 8915

Recd 27.10.84



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G.O. 26451 W a/27-10-84

Communicated
to the Consulting
Architect, ~~Government~~
with reference to
G.O. 2341 W. dated
22 September 1884.

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24.10.84

M.
27/10

C.A. G. for
En. S. W. a. 24/10

old 24/10

Id 30/10 28/10 24/10

20.12.11

1st JULY 1884, No. 621 I., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

READ—the following papers:—

From Captain C. C. RAWSON, R.E., Executive Engineer, in charge I Circle, to the Chief Engineer for Irrigation, dated Dowlaishweram, 20th April 1884, No. 248 G.D.

With reference to memorandum, No. $\frac{1}{99}$ G.D., dated 4th October 1882, I have the honor to furnish a statement showing the names and cost of distributary works required to irrigate lands on both sides of the Kovur-Manjair canal.

2. In No. 1278 G.D., dated 29th August 1882, it was stated that the amount required to cover the cost of these distributary works which should be paid from irrigation funds was Rs. 12,540 as shown in the original estimate on the statement sent herewith.

3. In the revised estimate now submitted the cost of the distributary works amounts to Rs. 20,124, but I think that only those items shown in red ink should be charged to the delta project; their cost is Rs. 16,360, i.e.:—

	RS.
4 New sluices	3,040
13½ Miles channel	9,720
Compensation for land	3,600

4. The works shown in black ink in the revised list of distributary works only irrigate land formerly supplied with water from the Cocanada canal and its branches.

5. With reference to paragraph 2 of the memorandum under reference, no contribution has been paid from Irrigation funds, and the amount to be sanctioned from unforeseen works in the Godávári delta revised estimate is Rs. 16,360 as stated above.

6. With reference to paragraph 3 of the memorandum, I herewith submit the revised estimate * for the Kovur-Manjair canal, amounting to Rs. 1,63,510, showing a saving of Rs. 25,940 on the estimate sanctioned in G.O., No. 2776, dated 17th October 1876.

7. As directed in G.O., No. 161 I., dated 17th February 1883, the lock into the Cholangi creek has been omitted, also the aqueduct over the same, and the item for widening and deepening the Cholangi river.

8. A drain for diverting the drainage has been allowed for in lieu of the aqueduct.

9. The whole of the plans and estimates now sent were examined and approved of by Mr. Walch the late Superintending Engineer before he went on leave, but he had not time to send them up.

10. It is requested that the revised estimate may receive early sanction, as there is an allotment of Rs. 17,500 for the work in the current official year, and there will be a difficulty in spending this if sanction be not granted soon.

11. The revised estimate allows for a short branch canal to the salt platform; this was provided at the request of the Salt Department.

No. 115 I.

Note by the Chief Engineer for Irrigation.

The Kovur-Manjair junction canal was, with the approval of the Collector of the Godávári district and the Board of Revenue, undertaken to establish water communication between the Penungiduru salt-pans and the Cocanada canal, and to unite the

Cocanada and Coringa canals. Estimates, amounting to Rs. 1,89,450, which provided for aqueducts over the Bhavaram drain, the Cholangi river, the Tooliabhaga, and the Coorada drains, and also for a lock into the Cholangi river in order that boats might convey salt from the platforms directly into the interior, were sanctioned for the canal in G.O., No. 2776, dated 17th October 1876. The officers then in charge of the Salt Department were of opinion that the canal was necessary, in the interests of salt manufacture, to avoid the difficulty of navigating the Cholangi river. The total cost of the canal, including establishment and tools and plant charges, was to be met from the following funds as stated in Proceedings of Madras Government, No. 2150 W., dated 18th December 1877 :—

	Works.	Establishment.	Tools and plant.	Total.
	RS.	RS.	RS.	RS.
Salt Department ...	78,260	19,570	6,260	1,04,090
Local funds ...	30,000	7,500	2,400	39,900
Canal and Ferry funds ...	67,330	16,830	5,390	89,550
Irrigation funds ...	13,860	3,460	1,110	18,430
Total ...	1,89,450	47,360	15,160	2,51,970

2. The canal was excavated as far as the Cholangi river and opened to traffic ; but when the lock into the river and the aqueduct over it were about to be commenced, the Commissioner of Salt Revenue apparently learned for the first time what was in contemplation, and wrote pointing out that if the works were carried out the salt factory would be ruined. The Superintending Engineer, I Circle, on a reference made to him on the subject by this office, reported that the injury complained of would not be as great as was represented ; but the Commissioner of Salt Revenue did not alter his opinion. This department has no objection to stop the works and to divert the drainage, but it is noticed that this sudden change of views has resulted in a waste of time and money. The Superintending Engineer was, in G.O., No. 161 I., dated 17th February 1883, directed to stop the works and estimate the cost of diverting the drainage. The Executive Engineer, in charge of I Circle, has submitted, with his letter, No. 248 G.D., dated 20th April 1884, revised estimates for the canal, amounting to Rs. 1,63,510, or Rs. 25,940 less than the sanctioned estimates. The amount provided for distributaries required for irrigation in the revised estimates is Rs. 20,124, against Rs. 12,540 included in the sanctioned estimates as shown below :—

	Sanctioned estimate.	Revised estimate.
	RS.	RS.
B. Land ...	1,860	3,600
C. Works ...	4,560	5,094
L. Earthwork... ..	6,120	11,430
Total ...	12,540	20,124

The total area to be irrigated is 9,750 acres, of which 2,650 acres were formerly irrigated under the Cocanada and Coringa canals. The additional area to be brought under irrigation is therefore only 7,100 acres. The estimated cost of works required to bring this area under irrigation is 16,360, as shown below :—

	RS.
B. Land ...	3,600
C. Works—	
4 Irrigation sluices at Rs. 760 each...	3,040
L. Earthwork—	
13½ miles of minor channels ...	9,720
Total ...	16,360

This amount may be taken as the share chargeable to the Godavari delta. Under paragraph 1643 of the Public Works Code, all contributions from one fund to another should be adjusted in the civil accounts ; but as the capital account of the delta should

include all expenditure incurred on the delta works, it is recommended that the estimates for the distributary works, required for extension of irrigation, may be sanctioned from the balance of the lump sum provided for unforeseen works in the completion estimates of the delta. Deducting the amount to be separately sanctioned, the revised estimates for the canal amount to Rs. 1,47,150, and compare with the sanctioned estimates as shown below :—

	Original estimate.	Revised estimate.
	RS.	RS.
<i>I Works.</i>		
1. (2) B. Land compensation ...	8,280	8,280
2. „ G. Kattipalli road bridge ...	8,880	7,779
3. „ Five cattle crossings ...	550	550
4. „ J. Cholangi river head lock ...	21,600	...
5. „ L. Kovur-Manjair canal excavation ...	45,590	52,345
6. „ Cholangi river, widening and deepening ...	19,720	...
7. (3) B. Land compensation ...	1,860	...
8. „ C. Sluices ...	4,560	2,054
9. „ L. Minor channels ...	6,120	1,710
10. (4) B. Land compensation ...	...	2,775
11. „ C. Aqueduct over Bhavaram drain ...	11,920	5,840
12. „ „ Do. over Tooliabhaga drain ...	28,140	40,000
13. „ „ Do. over Coorada drain ...	14,340	10,171
14. „ „ Do. over Cholangi drain ...	17,890	76
15. „ L. Drain from culvert in Korapa road to Tooliabhaga drain... ..	...	2,205
16. „ „ Tooliabhaga new cut ...	...	9,200
17. „ „ Branch channel to salt-pans near Kattipalli road ...	...	2,540
Total ...	1,89,450	1,45,525
Deduct amount proposed to be charged to Irrigation ...	13,860	...
	1,75,590	...
<i>Tools and Plant.</i>		
18. Ferry boat ...	...	275
19. Five ferry boats ...	...	1,350
Total ...	...	1,625
Total ...	1,75,590	1,47,150

The canal, item 5, has been excavated up to the Cholangi river ; K. Kottapalli road bridge, item 2, the Bhavaram and the Coorada aqueducts, items 11 and 13, have been built. Items 15 and 16 have been provided for in lieu of item 14, and items 4 and 6 are not required. The excess on item 12, which is mainly due to the enlargement of the aqueduct to enable it to pass the drainage diverted from the Cholangi creek, is nearly covered by the savings effected on items 11 and 13. The branch channel, item 17, has been provided for at the request of the Salt Department. Including the share of establishment and tools and plant charges, the revised estimates for the canal amount to Rs. 1,82,074, as shown below :—

	Outlay to end of 1883-84.	Further Outlay.	Total.
	RS.	RS.	RS.
<i>Works.</i>			
Land compensation ...	76,012	58,458	1,34,470
	2,666	8,389	11,055
Total ...	78,678	66,847	1,45,525
Establishment charges ...	18,979	13,445	32,424
Tools and plant do. ...	1,623	2,502	4,125
Total ...	99,280	82,794	1,82,074

The amounts of further outlay under establishment and tools and plant have been estimated at 23 and 1½ per cent., respectively, on the estimate of expenditure on works, excluding land compensation. The cost of ferry boats required is also included in the estimate of tools and plant charges. The canal may be treated as primarily belonging to the canal and ferry funds, to which the expenditure already incurred was debited, the salt and local funds contributing towards the expenditure to the extent to which they are interested. Deducting Rs. 43,925, the saving effected under "works" by the revised arrangements from the portion chargeable to salt funds, the distribution of the amount of revised estimates among the several funds interested will be as shown below:—

	Works.	Establishment.	Tools and plant.	Total.
	RS.	RS.	RS.	RS.
Salt	48,195	11,085	720	60,000
Local funds	30,000	6,900	450	37,350
Canal and Ferry funds	67,330	14,439	2,955	84,724
Total ...	1,45,525	32,424	4,125	1,82,074

OOTACAMUND,
13th June 1884.

(Signed) J. O. HASTED, Colonel, R.E.,
Chief Engineer for Irrigation.

To the Joint Secretary to Government,
Public Works Department, Irrigation Branch.

ORDER—dated 1st July 1884, No. 621 I., Public Works.

The proposal of the Chief Engineer for Irrigation to sanction estimates for distributary works on the Kovur-Manjair canal separately from the balance of the lump sum provided for unforeseen works in the Godavari completion estimates is approved, and the Superintending Engineer, I Circle, will submit estimates for the works for the sanction of Government. The revised estimates, amounting to Rs. 1,45,525, or Rs. 1,82,074, including establishment and tools and plant for the remaining works on the canal, are approved. The canal will be treated in the Public Works Department as primarily belonging to the canal and ferry funds, and the works will be sanctioned for execution when the question of contributions from the salt and local funds is decided in the Revenue and Financial Departments.

(True Extract.)

(Signed) J. O. HASTED, Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

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

Exd A. Aubert.
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