8583

Public Works (1896) Department.

G.O., No. 813 I.

Dated 9th October 1896.

[Despatch Abstract.]

Channel: Estimate of Rs. 6600 for improving the Lead Sluice — Bank Canal Kistna Western Bn, Sanctioned.

[P. W. D. 500—15-8-96.] J.C. 9/10

BACK PAPERS.

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

FURTHER PAPERS.

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

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

From the Superintending Engineer, II Circle, dated 30th July 1893, No. 1111 K.S.
Office-note to the Examiner, Public Works Accounts, dated 5th August 1893, No. 196.
From the Superintending Engineer, II Circle, dated 23rd August 1893, No. 1270 K.S.
Office-note to the Examiner, Public Works Accounts, dated 1st September 1893, No. 277.
„ from „ „ „ 13th „ „ „ 948.
„ from „ „ „ 13th „ „ „ 950.
From the Superintending Engineer, II Circle „ 16th „ „
Office-note to the Examiner, Public Works Accounts „ 15th „ „ „ 240.

No. 145 I.

Note by the Chief Engineer for Irrigation.

In letter No. 10 I., dated 22nd January 1889, printed in Proceedings of the Madras Government, No. 62 I., dated 11th February 1889, the Government of India extended for a further period of 5 years, commencing from the 1st April 1888, the Secretary of State's sanction to the estimates for the completion of the Kistna delta system as shown below :—

	Rs.
Direct charges	1,39,19,784
Indirect do.	9,81,160
Total ...	1,49,00,944

This extension of sanction expired on the 31st March 1893.

2. In G.O., No. 869 I., dated 26th October 1892, statements of outlay already, and to be, incurred were called for to admit of an application being submitted for a further extension of sanction. With his letter, No. 1111 K.S., dated 30th July 1893, the Superintending Engineer, II Circle, submitted the statements required, viz. :—

No. I statement showing by sub-heads the sanctioned estimates, the expenditure incurred up to end of 189-93 and the balances of the estimates.

No. II statement showing the items on which expenditure will have to be incurred after 31st March 1893 in completing the delta works. The principal items of this statement have been indicated by an asterisk.

The figures of outlay shown in both statements have been verified and corrected where necessary by the Examiner of Public Works Accounts. The amounts of the estimates entered in statement No. II as submitted by the Superintending Engineer included the sanctions accorded by Government up to end of June 1893, but the statement has been revised in this office so as to include all sanctions up to date. It is recommended that the two abstracts by main and sub heads appended to this note and statement No. II, of which the Superintending Engineer wishes to be furnished with 30 copies, be printed. The great delay in the submission of the statements is attributed by the Superintending Engineer to their bulk and the time required in fair copying and comparing them.

3. The total direct charges to the end of 1892–93 were Rs. 1,00,44,233, leaving Rs. 38,75,551 as the unexpended balance of the sanctioned estimate on 1st April 1893 still to be worked out. Rs. 56,73,820 of the expenditure were spent prior to 1882–83, Rs. 21,40,202 during the period 1882–83 to 1887–88 and the balance Rs. 22,30,211 during 1888–89 to 1892–93. The following are the principal works executed during the last quinquennium :—

Eastern Section—Head Works —The anicut crest was raised by 1 foot of concrete with cast iron grooved posts between which planks can be slipped when required to retain water to the required height after the season for floods. Screw gearing shutters to the Sitanagaram under sluices were provided. Quarters for the Executive and Assistant Engineers at Bezwada were constructed. An office for the Executive Engineer and anicut lascars and lock establishment sheds were also built.

Ryves canal.—One bridge, 6 head sluices, 7 minor sluices, 1 culvert, 2 regulators, 5 distributaries and 2 minor branches were completed.

Ellore canal.—Three outlets, 1 aqueduct, 1 bridge and 5 large distributaries were completed. The canal banks were raised.

Masulipatam canal.—The canal was widened by 13 feet from head to 4 miles 5 furlongs ; 2 head sluices and 54 masonry slope drains were constructed.

Bantumilli canal.—Kamalapuram lock, the main distributary, south side channel and one minor channel were completed. The tail lock and lock weir were almost completed. Five head sluices, 2 bridges and 12 minor sluices were also completed. Widening and extension of canal was practically finished.

Bank canal.—The lock and sluice at head of canal were completed. The canal for 13 miles was excavated to full bottom width.

Pulleru canal.—The straight cut, 3 bridges, 4 head sluices, 9 sluices and 3 distributaries were completed.

Pamarru junction canal.—One bridge was constructed.

Polraz canal.—One lock, improvements to 1 head sluice, construction of 5 head sluices, 2 outlets and inlets, 12 minor masonry works, 9 bridges and 7 distributary channels were completed. The canal was widened in the first $7\frac{1}{2}$ miles.

Drains.—The Inampudi, Polraz, Chendrayacodu, Peddakommileru, Pallava and Kanakavalli drains and the Lingala and Vadlamanad affluents were completed. The Lazzabanda drain and Chinnakommileru affluent were widened and the Peddalanka drain was excavated to tentative width.

Western Section—Head Works.—Quarters for the Executive and Assistant Engineers at Duggirala were constructed.

Main canal.—The widening of this canal from 1 to 6 and 9 to 12 miles was in progress.

Bank canal.—One lock weir, 1 rest-house and 2 head sluices were constructed. One channel was extended, the canal was widened and the diversion of the canal at Penumudi was completed.

Commamur canal.—The improvements to canal in 1st to 4th reaches, 1 inlet, 1 surplus sluice, 1 bridge, 12 distributaries, 3 minor masonry works and drainage affluents were completed.

Nizampatam canal.—One bridge and lock establishment quarters at Duggirala were constructed.

Drains.—Iskapalli aqueduct of Bhattiprole drain, Langagunta affluent and 1 bridge were completed. The Tungabhadra drain was widened, and Nallamada and Sakkikalva affluents and the Karenchedu drain were completed. The earthwork improvements to the Romperu drain were almost completed to its junction with Sakkikalva affluent (5 miles 37 chains).

4. After providing for all known requirements, except for the works required for carrying out the extension of irrigation recently approved (*vide* paragraph 6), the amount available for unforeseen works is, as shown in the distribution given in the margin of the total amount sanctioned for works outlay, Rs. 3,75,257, which represents the unappropriated balance of the sanctioned provision for the extension of the Eastern Bank canal and the Puligedda aqueduct which are not now required, it having been recently decided that it was unnecessary that any further expenditure should be incurred upon the extension of the Bank canal and the proposed irrigation of 15,000 acres thereby, whilst there is ample area available for irrigation under the Ellore, Ryves and Masulipatam canals.

	Rs.
Old outlay	30,81,755
Outlay incurred on completed works	31,74,637
Outlay incurred on works in progress	14,35,792
Outlay to be incurred to complete works (statement No. II.)	26,63,553
Reserve for unforeseen works ...	3,75,257
Total amount sanctioned for *works.*	1,07,30,994

5. The irrigation under the delta is advancing very rapidly. There was an extension of irrigation from 337,327 acres in 1886–87 to 471,114 acres in 1892–93 and an increase of revenue from Rs. 11,74,582 to Rs. 18,00,680. The financial result during 1892–93 was a net return, after paying interest charges, of 8·87 per cent. on the total capital invested against 7 per cent., the ultimate financial result anticipated.

6 The ultimate area of irrigation as originally contemplated in the project estimates was 475,000 acres, but recent inquiry has shown that it would be unwise to restrict cultivation to that extent. Under the Ellore canal a head sluice and channel for the irrigation of 12,000 acres have already been carried out some years back, but kept closed owing to the restriction placed hitherto upon the extension of irrigation. The Superintending Engineer was therefore instructed * to have this sluice opened during the irrigation season and the effects upon the flow and water levels of the Ellore canal carefully gauged and recorded. He was also requested to forward the necessary estimates of the probable cost of putting the Masulipatam and Ryves canal into a condition fit to cope with the increased supply they may be called upon to carry. An estimate, amounting to Rs. 34,200, for widening the former canal was

* Memo. No. II/27 K S., dated 17th Feb. 1893.

sanctioned in G.O., No. 356 I., dated 22nd April 1893, but the estimate for the latter canal has not yet been submitted. With these canals rendered efficient there is every probability of an extension in both sections of irrigation to the extent of 100,000 acres beyond what was fixed as the ultimate area.

7. As no excess over the sanctioned estimate for the delta is anticipated, merely an extension of the period of sanction for another 5 years is now necessary.

28th Sept. 1893. (Signed) R. R. E. DRAKE-BROCKMAN, Lt.-Col., R.E.,
Chief Engineer for Irrigation.

ENCLOSURES.

STATEMENT showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA EASTERN SECTION.	RS.	RS.	RS.	RS.	RS.	RS.	
				Head Works.							
1	No. 580 I. of 30th June 1893 ..	(1) C.	..	Curtain wall in rear of Seethanagaram head sluices ..	3,300	..	3,300	3,300	..	..	
2	Do. do. ..	..	..	Driving piles in front of Seethanagaram head sluices ..	3,200	..	3,200	3,200	..	..	
				Total ..	6,500	..	6,500	6,500	..	..	
3	....	(1) O.	..	Wire fencing to Public Works Department lands in Buckinghampett	..	..	1,025	1,025	1,025	..	
				Total (1) Head works ..	6,500	..	7,525	7,525	1,025	..	
				Masulipatam canal.							
4	No. 666 I. of 6th Augt. 1892 ..	(2) K.	..	Quarters for lock establishment at Nidamole	1,530	1,104	426	1,530	..	..	
5	* No. 575 I. of 1st July 1880 and No. 562 I. of 7th Oct. 1890 ..	(2) L.	1 12	Improving and widening canal	1,05,200	80,838	24,362	1,05,200	..	..	
6	* No. 356 I. of 22nd April 1893 ..	..	..	Do. do.	34,200	..	34,200	34,200	..	..	
7	No. 575 I. of 1st July 1885 ..	..	..	Stubbing trees	5,000	..	5,000	5,000	..	..	
				Total ..	1,44,400	80,838	63,562	1,44,400	..	..	
				Total (2) Main canals and branches ..	1,45,930	81,942	63,988	1,45,930	..	..	
8	No. 856 I. of 17th Oct. 1892 ..	(3) B.	..	Compensation for land required for west side channel ..	3,000	..	3,000	3,000	..	..	
9	Do. do. ..	..	22 0	Do. do. for Medur channel ..	2,800	..	2,800	2,800	..	..	Lump sum.
10	Do. do. ..	..	..	Do. for Kistnapuram branch of Medur channel.	1,270	..	1,270	1,270	..	..	
11	Do. do. ..	..	..	Do. do. Gudapad of Medur channel.	800	..	800	800	..	..	
				Total ..	7,870	..	7,870	7,870	..	..	
12	No. 856 I. of 17th Oct. 1892 ..	(3) C.	..	Masonry works on west side channel	7,500	..	7,500	7,500	..	..	
13	Do. do. and No. 427 I. of 13th May 1893.	..	22 0	Medur channel head sluice	1,000	273	727	1,000	..	..	Lump sum.
14	Do. do.	..	..	Do. 5 field masonry sluices	500	..	500	500	..	..	
15	No. 573 I. of 29th June 1893 ..	..	..	Do. drop No. 1	435	..	435	435	..	..	
16	Do. do. ..	..	..	Do. drop No. 2 over bridge at 5 miles 1½ furlongs ..	710	..	710	710	..	..	
17	No. 856 I. of 17th Oct. 1892 ..	..	..	Do. drop No. 3 over bridge at 7 miles 6 furlongs ..	575	..	575	575	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA EASTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Masulipatam canal—cont.							
18	No. 856 I. of 17th Oct. 1892 ..	(3) C.	..	Medur tail escape	150	..	150	150	..	..	
19	No. 573 I. of 29th June 1893 ..	..	..	Head sluice to Kistnapatam branch	350	..	350	350	..	..	
20	No. 856 I. of 17th Oct. 1892 ..	..	..	Field masonry sluice	100	..	100	100	..	..	
21	No. 573 I. of 29th June 1893 ..	..	..	Road culvert at 2 miles 5 furlongs across Nidamole road..	550	..	550	550	..	..	
22	No. 856 I. of 17th Oct. 1892 ..	..	..	Tail escape	100	..	100	100	..	..	
23	No. 573 I. of 29th June 1893 ..	..	..	Head sluice to Gudapad branch	390	..	390	390	..	..	
24	No. 856 I. of 17th Oct. 1892 ..	..	..	Tail escape to do.	100	..	100	100	..	..	
25	No. 765 I. of 2nd Sept. 1893 ..	..	22 0	Surplus weir	4,300	..	4,300	4,300	..	..	
				Total ..	16,760	273	16,487	16,760	..	..	
26	* No. 856 I. of 17th Oct. 1892 ..	(3) L.	..	Distributaries of west side channel	18,000	..	18,000	18,000	..	..	
27	Do. do. ..	..	22 0	Medur channel	5,850	..	5,850	5,850	..	..	Lump sum.
28	Do. do. ..	..	..	Kistnapuram branch of Medur channel	3,180	..	3,180	3,180	..	..	
29	Do. do. ..	..	..	Gudapad branch of Medur channel	1,760	..	1,760	1,760	..	..	
			..	Total ..	28,790	..	28,790	28,790	..	..	
30	Appendix D printed in G.O., No. 181 I. of 28th Feb. 1882.	(3) O.	..	Cattle-crossing west side channel	1,500	..	1,500	1,500	..	..	Lump sum.
				Total (3) Distributaries ..	54,920	273	54,647	54,920	..	..	
				Total, Masulipatam canal ..	2,00,850	82,215	1,18,635	2,00,850	..	..	
				Pulleru canal.							
31	....										
32	No. 318 I. of 11th April 1893 ..	(2) B.	..	Compensation for land	..	145	..	145	145	..	
		..	..	Do. required for depositing silt	3,650	..	3,650	3,650	..	..	
33	*	(2) L.	..	Total ..	3,650	145	3,650	3,795	145	..	
				Widening from Pamarru to Cowtaram	..	..	22,000	22,000	22,000	..	
34	No. 455/A. I. of 3rd May 1884 ..	(2) O.	..	Other cattle-crossings	2,745	..	2,745	2,745	..	..	
35	Superintending Engineer's No. 2185 K.S. of 8th Dec. 1891.	..	..	Mile and furlong stones along the Pulleru canal ..	160	80	80	160	..	..	Lump sum.

36	No. 563 I. of 16th July 1891 ..	..	..	Demarcation stones along Upper Pulleru	200	80	120	200	..	..	
				Total ..	3,105	160	2,945	3,105	..	..	
				Total (2)[Main canals and branches ..	6,755	305	28,595	28,900	22,145	..	
37	Para. 80 of the note printed in No. 3528 of 26th Dec. 1876.	(3) B.	..	Kalidindicodu	460	..	460	460	..	..	Lump sum.
38	Do. do. ..	..	..	Pedatummidi channel	1,100	..	1,100	1,100	..	..	Do.
39	No. 632 I. of 8th July 1884 ..	..	..	Bantumilli south side channel	2,080	1,069	1,011	2,080	..	..	
40	Superintending Engineer's No. 2624 K.S. of 16th Mar. 1889.	..	..	Proposed head of Sayarazu Lunkacode	277	..	277	277	..	..	
41	Superintending Engineer's No. 860 K.S. of 2nd July 1890.	..	..	Yedlacodu extension	215	21	194	215	..	..	
42	Superintending Engineer's No. 2989 K.S. of 9th Mar. 1892.	..	..	Right side channel of Motur channel from 2 miles 63 chains	340	60	280	340	..	..	
43	Superintending Engineer's No. 1045 K.S. of 5th Aug. 1892.	..	..	Right side channel of Motur channel from No. 5 or Singanapudi head sluice	107	..	107	107	..	..	
44	No. 691 I. of 30th July 1884 ..	..	..	Channels in the 5th sub-section for which estimates have not yet been prepared	8,015	..	8,015	8,015	..	..	
45	No. 291 I. of 25th Mar. 1891 ..	..	..	Left side channel of Kalidindicodu	1,400	441	959	1,400	..	..	Lump sum.
46	No. 845 I. of 14th Oct. 1892 ..	..	..	Right side channel of Gudivâda channel	103	..	103	103	..	..	
47	No. 824 I. of 22nd Sept. 1893 ..	..	..	Excavating Vennelacodu	240	..	240	240	..	..	
48	No. 3170 K.S. of 22nd Mar. 1893.	..	..	Head to Kanur Subbiacode and Chevandra channel ..	32	..	32	32	..	..	
49	No. 587 I. of 4th July 1893 ..	..	..	Chintalacodu extension	537	..	537	537	..	..	
50	No. 601 I. of 8th July 1893 ..	..	..	Left side channel of Gudivâda channel	241	..	241	241	..	..	
				Total ..	15,147	1,591	13,556	15,147	..	..	
51	No. 845 I. of 14th Oct. 1892 ..	(3) C.	..	Sluice to right side channel of Gudivâda channel ..	436	332	104	436	..	..	
52	No. 455/A. I. of 3rd May 1884 ..	..	..	Pamarru channel, Pengandra branch, one head sluice and one drop	600	..	600	600	..	..	
53	Do. do. ..	..	..	Do. Komaravole branch head sluice ..	223	..	223	223	..	..	Lump sum.
54	Do. do. ..	..	..	Do. culvert under road	150	..	150	150	..	..	
55	No. 573 I. of 29th June 1892 ..	..	..	Regulator in Palacodu for Pengandra branch No. 1 ..	210	..	210	210	..	..	Lump sum.
56	Superintending Engineer's No. 3282 K.S. of 31st March 1892.	..	..	Head sluice to old Palacodu in left bank, Motur channel..	546	..	546	546	..	..	
57	Para. 80 of the note printed with G.O., No. 3528 of 22nd Dec. 1876.	..	..	Fifteen minor sluices	5,250	..	5,250	5,250	..	..	Lump sum.
58	Superintending Engineer's No. 1951 K.S. of 7th Nov. 1892.	..	..	Combined head sluice to Chenandra channel and Kanur Subbiacodu	600	82	518	600	..	..	
59	Superintending Engineer's No. 2502 K.S. of 19th Jan. 1893.	..	..	Bridge at 3rd mile of Doggumilli crossing	900	90	810	900	..	..	
60	Superintending Engineer's No. 1968 K.S. of 8th Nov. 1892.	..	..	Head sluice to Golinepalli channel on the right bank of Gudivâda channel at 2 miles 62 chains.	480	472	8	480	..	..	
61	Do. do. ..	..	..	Do. on the left bank of Gudivâda channel at 4 miles 35 chains	490	..	490	490	..	..	
62	Do. do. ..	..	..	Do. on the right bank of Gudivâda channel at 4 miles 70 chains	490	..	490	490	..	..	
63	Do. do. ..	..	..	Do. on the left bank of Gudivâda channel at 6 miles 59 chains	565	214	351	565	..	..	

Satement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA EASTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Pulleru canal—cont.							
64	No. 449 I. of 17th May 1993 ..	(3) C.	..	Head sluice to Diwan Sahibcodu at 6 miles 3 furlongs of Butlercodu	400	..	400	400	..	..	
65	Do. do. ..	..	..	Head sluice to Vemavaram channel at 6 miles 4 furlongs of Butlercodu	500	..	500	500	..	..	
66	* No. 691 I. of 30th July 1884 ..	..	..	Masonry works on distributaries for which detailed estimates have not been prepared	33,763	574	33,189	33,763	..	..	Lump sum.
67	No. 587 I. of 4th July 1893 ..	..	..	Culvert on Kankipad road over Chintalacodu	510	..	510	510	..	..	
68	No. 824 I. of 22nd Sept. 1893 ..	..	..	Head sluice to Vennelacodu	470	..	470	470	..	..	
				Total ..	46,583	1,764	44,819	46,583	..	..	
69	No. 291 I. of 25th May 1891 ..	(3) L.	..	Kalidindicodu left side channel	2,500	2,012	488	2,500	..	..	
70	Superintending Engineer's No. 2989 K.S. of 9th March 1892.	..	..	Right side channel of Motur channel from 2 miles 63 chains ..	520	15	505	520	..	..	
71	Superintending Engineer's No. 1145 K.S. of 5th Aug. 1892.	..	..	Do. do. from sluice No. 5.	211	..	211	211	..	..	
72	No. 845 I. of 14th Oct. 1892 ..	..	..	Right side channel of Gudivada channel	361	..	361	361	..	..	
73	No. 601 I. of 8th July 1893 ..	..	..	Left side channel of do.	325	..	325	325	..	..	
74	No. 573 I. of 29th June 1892 ..	..	..	Extending the Penjandra branch No. 1	450	..	450	450	..	..	
75	No. 824 I. of 22nd Sept. 1893 ..	..	..	Excavating Vennelacodu	430	..	430	430	..	..	
76	* No. 691 I. of 30th July 1884 ..	..	..	Distributaries	71,927	..	71,927	71,927	..	..	Lump sum.
77	No. 225 I. of 13th March 1893 ..	..	..	Improving the Butlercodu	1,670	..	1,670	1,670	..	..	
78	No. 587 I. of 4th July 1893 ..	..	..	Do. the Chintalacodu	1,320	..	1,320	1,320	..	..	
				Total ..	79,714	2,027	77,687	79,714	..	..	
79	No. 311 I. of 26th Mar. 1885 and No. 591 I. of 29th Nov. 1889.	(3) O.	..	Ankanagudem ramp	625	445	180	625	..	..	
80	Do. do. ..	..	..	Anamanapadi do.	585	..	585	585	..	..	
81	Do. do. ..	..	..	Rudrapaka do.	562	..	562	562	..	..	
82	No. $\frac{455}{A}$ I. of 3rd May 1884 ..	..	..	Pamarru cattle crossing	500	..	500	500	..	..	Lump sums.
83	Do. do. ..	..	..	Palacodu	185	..	185	185	..	..	
84	No. 463 I. of 16th July 1891 ..	..	..	Demarcation stones along Motur channel	770	5	765	770	..	..	
85	Superintending Engineer's No. 2989 K.S. of 29th March 1892.	..	..	Do. to right side channel to Motur channel.	20	..	20	20	..	..	
86	No. 824 I. of 22nd Sept. 1893 ..	..	..	Fixing demarcation stones along Vennelacodu ..	10	..	10	10	..	..	
87	No. 1472 K.S. of 23rd Sept. 1891.	..	..	Do. along Bantumilli canal, south side channel	80	..	80	80	..	..	

88	No. 291 I. of 25th March 1891 ..	..	..	Fixing demarcation stones along Kalidindicodu left side channel	170	39	131	170	..	..	
89	Superintending Engineer's No. 2777 K.S. of 6th Feb. 1891.	..	..	Ramp at Pedapalaparru	420	362	58	420	..	..	
90	No. 2576 K.S. of 26th Jan. 1893.	..	..	Demarcation stones to side channel along Bantumilli canal, south side channel	40	4	36	40	..	..	
91	No. 587 I. of 4th July 1893 ..	..	..	Demarcation stones along Chintalacodu	73	..	73	73	..	..	
92	No. 601 I. of 8th July 1893 ..	..	..	Do. left side channel of Gudivada channel	14	..	14	14	..	..	
				Total ..	4,054	855	3,199	4,054	..	..	
				Total (3) Distributaries ..	1,45,498	6,237	1,39,261	1,45,498	..	..	
				Total, Pulleru canal ..	1,52,253	6,542	1,67,856	1,74,398	22,145	..	
				Pamarru junction canal.							
93	No. 709 I. of 23rd Aug. 1892 ..	(2) K.	..	Lock lascars' sheds	810	344	466	810	..	..	
				Total, Pamarru junction canal ..	810	344	466	810	..	..	
				Polraz canal.							
94	No. 363 I. of 25th April 1893 ..	..	..	Single lock lascar's shed at Vinjeram	330	..	330	330	..	..	
95	Superintending Engineer's No. 2953 K.S. of 7th March 1892.	(2) O.	..	Demarcation stones from Mudinepalli bridge	300	..	300	300	..	..	
				Total (2) Main canals and branches ..	630	..	630	630	..	..	
96	No. 313 I. of 2nd July 1889 ..	(3) B.	..	Peddakommileru south side channel	2,014	1,513	501	2,014	..	..	
97	No. 476 I. of 20th May 1892 ..	..	..	Kykalur channel (loss of crop)	3,000	2,999	1	3,000	..	..	
98	No. 984 I. of 19th Dec. 1 91 ..	..	..	Branch No. 1 of Peddakommileru south side channel ..	4,390	..	4,390	4,390	..	..	
99	Superintending Engineer's No. 3123 K.S. of 11th March 1891.	..	..	Kallapallem side channel	550	..	550	550	..	..	
100	No. 531 I. of 1st July 1891 ..	..	..	Korlapad channel	610	..	610	610	..	..	
101	Superintending Engineer's No. 2909 K.S. of 25th Feb. 1893.	..	..	Korlapad side channel	278	..	278	278	..	..	
102	No. 635 I. of 19th July 1893 ..	..	..	Branch No. II, Peddakommileru south side channel ..	231	..	231	231	..	..	
103	....	..	..	Compensation for Chigurukota channel	..	49	..	49	49	..	
				Total ..	11,073	4,561	6,561	11,122	49	..	
104	No. 313 I. of 2nd July 1889 ..	(3) C.	..	Sluice to left bank at 10 miles 1,188 feet	335	42	293	335	..	..	
105	Do. do. ..	..	..	Do. to right bank at 10 miles 1,320 feet	337	20	317	337	..	..	
106	No. 606 I. of 11th July ..	..	..	Three earthenware pipe sluices at right bank	300	..	300	300	..	..	
107	No. 531 I. of 1st July 1891 ..	..	..	Head sluice to Koralapad channel	1,000	787	213	1,000	..	..	
108	No. 313 I. of 2nd July 1889 and Superintending Engineer's No. 2871 K.S. of 13th Feb. 1891.	..	..	Seven minor sluices	300	..	300	300	..	..	Lump sum.
109	Superintending Engineer's No. 2762 K.S. of 13th Feb. 1893.	..	..	Peddakommileru north side channel, right bank sluice, at .. .. .. 0 mile 3,000 feet ..	80	..	80	80	..	..	
110	Do. do. ..	..	..	Do. do. 1 ,, 720 ,, ..	80	..	80	80	..	..	
111	Do. do. ..	..	..	Do. do. 3 miles 1,660 ,, ..	80	..	80	80	..	..	
112	Do. do. ..	..	..	Do. do. 4 ,, 3,980 ,, ..	80	..	80	80	..	..	
113	Do. do. ..	..	..	Do. do. 6 ,, 950 ,, ..	174	..	174	174	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA EASTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Polraz canal—cont.							
114	Superintending Engineer's No. 2762 K.S. of 13th Feb. 1893 ..	..	..	Peddakommileru north side channel, right bank sluice, at 7 miles 1,955 feet ..	188	..	188	188	..	..	
115	Do. do. ..	..	..	Do. do. 8 ,, 2,285 ,, ..	89	..	89	89	..	..	
116	Do. do. ..	..	..	Do. do. 9 ,, 4,325 ,, ..	89	..	89	89	..	..	
117	Do. do. ..	..	..	Lingala channel head sluice	..	..	900	900	900	..	
118	Do. do. ..	..	..	Do. aqueduct	..	..	1,200	1,200	1,200	..	
119	No. 635 I. of 19th July 1893 ..	..	..	Head sluice to Peddakommileru branch No. II ..	480	..	480	480	..	..	
120	Do. do. ..	..	..	No. 1 sluice at 0 mile 4,620 feet of do. .. .	100	..	100	100	..	..	
121	Do. do. ..	..	..	,, 2 do. at 1 ,, 3,300 ,, do.	180	..	180	180	..	..	
122	Do. do. ..	..	..	,, 3 do. at 2 miles 1,900 ,, do.	180	..	180	180	..	..	
123	Do. do. ..	..	..	Under-tunnel at the head at 0 miles 3,960 feet ..	170	..	170	170	..	..	
124	No. 247 I. of 10th Mar. 1885 ..	..	..	Head sluice to Rudravaram channel	310	..	310	310	..	..	
125	.... ..	..	..	Kykalur road side channel head sluice	..	..	490	490	490	..	
				Total ..	4,552	849	6,293	7,142	2,590	..	
126	No. 313 I. of 2nd July 1889 ..	(3) L.	..	Ten minor distributaries	4,212	..	4,212	4,212	..	..	
127	No. 328 K.S. of 25th Mar. 1891 ..	..	..	Chevurcodu	2,300	1,764	536	2,300	..	..	
128	No. 551 I. of 1st July 1891 ..	..	..	Korlapad channel	1,680	1,235	445	1,680	..	..	Lump sum.
129	No. 2909 K.S. of 25th Feb. 1893 ..	..	..	Korlapad side channel	260	..	260	260	..	..	
130	.... ..	..	..	Lingala channel	..	..	2,000	2,000	2,000	..	
131	No. 635 I. of 19th July 1893 ..	..	..	Peddakommileru, branch No. II	1,950	..	1,950	1,950	..	..	
132	.... ..	..	..	Extending and improving Kykalur channel	..	..	3,600	3,600	3,600	..	
133	.... ..	..	..	Do. Peddakommileru south side channel.	..	..	1,630	1,630	1,630	..	
134	.... ..	..	..	Rudravaram channel, extending and improving ..	..	..	4,000	4,000	4,000	..	
135	.... ..	..	..	Kykalur road side channel	..	..	360	360	360	..	
				Total ..	10,402	2,999	18,993	21,992	11,590	..	
136	Superintending Engineer's No. 3123 K.S. of 11th Mar. 1891 ..	(3) O.	19 60	Demarcation stones along Kallapalem side channel ..	80	14	66	80	..	..	
137	No. 531 I. of 1st July 1891 ..	..	12 5	Do. Korlapad channel	60	10	50	60	..	..	
138	No. 984 I. of 19th Dec. 1891 ..	..	3 1	Do. branch No. 1, Peddakommileru south side channel ..	260	43	217	260	..	..	
139	No. 313 I. of 2nd July 1889 ..	..	..	Cattle ramps at 5 miles 1,122 feet	272	..	272	272	..	..	
140	Do. do. ..	..	..	Do. on Peddakommileru south side channel ..	464	338	126	464	..	..	
141	Do. do. ..	..	..	Do. do. north side channel ..	387	224	163	387	..	..	
142	Superintending Engineer's No. 3286 K.S. of 25th Mar. 1891 ..	..	..	Do. Chevurukodu	200	50	150	200	..	..	
143	Superintending Engineer's No. 2909 K.S. of 25th Feb. 1893 ..	..	..	Do. Korlapad side channel	22	..	22	22	..	..	
144	No. 635 I. of 19th July 1893 ..	..	..	Demarcation stones along Pedakommileru south side channel, branch No. II	59	..	59	59	..	..	
				Total ..	1,804	679	1,125	1,804	..	..	
				Total (3) Distributaries ..	27,831	9,088	32,972	42,060	14,229	..	
145	Para. 77 of the note printed in G.O. No. 3528 of 22nd Dec. 1873.	(4) B.	..	Upputeru	150	..	150	150	..	..	
146	Superintending Engineer's No. 861 K.S. of 2nd July 1890.	..	..	Compensation for ring channel through Kottada weir ..	35	..	35	35	..	..	
				Total ..	185	..	185	185	..	..	
147	Do. do. ..	(4) L.	..	Embanking Upputeru	2,710	..	2,710	2,710	..	..	
148	Do. do. ..	..	..	Do.	795	..	795	795	..	..	
				Total ..	3,505	.	3,505	3,505	..	..	
				Total (4) Drainage and protective works ..	3,690	..	3,690	3,690	..	..	
				Total, Polraz canal ..	32,151	9,088	37,292	46,380	14,229	..	
				Bantumilli canal.							
149	No. 30 I. of 13th Jan. 1883 ..	(2) B.	..	Compensation for land—old claims	30	..	30	30	..	..	
150	No. 710 I. of 4th Dec. 1890 ..	..	..	Compensation for Bantumilli canal extension to Upputeru.	6,200	441	5,759	6,200	..	..	
				Total ..	6,230	441	5,789	6,230	..	..	
151	No. 710 I. of 4th Dec. 1890 and No. 411 I. of 6th May 1893.	(2) I.	..	Tidal lock near Lakshmipuram	31,000	25,342	5,658	31,000	..	..	
152	Do. do. ..	..	..	Lock weir near Lakshmipuram	4,910	4,641	269	4,910	..	..	
				Total ..	35,910	29,983	5,927	35,910	..	..	
153	No. 30 I. of 13th Jan. 1883 ..	(2) K.	..	Chandrala rest-house	1,300	..	1,300	1,300	..	..	
154	No. 363 I. of 25th April 1893 ..	..	..	Single lock lascar's shed at Kamalapuram	310	..	310	310	..	..	Lump sum.
				Total ..	1,610	..	1,610	1,610	..	..	
155	No. 710 I. of 4th Dec. 1890 ..	(2) L.	..	Canal extension	46,980	43,673	3,307	46,980	..	..	
156	No. 30 I. of 13th Jan. 1883 No. 349 I. of 1st April 1885 and No. 710 I. of 4th Dec. 1890	..	..	Widening and deepening	15,300	10,278	5,022	15,300	..	..	
157	.... ..	..	..	Widening from Cowtaram to Kamalapuram	..	..	3,550	3,550	3,550	..	
				Total ..	62,280	53,951	11,879	65,830	3,550	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892–93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA EASTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Bantumilli canal—cont.							
158	No. 30 I. of 18th Jan. 1883 ..	(2) G.	..	Cowtaram ramp	280	..	280	280	..	..	Lump sums.
159	Do. do. ..	..	..	Daggumilli do.	300	..	300	300	..	..	
160	Do. do. ..	..	..	Cherandra do.	420	..	420	420	..	..	
161	Do. do. ..	..	..	Nallagunta do.	290	..	290	290	..	..	
162	Do. do. ..	..	..	Kalanagunta do.	190	..	190	190	..	..	
163	Do. do. ..	..	..	Satulur do.	360	..	360	360	..	..	
164	Do. do. ..	..	..	Amudalapalli do.	345	..	345	345	..	..	
165	Do. do. ..	..	..	Cruttivennu do.	530	..	530	530	..	..	
166	Do. do. ..	..	..	Chendrala do.	515	..	515	515	..	..	
167	No. 710 I. of 4th Dec. 1890 ..	..	..	Demarcation stones along canal extension	480	108	372	480	..	..	
				Total ..	3,710	108	3,602	3,710	..	..	
				Total (2) Main canals and branches ..	1,09,740	84,483	28,807	1,13,290	3,550	..	
168	Superintending Engineer's No. 3199 K.S. of 24th Mar. 1893 ..	(3) B.	..	Old claims—Chennu Addacodu	159	..	159	159	..	..	
169	No. 490 I. of 28th Nov. 1889 ..	..	..	Compensation for land required for the main distributary	3,436	..	3,436	3,436	..	..	
170	Superintending Engineer's No. 2198 K.S. of 29th Nov. 1890 ..	..	..	Right side channel of Kaldindi	210	51	159	210	..	..	
171	....	..	..	Kamalapuram north side channel	1,456	..	1,456	1,456	..	..	
				Total ..	5,261	51	5,210	5,261	..	..	
172	No. 738 I. of 29th Aug. 1892 ..	(3) C.	..	Fender piles to the head of Kamalapuram lock weir ..	1,080	821	259	1,080	..	..	
173	No. 412 I. of 6th May 1893 ..	..	..	Head sluice to Lellaboracodu	390	..	390	390	..	..	
174	No. 590 I. of 28th Nov. 1889 ..	..	..	Sluice to Doddicodu	540	468	72	540	..	..	
175	Do. do. ..	..	..	Sluice to Rallaguntacodu	555	479	76	555	..	..	
176	Do. do. ..	..	..	Bridge with regulator on Bantumilli road at 5 miles 2,070 feet	2,202	2,073	129	2,202	..	..	
177	Do. do. ..	..	..	Sluice to road side channel	917	803	114	917	..	..	
178	Do. do. ..	..	..	Do. Gauganammacodu	493	434	59	493	..	..	
179	Do. do. ..	..	..	Do. Vaivaka channel	842	682	160	842	..	..	
180	Do. do. ..	..	..	Do. Nadimirecodu	460	318	142	460	..	..	
181	Do. do. ..	..	..	Do. Avakur channel	468	384	84	468	..	..	
182	Do. do. ..	..	..	Do. Tail escape	270	124	146	270	..	..	
183	No. 257 I. of 23rd Mar. 1893 ..	..	..	Do. Yurinicodu on left bank	430	178	252	430	..	..	
184	No. 257 I. of 23rd March 1893 ..	..	..	Sluice to Chennur Addacodu on left bank	460	143	317	460	..	..	
185	Do. do. ..	..	..	Do. Tummidicodu do.	455	145	310	455	..	..	
186	Do. do. ..	..	..	Do. Gorricodu do.	455	147	308	455	..	..	
187	Do. do. ..	..	..	Do. Rallaguntacodu do.	500	154	346	500	..	..	
188	Do. do. ..	..	..	Do. Vonudurru do.	510	180	330	510	..	..	
189	Do. do. ..	..	..	Do. Vaivaka channel do.	530	169	361	530	..	..	
190	....	..	..	Head sluice to Kamalapuram north side channel ..	1,040	..	1,040	1,040	..	..	
191	....	..	..	No. 1 sluice at 1 mile 7 furlongs and 530 feet of Kamalapuram north side channel ..	185	..	185	185	..	..	
192	....	..	..	,, 2 do. at 2 miles 7 furlongs 150 feet	179	..	179	179	..	..	
193	....	..	..	,, 3 do. at 3 ,, 7 ,, 400 ,, ...	175	..	175	175	..	..	
194	....	..	..	,, 4 do. at 4 ,, 5 ,, 300 ,, ...	162	..	162	162	..	..	
195	....	..	..	,, 5 do. at 5 ,, 3 ,, 200 ,, ...	177	..	177	177	..	..	
196	....	..	..	,, 6 do. at 5 ,, 6 ,, 330 ,, ...	172	..	172	172	..	..	
197	....	..	..	Head sluice to Bantumilli north side channel	..	..	600	600	600	..	
				Total ..	13,647	7,702	6,545	14,247	600	..	
198	No. 590 I. of 20th Nov. 1889 ..	(3) L.	..	Minor channel	3,150	..	3,150	3,150	..	..	Lump sum.
199	No. 3199 K.S. of 24th March 1893.	..	..	Chennur Addacodu	671	107	564	671	..	..	
200	....	..	..	Improvements to distributaries of main distributary ..	..	..	5,000	5,000	5,000	..	
201	....	..	..	Do. to Kamalapuram south side channel ..	..	..	1,000	1,000	1,000	..	
202	....	..	..	Kamalapuram north side channel	3,590	..	3,590	3,590	..	..	
203	....	..	..	Bantumilli do.	..	..	2,400	2,400	2,400	..	
				Total ..	7,411	107	15,704	15,811	8,400	..	
204	No. 590 I. of 20th Nov. 1889 ..	(3) O.	..	Demarcation stones along Bantumilli main distributary.	448	62	356	418	..	..	
205	No. 590 I. of 20th Nov. 1889 and Superintending Engineer's No. 2198 K.S. of 29th Nov. 1890.	..	..	Do. along left side channel of Bantumilli canal	30	14	16	30	..	..	
206	Superintending Engineer's No. 3199 K.S. of 24th March 1893.	..	..	Do. along Chennur Addacodu	20	..	20	20	..	..	
207	Superintending Engineer's No. 1032 K.S. of 5th Aug. 1891.	..	..	Do. along right side channel of Kamalapuram south side channel ..	150	24	126	150	..	..	
208	....	..	..	Do. along Kamalapuram north side channel.	134	..	134	134	..	..	
				Total ..	752	100	652	752	..	..	
				Total (3) Distributaries ..	27,071	7,960	28,111	36,071	9,000	..	
				Total, Bantumilli canal ..	1,36,811	92,443	56,918	1,49,361	12,550	..	
				Ellore canal.							
209	Superintending Engineer's No. 2244 K.S. of 12th Dec. 1891.	(2) B.	..	Rest-house at Perikede	30	..	30	30	..	..	
210	No. 314 I. of 2nd June 1888 ..	(2) F.	32 29	Inlet	190	..	190	190	..	..	
211	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876.	(2) I.	..	Kalaparru bridge towpath	430	..	430	430	..	..	
212	* Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876.	..	..	Ellore do.	455	..	455	455	..	..	
213	No. 304 I. of 7th April 1893 ..	..	..	Wharf wall at Ellore	11,300	402	10,898	11,300	..	..	
				Total ..	12,185	402	11,783	12,185	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892–93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA EASTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Ellore canal—cont.							
214	No. 314 I. of 2nd June 1888 ..	(2) O.	9 75	Nakkalam cattle-crossing	436	..	436	436	..	..	
				Total (2) Main canals and branches ..	12,841	402	12,439	12,841	..	..	
215	No. 314 I. of 2nd June 1888 ..	(3) B.	11 70	Kesavapalli channel	200	..	200	200	..	..	
216	No. 226 I. of 13th March 1893 ..	..	14 30½	Ungutúr channel	3,370	..	3,370	3,370	..	..	Lump sum.
217	Do. do. ..	..	..	Do. right side channel	105	..	105	105	..	..	
218	Do. do. ..	..	..	Do. left do.	720	..	720	720	..	..	
219	No. 314 I. of 2nd June 1888 and 2 I. of 4th January 1892.	..	17 26	Ponukumad channel	910	..	910	910	..	..	
220	Do. do. ..	..	..	Do. right side channel	50	..	50	50	..	..	
221	Do. do. ..	..	..	Do. left do.	160	..	160	160	..	..	
222	No. 397 I. of 2nd May 1893 ..	..	..	Do. left side extension	310	..	310	310	..	..	
223	No. 226 I. of 13th March 1893 ..	..	20 41	Chirivada channel	2,489	..	2,489	2,489	..	..	
224	No. 65 I. of 21st January 1892 ..	..	22 36	Viravalli do.	1,640	..	1,640	1,640	..	..	
225	Do. do. ..	..	..	Do. right side channel	410	..	410	410	..	..	
226	No. 314 I. of 2nd June 1888 and No. 897 of 21st November 1891.	..	26 2	Kakulapad channel	1,030	..	1,030	1,030	..	..	
227	No. 635 I. of 9th July 1884 ..	..	36 20	Mupparru do.	450	..	450	450	..	..	
228	No. 373 I. of 28th April 1893 ..	..	..	Demarcating land for Madepalli channel	300	..	300	300	..	..	
229	No. 576 I. of 22nd July 1891 ..	..	..	Wutlur right side channel	137	..	137	137	..	..	
230	Do. do. ..	..	..	Do. left do.	130	..	130	130	..	..	
231	No. 2 I of 4th January 1892 ..	..	30 40	Pedapad channel	830	..	830	830	..	..	
232	Do. do. ..	..	..	Do. right side channel	110	..	110	110	..	..	
233	Do. do. ..	..	..	Do. left do.	170	..	170	170	..	..	
234	No. 455 I. of 18th May 1893 ..	..	..	Do. do. extension	163	..	163	163	..	..	
235	No. 488 I. of 2nd June 1893 ..	..	28 60	Gogunta channel	1,930	..	1,930	1,930	..	..	
236	Do. do. ..	..	..	Do. right side channel	180	..	180	180	..	..	
237	Do. do. ..	..	..	Do left do.	340	..	340	340	..	..	
238	No. 496 I. of 6th June 1893 ..	..	40 10	Chataparru channel	910	..	910	910	..	..	
239	....	..	23 91	Tippanagunta channel	..	..	400	400	400	..	
				Total ..	17,044	..	17,444	17,444	400	..	

240	Para. 50 of the note printed in No, 3528 of 22nd Dec. 1876.	(3) C.	11 70	Kesarapalli channel	350	..	350	350	..	..	
241	No. 226 I. of 13th Mar. 1893 ..	..	14 30½	Ungutúr do. head sluice	2,340	2	2,338	2,340	..	..	Lump sum.
242	Do. do. ..	..	..	Drop No. 1	600	..	600	600	..	..	
243	Do. do. ..	..	..	Do. ,, 2	350	..	350	350	..	..	
244	Do. do. ..	..	..	Tail escape	395	..	395	395	..	..	
245	Do. do. ..	..	20 41	Chirivada channel, head sluice	1,362	..	1,362	1,362	..	..	
246	Do. do. ..	..	..	Drop No. 1	685	..	685	685	..	..	
247	Do. do. ..	..	..	Do. ,, 2	570	..	570	570	..	..	
248	Do. do. ..	..	..	Do. ,, 3	430	..	430	430	..	..	
249	Do. do. ..	..	..	Do. ,, 4	450	..	450	450	..	..	
250	No. 635 I. of 9th July 1884 ..	..	..	Minor sluices, Mupparru channel	390	294	96	390	..	..	
251	No. 314 I. of 2nd June 1888 ..	(3) C.	39 43	Madepalli channel, under-tunnel	1,234	651	583	1,234	..	..	
252	Do. do. ..	..	39 54	Do. culvert	1,741	1,556	185	1,741	..	..	
253	Do. do. ..	..	39 73	Do. under-tunnel	1,234	798	436	1,234	..	..	
254	Do. do. ..	..	..	Do. (9) minor sluices	1,350	92	1,258	1,350	..	..	
255	No. 576 I. of 22nd July 1891 ..	..	..	Watlur channel drop	390	250	140	390	..	..	
256	No. 897 I. of 21st Nov. 1891 ..	..	..	Under-tunnel at 11,240 feet of Kakulapad channel ..	900	460	440	900	..	..	
257	Do. do. ..	..	..	Field masonry sluice, No. 1, left bank	140	4	136	140	..	..	
258	Do. do. ..	..	..	Do. ,, 2 do.	140	4	136	140	..	..	
259	Do. do. ..	..	..	Do. ,, 3 do.	150	..	150	150	..	..	
260	Do. do. ..	..	..	Do. ,, 4 do.	180	..	180	180	..	..	
261	Do. do. ..	..	..	Do. ,, 1, right bank	140	..	140	140	..	..	
262	Do. do. ..	..	..	Do. ,, 2 do.	180	..	180	180	..	..	
263	No. 397 I. of 2nd May 1893 ..	..	..	Improvements to left side vent, Punukumad left side channel	120	..	120	120	..	..	
264	Do. do. ..	..	..	Aqueduct do. do.	1,730	..	1,730	1,730	..	..	
265	No. 2 I. of 4th Jan. 1892 ..	..	..	Peddapad channel, drop No. 1	400	366	34	400	..	..	
266	Do. do. ..	..	..	Do. do. ,, 2	400	340	60	400	..	..	
267	Do. do. ..	..	..	Do. do ,, 3	370	318	52	370	..	..	
268	Do. do. ..	..	30 40	Four field masonry sluices	640	96	544	640	..	..	
269	No. 595 I. of 7th July 1893 ..	..	..	Road culvert to Punukollu road	680	148	532	680	..	..	
270	No. 65 I. of 21st Jan. 1892 ..	..	..	Viravalli channel, drop No. 1	320	99	221	320	..	..	
271	Do. do. ..	..	..	Do. do. ,, 2	320	93	227	320	..	..	
272	Do. do. ..	..	..	Do. do. ,, 3	290	84	206	290	..	..	
273	Do. do. ..	..	..	Do. field masonry sluice No. 1	190	5	185	190	..	..	
274	Do. do. ..	..	..	Do. do. ,, 2	210	2	208	210	..	..	
275	No. 488 I. of 2nd June 1893 ..	(3) C.	28 60	Gogunta channel, head sluice	2,380	..	2,380	2,380	..	..	
276	Do. do. ..	..	..	Do. drop No. 1	520	..	520	520	..	..	
277	Do. do. ..	..	..	Do. do. ,, 2	520	..	520	520	..	..	
278	Do. do. ..	..	..	Do. do. ,, 3	530	..	530	530	..	..	
279	Do. do. ..	..	..	Do. do. ,, 4	470	..	470	470	..	..	
280	No. 496 I. of 6th June 1893 ..	..	40 10	Chataparru channel, head sluice	1,050	..	1,050	1,050	..	..	
281	Do. do. ..	..	..	Do. drop No. 1	500	..	500	500	..	..	
282	Do. do. ..	..	..	Do. do. ,, 2	500	..	500	500	..	..	
283	Do. do. ..	..	23 1	Tippanagunta channel, masonry works	..	..	3,000	3,000	3,000	..	
				Total ..	27,841	5,662	25,179	30,841	3,000	..	
284	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876.	(3) L.	11 70	Kesarapalli channel	650	..	650	650	..	..	
285	No. 226 I. of 13th Mar. 1893 ..	..	14 30½	Ungutur channel, excavation	4,560	..	4,560	4,560	..	..	Lump sum.
286	Do. do. ..	..	..	Do. earthenware pipes	460	..	460	460	..	..	
287	Do. do. ..	..	..	Ungutur right side channel, excavation	60	..	60	60	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA EASTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Ellore canal—cont.							
288	No. 226 I. of 13th Mar. 1893 ..	..	..	Ungutur right side channel, earthenware pipes ..	70	..	70	70	..	..	
289	Do. do. ..	..	..	Ungutur left side channel, excavation	620	..	620	620	..	..	
290	Do. do. ..	..	..	Do. do. earthenware pipes ..	140	..	140	140	..	..	
291	No. 2 I. of 4th Jan. 1892, para. 50 of the note printed in G.O. No. 3528 of 22nd Dec. 1876. ..	..	..	Ponukumad channel, excavation	2,110	1,657	453	2,110	..	..	
292	No. 397 I. of 2nd May 1893 ..	..	..	Do. left side channel, extension ..	370	..	370	370	..	..	
293	Do. do. ..	..	..	Do. earthenware pipes	100	..	100	100	..	..	
294	Do. do. ..	..	..	Do. palmyra spouts	30	15	15	30	..	..	
295	No. 226 I. of 13th Mar. 1893, Para. 50 of the note printed in G.O. No. 3528 of 22nd Dec. 1876.	(3) L.	20 41	Chirivada channel, excavation	4,954	..	4,954	4,954	..	..	
296	Do. do. ..	..	..	Do. earthenware pipes	610	..	610	610	..	..	
297	No. 576 I. of 22nd July 1891 ..	..	..	Viravalli channel, box sluices and spouts	280	3	277	280	..	..	
298	Do. do. ..	..	..	Viravalli right side channel, excavation	280	247	33	280	..	..	
299	Do. do. ..	..	..	Do. do. palmyra spouts	20	..	20	20	..	..	
300	Do. do. ..	..	..	Kakulapad channel	1,950	1,461	489	1,950	..	..	
301	Do. do. ..	..	..	Do. six box sluices	300	..	300	300	..	..	
302	Do. do. ..	..	..	Side channel to Mupparru channel	408	313	95	408	..	..	
303	No. 303 I. of 7th April 1893 ..	..	..	Madepalli channel, extension	2,150	..	2,150	2,150	..	..	
304	No. 644 I. of 18th Sept. 1886 ..	..	39 11	Do. side channel	570	..	570	570	..	..	
305	Do. do. ..	..	..	Channel parallel to Ellore canal on left of do. ..	400	24	376	400	..	..	
306	Do. do. ..	..	..	Do. do. on right of do.	44	..	44	44	..	..	
307	Do. do. ..	..	39 54	Side channel right of Madepalli channel	43	..	43	43	..	..	
308	No. 488 I. of 2nd June 1893 ..	..	28 60	Gogunta channel, excavation	2,490	..	2,490	2,490	..	..	
309	Do. do. ..	..	..	Do. earthenware pipes	150	..	150	150	..	..	
310	Do. do. ..	..	..	Gogunta channel, right side channel, excavation ..	210	..	210	210	..	..	
311	Do. do. ..	..	..	Do. earthenware pipes	80	..	80	80	..	..	
312	Do. do. ..	..	..	Gogunta channel, left side channel, excavation ..	630	..	630	630	..	..	
313	Do. do. ..	..	..	Do. earthenware pipes	160	..	160	160	..	..	
314	No. 496 I. of 6th June 1893 ..	..	..	Chataparru channel, excavation	780	..	780	780	..	..	
315	Do. do. ..	..	..	Do. earthenware pipes	80	..	80	80	..	..	
316	No. 576 I. of 22nd July 1891 ..	..	..	Wutlur right side channel	292	214	78	292	..	..	
317	Do. do. ..	(3) L.	..	Pedapad channel	1,560	1,287	173	1,560	..	..	
318	No. 455 I. of 18th May 1893 ..	..	..	Do. left side channel, extension	1,377	..	1,377	1,377	..	..	
319	Do. do. ..	..	..	Tippanagunta channel	..	..	2,000	2,000	2,000	..	
				Total ..	28,988	5,321	25,667	30,988	2,000	..	
320	No. 467 I. of 17th Nov. 1886 ..	(3) O.	..	Madepalli channel, cattle-crossing	394	..	394	394	..	..	
321	Do. do. ..	..	..	Do. demarcation stones	..	..	300	300	300	..	
322	No. 226 I. of 13th Mar. 1893 ..	..	14 30½	Demarcation stones, Ungutur channel	260	..	260	260	..	..	
323	Do. do. ..	..	..	Do. right side channel of do. ..	10	..	10	10	..	..	
324	Do. do. ..	..	..	Do. left do. do. ..	40	..	40	40	..	..	
325	Do. do. ..	..	20 41	Do. Chirivada channel	250	..	250	250	..	..	
326	No. 897 I. of 21st Nov. 1891 ..	..	..	Do. Kakulapad channel	200	..	200	200	..	..	
327	Do. do. ..	..	..	Do. Ponukumad channel	140	25	115	140	..	..	
328	Do. do. ..	..	..	Do. do. right side channel ..	10	..	10	10	..	..	
329	Do. do. ..	..	..	Do. do. left side do. ..	20	..	20	20	..	..	
330	No. 397 I. of 2nd May 1893 ..	..	..	Do. do. do. extension ..	30	..	30	30	..	..	
331	No. 2 I. of 4th Jan. 1892 ..	..	..	Do. Pedapad channel	100	13	87	100	..	..	
332	Do. do. ..	..	..	Do. do. right side channel ..	12	2	10	12	..	..	
338	Do. do. ..	..	..	Do. do. left side do ..	50	12	38	50	..	..	
334	No. 455 I. of 18th May 1893 ..	..	..	Do. do. do. extension ..	60	..	60	60	..	..	
335	No. 576 I. of 22nd July 1891 ..	..	..	Do. Wutlur channel	50	12	38	50	..	..	
336	Do. do. ..	..	..	Do. do. right side channel ..	21	3	18	21	..	..	
337	Do. do. ..	..	..	Do. do. left do. ..	18	2	16	18	..	..	
338	No. 65 I. of 21st January 1892 ..	..	..	Do. Viravalli channel	140	4	136	140	..	..	
339	Do. do. ..	..	..	Do. do. right side channel ..	30	..	30	30	..	..	
340	No. 488 I. of 2nd June 1893 ..	..	28 60	Do. Gogunta channel	130	..	130	130	..	..	
341	Do. do. ..	..	..	Do. do. right side channel ..	30	..	30	30	..	..	
342	Do. do. ..	..	..	Do. do. left side do. ..	50	..	50	50	..	..	
343	No. 496 I. of 6th June 1893 ..	(3) O.	..	Do. Chataparru channel	140	..	140	140	..	..	
				Total ..	2,185	73	2,412	2,485	300	..	
				Total (3) Distributaries ..	76,058	11,056	70,702	81,758	5,700	..	
344	No. 314 I. of 2nd June 1888 ..	(4) B.	8 40	Nakkalam drain	160	..	160	160	..	..	
345	Do. do. ..	..	10 20	Kesavapalli do.	308	..	308	308	..	..	
346	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876 ..	..	16 0	Avatipalli do.	300	..	300	300	..	..	
347	Do. do. ..	..	17 0	Atukur drain	80	..	80	80	..	..	
348	Do. do. ..	..	19 0	Pottipad drain	50	..	50	50	..	..	
349	No. 314 I. of 2nd June 1888 ..	..	..	Ampapuram do.	255	..	255	255	..	..	
350	No. 314 I. of 2nd June and No. 410 I. of 14th May 1891. ..	..	23 10	Viravalli do.	250	..	250	250	..	..	
351	Do. do. ..	..	25 5	Narasanapalem drain	90	..	90	90	..	..	
352	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876. ..	..	24 0	Canumole drain	225	..	225	225	..	..	
353	Do. do. ..	..	27 0	Perikeed do.	170	..	170	160	..	..	
354	Do. do. ..	..	28 0	Ramileru do.	80	..	80	80	..	..	
355	No. 314 I. of 2nd June 1888 ..	..	29 70	Totagudem do.	50	..	50	50	..	..	
356	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876. ..	..	31 0	Punukollu do.	40	..	40	40	..	..	
357	No. 314 I. of 2nd June 1888 ..	..	33 40	Pedapad do.	100	..	100	100	..	..	
358	Do. do. ..	..	..	East Tammiluru flood bank	80	..	80	80	..	..	
359	Para 50 of the note printed in No. 3528 of 22nd Dec. 1876. ..	..	35 77	Wutlur drain	70	..	70	70	..	..	
360	Do. do. ..	..	37 10	West Tammileru drain	300	..	300	300	..	..	
361	Do. do. ..	..	39 5	Jalipudi drain	100	..	100	100	..	..	
362	No. 653 I. of 13th Nov. 1890 ..	..	..	Compensation for Budameru widening	480	..	480	480	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA EASTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Ellore canal—cont.							
363	No. 495 I. of 9th Sept. 1890 ..	..	..	Compensation for raising the Budameru flood bank from Moparru to Aripirala.	104	..	104	104	..	..	
				Total ..	3,292	..	3,292	3,292	..	..	
364	....	(4) C.	..	Ten foot bridges across drains	..	..	5,000	5,000	5,000	..	
365	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876.	(4) L.	27 0	Perikeed drain	300	..	300	300	..	..	
366	Do. do. ..	..	28 0	Ramileru do.	60	..	60	60	..	..	
367	Do. do. ..	..	31 0	Punukollu do.	20	..	20	20	..	..	
368	Do. do. ..	..	35 77	Wutlur do.	300	..	300	300	..	..	
369	Do. do. ..	..	37 10	West Tammileru drain	2,500	..	2,500	2,500	..	..	Lump sum.
370	Do. do. ..	..	39 5	Jalipudi drain	300	..	300	300	..	..	
371	Do. do. ..	..	..	East Tammileru drain	2,165	..	2,165	2,165	..	..	Lump sum.
372	No. 314 I. of 2nd June 1888 ..	..	8 40	Nakkalam drain	425	..	425	425	..	..	
373	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876.	..	10 21	Kesavapalli do.	300	..	300	300	..	..	
374	Do. do. ..	..	16 0	Avatapalli do.	400	..	400	400	..	..	
375	Do. do. ..	..	17 0	Atukur do.	490	..	490	490	..	..	
376	Do. do. ..	..	19 0	Pottipad do.	150	..	150	150	..	..	
377	No. 314 I. of 2nd June 1888 ..	..	21 20	Ampapuram drain	3,187	1,835	1,352	3,187	..	..	
378	Para. 58 of the note printed in No. 3528 of 2nd Dec. 1876	..	22 50	Nellivagu do.	830	..	830	830	..	..	
379	Do. do. ..	..	24 0	Canumole do.	1,465	..	1,465	1,465	..	..	
380	No. 653 I. of 13th Nov. 1890 ..	..	..	Widening the last 3 miles of the Budameru	19,120	15,248	3,872	19,120	..	..	
381	No. 495 I. of 9th Sept. 1890 ..	..	..	Raising flood bank to the Budameru	4,946	3,085	1,861	4,946	..	..	
				Total ..	36,958	20,168	16,790	36,958	..	..	
				Total, (4) Drainage and protective works ..	40,250	20,168	25,082	45,250	5,000	..	
				Total, Ellore canal ..	1,29,149	31,626	1,08,223	1,39,849	10,700	..	
				Ryves canal.							
382	No. 145 I. of 12th Feb. 1885 ..	(3) B.	..	Dosapad channel	6,960	4,298	2,662	6,960	..	..	
383	No. 354 I. of 11th May 1886 ..	..	..	Juvvanapudi branch of Kunderu channel	1,782	1,620	162	1,782	..	..	
384	No. 406 I. of 25th July 1890 ..	..	..	Aripirala branch	1,070	..	1,070	1,070	..	..	
385	Do. do. ..	..	..	Pamalapad branch	550	..	550	558	..	..	
386	No. 679 I. of 31st July 1893 ..	..	..	Bhumicodu from Dosapad channel	83	..	83	83	..	..	
387	....	..	..	Side channel from left bank of Dosapad channel at 10 miles 300 feet.	220	..	220	220	..	..	
388	Do. do. ..	..	..	Left side channel of Dosapad channel from below Aripirala branch, head sluice.	510	..	510	510	..	..	
				Total ..	11,175	5,918	5,257	11,175	..	..	
389	Do. do. ..	(3) C.	..	Aripirala Panta Codu, head sluice	590	156	234	390	..	..	
390	No. 395 I. of 2nd May 1893 ..	..	..	Dam at 2 miles 5 furlongs of Neharalli codu	560	..	560	560	..	..	
391	Do. do. ..	..	..	Dam at 5 miles 17 chains of do.	480	..	480	480	..	..	
392	....	..	..	Head sluice to left side channel of Dosapad channel from below Aripirala branch, head suice.	620	..	620	620	..	..	
393	....	..	..	Road culvert to Perikeed road	430	..	430	430	..	..	
394	No. 395 I. of 2nd May 1893 ..	..	..	Sluice to Bhumicodu	360	..	360	360	..	..	
395	Do. do. ..	..	..	Do. right side channel	300	..	300	300	..	..	
396	Do. do. ..	..	..	Do. left do. do.	270	..	270	270	..	..	
397	Do. do. ..	..	..	Do. Tamirasa do.	300	..	300	300	..	..	
398	Do. do. ..	..	..	Do Rachacodu	260	..	260	260	..	..	
399	No. 354 I. of 11th May 1886 ..	..	..	Masonry works	2,666	..	2,666	2,666	..	..	
400	No. 679 I. of 31st July 1893 ..	..	..	Sluice to Bhumicodu from Dosapad channel	550	..	550	550	..	..	Lump sum.
401	Do. do. ..	..	..	Tail escape to do. do.	142	..	142	142	..	..	
402	....	..	..	Head sluice to side channel from left bank of Dosapad channel at 10 miles 300 feet.	680	..	680	680	..	..	
403	....	..	..	Head sluice at 11 miles of Dosapad channel	..	..	1,500	1,500	1,500	..	
404	No. 649 I. of 24th July 1893 ..	..	..	Pipe sluices in right bank of Dosapad channel	530	..	530	530	..	..	
				Total ..	8,538	156	9,882	10,038	1,500	..	
405	No. 799 I. of 9th October 1882 ..	(3) L.	..	Enlarging and improving minor channels	118	..	118	118	..	..	
406	No. 395 I. of 2nd May 1893 ..	..	..	Bhumicodu	139	..	139	139	..	..	Lump sum.
407	Do. do. ..	..	..	Do. right side channel	399	..	399	399	..	..	
408	Do. do. ..	..	..	Do. left do.	282	..	282	282	..	..	
409	Do. do. ..	..	..	Tamirasa channel	990	..	990	990	..	..	
410	No. 354 I. of 11th May 1886 ..	..	..	Earthwork	8,680	132	8,548	8,680	..	..	
411	....	..	..	Improvements to Kunderu channel	..	..	2,000	2,000	2,000	..	Lump sum.
412	....	..	..	Do. Mastaphankhancodu	..	..	6,000	6,000	6,000	..	
413	....	..	..	Do. North side channel of Dosapad channel.	..	..	3,000	3,000	3,000	..	
414	....	..	..	Do. Aripirala branch	..	..	1,000	1,000	1,000	..	
415	....	..	..	Left side channel from Dosapad channel from below Aripirala branch, head sluice.	443	..	443	443	..	..	
416	....	..	..	Improvements to south side channel of Dosapad channel.	..	..	1,000	1,000	1,000	..	
417	....	..	..	Side channel from left bank of Dosapad channel, 10 miles 300 feet.	400	..	400	400	..	..	
418	No. 679 I. of 31st July 1893 ..	..	..	Excavating Bhumicodu channel	535	..	535	535	..	..	
				Total ..	11,986	132	24,854	24,986	13,000	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure. Expenditure incurred to end of 1892-93.	Expenditure. Further expenditure.	Expenditure. Total	Increase.	Decrease.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA EASTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Ryves canal—cont.							
419	No. 354 I. of 11th May 1886 ..	(3) O.	..	Kunderu channel, cattle ramp at Katur	197	..	197	197	..	..	
420	No. 563 I. of 16th July 1891 ..	..	..	Do. demarcation stones	330	..	330	330	..	..	
421	Do. do. ..	..	..	Lingavaram channel do.	240	..	240	240	..	..	
422	Do. do. ..	..	..	Neharalli codu do.	410	79	331	410	..	.	
423	Do. do. ..	..	..	Juvvanapudi branch channel	260	..	260	260	..	..	
424	Do. do. ..	..	..	Dosapad channel do.	800	..	800	800	..	..	
425	Do. do. ..	..	..	Kalavapamula branch do.	200	..	200	200	..	..	
426	Do. do. ..	..	..	Komatigunta channel do.	240	..	240	240	..	..	
427	....	..	..	Demarcation stones for left side channel of dosapad channel from below Aripirala branch head sluice.	27	..	27	27	..	..	
428	No. 563 I. of 16th July 1893 ..	..	..	North side channel of Dosapad channel from below Aripirala branch channel, head sluice	400	..	400	400	..	..	
429	....	..	..	Demarcation stones for side channel from left bank of Dosapad channel at 10 miles 300 feet.	30	..	30	30	..	..	
430	....	..	..	Improvements to ramps on Dosapad channel and providing revetments.	..	..	3,000	3,000	3,000	..	
				Total ..	3,134	79	6,055	6,134	3,000	..	
				Total (3) Distributaries ..	34,833	6,285	46,048	52,333	17,500	..	
				Total, Ryves canal ..	34,833	6,285	46,048	52,333	17,500	..	
				Bank canal.							
431	....	(2) B.	..	Compensation	..	..	5,000	5,000	5,000	..	
				Total (2) Main canals and branches	..	..	5,000	5,000	5,000	..	
				Total, Bank canal ..	..	..	5,000	5,000	5,000	..	
				Drain from Inampudi aqueduct to Dayyapu calva.							
432	No. 962 I. of 14th Nov. 1885 ..	(4) B.	..	Compensation for land	5,710	1,849	3,861	5,710	..	..	
				Uppalur drain.							
433	Appendix D of No. 181 I. of 28th Feb. 1892 and No. 962 I. of 14th Nov. 1885.	(4) C.	..	Masonry works	6,717	..	6,717	6,717	..	..	Lump sum.
434	Do. do. ..	(4) L.	..	Earthwork	4,469	..	4,469	4,469	..	..	Do.
435	Do. do. ..	(4) O.	..	Miscellaneous works	261	..	261	261	..	..	
				Total, Uppalur drain ..	11,447	..	11,447	11,447	..	..	
				Chendraya drain.							
436	No. $\frac{369}{A}$ I. of 4th May 1883 ..	(4) O.	..	Bench marks	1,150	..	1,150	1,150	..	..	
437	Appendix D of No. 181 I. of 28th Feb. 1882.	..	..	Other masonry works	1,969	..	1,969	1,969	..	..	
438	No. 536 I. of 16th July 1891 ..	..	..	Demarcation stones	1,740	141	1,599	1,740	..	..	
				Total ..	4,859	141	4,718	4,859	..	..	
				Total, Chendraya drain ..	4,859	141	4,718	4,859	..	..	
				Polraz drain.							
439	No. 493 I. of 25th May 1892 ..	(4) C.	..	Rolled iron girder bridge across Polraz drain for Bantumilli-Gudivâda road at Mudanapalli.	7,400	2,785	4,615	7,400	..	..	
440	* Appendix D of G.O. No. 181 I. of 28th Feb. 1882.	..	..	Masonry works	14,128	..	14,128	14,128	..	..	Lump sum.
				Total ..	21,528	2,785	18,743	21,528	.	..	
441	* No. 962 I., of 14th Nov. 1885 ..	(4) L.	..	Earthwork	13,709	..	13,709	13,709	..	..	Lump sum.
442	Appendix D of No. 181 I. of 28th Feb. 1882.	(4) O.	..	Demarcation stones	190	..	190	190	..	..	
				Total, Polraz drain ..	35,427	2,785	32,642	35,427	..	..	
				Pullava drain.							
443	No. 128 I. of 5th Feb. 1884 ..	(4) C.	..	Outlet sluices	2,505	..	2,505	2,505	..	..	
444	Superintending Engineer's No. 2953 K.S. of 7th Mar. 1892.	(4) O.	..	Demarcation stones along Veduruva affluent ..	65	..	65	65	..	..	
445	Do. do. ..	..	..	Do. Annava affluent	80	..	80	80	..	..	
446	Do. do. ..	..	..	Do. Pullava drain	140	..	140	140	..	..	
447	Superintending Engineer's No. 962 K.S. of 22nd July 1889.	..	..	(6) Cattle crossing along Pullava main drain	719	320	399	719	..	..	
448	Do. do. ..	..	..	(4) Do. Veduruva affluent	277	..	277	277	..	..	
449	Do. do. ..	..	..	(4) Do. Annava do.	295	110	185	295	..	..	
				Total ..	1,576	430	1,146	1,576	..	..	
				Total, Pullava drain ..	4,081	430	3,651	4,081	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA EASTERN SECTION—*cont.*							
				Dammidi drain.	RS.	RS.	RS.	RS.	RS.	RS.	
450	No. 128 I. of 5th Feb. 1884 ..	(4) C.	..	Outlet sluices	1,865	..	1,865	1,865	..	..	
451	Superintending Engineer's No. 2953 K.S. of 7 Mar. 1893.	(4) O.	..	Demarcation stones	95	..	95	95	..	..	
				Total, Dammidi drain ..	1,960	..	1,960	1,960	..	..	
				Peddakommileru drain.							
452	No. 128 I. of 5th Feb. 1884 ..	(4) C.	..	Road dam	190	..	190	190	..	..	
453	Do. do. ..	..	..	Do.	360	..	360	360	..	..	
				Total ..	550	..	550	550	..	..	
454	Superintending Engineer's No. 2953 K.S. of 7th Mar. 1893.	(4) O.	..	Demarcation stones along Chinnakommileru drain ..	100	..	100	100	..		
			..	Total, Peddakommileru drain ..	650	..	650	650	..	..	
				Pedalanka drain.							
455	No. 546 I. of 18th June 1892 ..	(4) B.	..	Pedalanka main drain	1,000	43	957	1,000	..	..	
456	Do. do. ..	..	..	Utukur affluent	150	..	150	150	..	..	
457	Do. do. ..	..	..	Kondangi affluent	200	..	200	200	..	..	
458	Do. do. ..	..	..	Pedatummidi affluent	260	..	260	260	..	..	
459	Do. do. ..	..	..	Amudalapalli do.	200	50	150	200	..	..	
460	Do. do. ..	..	..	Kaldindicodu, now converted into a drain	2,150	..	2,150	2,150	..	..	
				Total ..	3,960	93	3,867	3,960	..	..	
461	No. 1005 I. of 28th Nov. 1892 ..	(4) C.	..	Bridge on Bantumilli road across Kaldindicodu drain ..	7,200	..	7,200	7,200	..	..	
462	No. 546 I. of 18th June 1892 and No. 128 I. of 5th Feb. 1884.	(4) L.	..	Pedalanka main drain	56,260	53,934	2,326	56,260	..	..	
463	....	..	..	Utukur affluent	1,310	..	1,310	1,310	..	..	
464	Do. do. ..	..	..	Kondangi affluent	1,530	..	1,530	1,530	..	..	
465	Do. do. ..	..	..	Pedatummidi do.	2,030	..	2,030	2,030	..	..	
466	Do. do. ..	..	..	Amadalapalli do.	1,790	22	2,008	2,030	..	..	
467	* Do. do. ..	..	..	Kaldindicodu, now converted into a drain	55,787	8	1,782	1,790	..	..	
468	....	..	..	Pedatummidi affluent	..	2,536	53,251	55,787	..	..	
						..	5,000	5,000	5,000	..	
469	*	..	..	Widening Pedalanka drain from Korukollu to the Upputeru.	..	..	40,000	40,000	40,000	..	
				Total ..	1,18,707	56,500	1,07,207	1,63,707	45,000	..	
470	No. 546 I. of 18th June 1892 ..	(4) O.	..	Cattle ramps along main drain	415	..	415	415	..	..	
471	Do. do. ..	..	..	Do. do.	1,000	..	1,000	1,000	..	..	
472	Do. do. ..	..	..	Bench mark stones for do.	160	32	128	160	..	..	
473	Do. do. ..	..	..	Do. Kaldindi drain	210	..	210	210	..	..	
474	Do. do. ..	..	..	Do. Utukur affluent	77	..	77	77	..	..	
475	Do. do. ..	..	..	Do. Kondangi do.	68	..	68	68	..	..	
476	Do. do. ..	..	..	Do. Pedatummidi affluent	104	..	104	104	..	..	
477	Do. do. ..	..	..	Do. Amudalapalli do.	99	..	99	99	..	..	
478	No. 1441 W. of 31st May 1893 ..	..	..	Flags and pegs for surveying the drain	12	..	12	12	..	..	
				Total ..	2,145	32	2,113	2,145	..	..	
				Total, Pedalanka drain ..	1,32,012	56,625	1,20,387	1,77,012	45,000	..	
				Lazabanda drain.							
479	No. 179 I. of 26th Feb. 1883 ..	(4) B.	..	Isakaparru affluent	945	265	680	945	..	..	
480	Do. do. ..	..	..	Compensation for land	1,990	..	1,990	1,990	..	..	
481	No. 3169 K.S. of 22nd Mar. 1893.	..	..	Dokiparru affluent	140	..	140	140	..	..	Lump sum.
482	No. 3228 K.S. of 27th June 1893.	..	..	Venturumalli do.	465	..	465	465	..	..	
				Total ..	3,540	265	3,275	3,540	..	..	
483	No. 179 I. of 26th Feb. 1883 ..	(4) C.	..	Masonry works	17,412	..	17,412	17,412	..	..	Lump sum.
484	No. 3169 K.S. of 22nd Mar. 1893.	(4) L.	..	Dokiparru affluent	210	..	210	210	..	..	
485	No. 3228 K.S. of 27th Mar. 1893.	..	..	Venuturumalli affluent	1,179	..	1,179	1,179	..	..	
486	No. 179 I. of 26th Feb. 1883 ..	(4) L.	..	Improvements	59,559	..	59,559	59,559	..	..	
				Total ..	60,948	..	60,948	60,948	..	..	
487	Do. do. ..	(4) O.	..	Cattle-crossing	5,576	..	5,576	5,576	..	..	Lump sum.
				Total, Lazabanda drain ..	87,476	265	87,211	87,476	..	..	
				Sultanagaram drain.							
488	Appendix D. of No. 181 I. of 28th Feb. 1892.	(4) B.	..	Compensation for land	412	..	412	412	..	..	Lump sum.
489	Do. do. ..	(4) L.	..	Earthwork	2,415	..	2,415	2,415	..	..	Do.
				Total, Sultanagaram drain ..	2,827	..	2,827	2,827	..	..	
				Kanakavalli drain.							
490	Superintending Engineer's No. 3089 K.S. of 10th Mar. 1891.	(4) B.	..	Compensation for land	2,720	1,844	876	2,720	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA EASTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Kanakavalli drain—cont.							
491	Superintending Engineer's No. 3089 K.S. of 10th Mar. 1891.	..	..	Raising bund on the land side	670	..	670	670	..	..	
492	No. 7676 I. of 2nd Sept. 1893 ..	..	..	Compensation for widening and improving	273	..	273	273	..	..	
				Total ..	3,663	1,844	1,819	3,663	..	..	
493	Do. do. ..	(4) C.	..	Building dry stone inlets	1,150	977	173	1,150	..	..	
494	No. 767 I. of 2nd Sept. 1893 ..	..	..	Demolishing and reconstructing Inampudi bridge ..	400	..	400	400	..	..	
495	Do. do. ..	..	..	Improving the drop wall of Inampudi aqueduct ..	30	..	30	30	..	..	
				Total ..	1,580	977	603	1,580	..	..	
496	Do. do. ..	(4) L.	..	Widening and improving	4,400	..	4,400	4,400	..	..	
497	No. 141 I. of 16th Mar. 1889 ..	(4) O.	..	Demarcation stones	1,057	..	1,057	1,057	..	..	
498	No. 767 I. of 2nd Sept. 1893 ..	..	..	Do	197	..	197	197	..	..	
				Total ..	1,254	..	1,254	1,254	..	..	
				Total, Kanakavalli drain ..	10,897	2,821	8,076	10,897	..	..	
				Gúdúr swamp.							
499	Appendix D. of 181 I. of 28th Feb. 1892.	(4) B.	..	Compensation for land	375	..	375	375	..	..	Lump sum.
500	Do. do. ..	(4) C.	..	Masonry works	1,500	..	1,500	1,500	..	..	Do.
501	Do. do. ..	(4) L.	..	Earthwork	5,625	..	5,625	5,625	..	..	
				Total, Gúdúr swamp ..	7,500	..	7,500	7,500	..	..	
				Ellamalli drain.							
502	No. 2953 K.S. of 7th Mar. 1892.	(4) O.	..	Demarcation stones	20	..	20	20	..	..	
				Total, Kistna Eastern section ..	9,98,223	2,93,459	8,32,913	11,26,372	1,28,149	..	

			M.FUR.PT.	KISTNA WESTERN SECTION.							
				Main canal.							
503	*No. 992 I. of 4th Nov. 1884 and No. 423 I. of 10th May 1893.	(2) L.	..	Widening main canal	5,65,657	4,30,119	1,35,538	5,65,657	..	..	
504	Superintending Engineer's No. 315 K.S. of 6th May 1892.	..	..	Tramway and wharf wall from left wing wall of Sithanagaram head sluice.	2,100	453	1,647	2,100	..	..	
				Total ..	5,67,757	4,30,572	1,37,185	5,67,757	..	..	
505	No. 992 I. of 4th Nov. 1884 ..	(2) O.	..	Concrete block	364	..	364	364	..	..	
506	No. 247 I. of 22nd Mar. 1893 ..	..	..	Retaining wall round the island separating the head lock at Sithanagaram from the head sluice.	3,100	..	3,100	3,100	..	..	
				Total ..	3,464	..	3,464	3,464	..	..	
				Total (2) Main canals and branches ..	5,71,221	4,30,572	1,40,649	5,71,221	..	..	
507	Superintending Engineer's No. 2764 K.S. of 13th Feb. 1893.	(3) C.	..	Head sluice to Imani branch channel	810	..	810	810	..	..	
				Total (3) Distributaries ..	810	..	810	810	..	..	
				Total, Main canal ..	5,72,031	4,30,572	1,41,459	5,72,031	..	..	
				Nizampatam canal.							
508	No. 834 I. of 23rd Sept. 1885 ..	(2) G.	..	Bridge on Tsandole road	8,390	..	8,390	8,390	..	..	
509	....	..	..	Do. at Turumella	..	..	9,000	9,000	9,000	..	
				Total ..	8,390	..	17,390	17,390	9,000	..	
510	....	(2) I.	..	Permanent sheds for lock establishment	..	..	6,600	6,600	6,600	..	
511	*Para. 9 of the note printed in No. 3573 of 19th Dec. 1874 ..	(2) L.	..	Improvements to the canal	10,645	..	10,645	10,645	..	..	
				Total (2) Main canals and branches ..	19,035	..	34,635	34,635	15,600	..	
512	No. 404 I. of 5th May 1893 ..	(3) B.	..	Compensation for land for west side channel extension ..	1,400	..	1,400	1,400	..	..	
513	Do. do. ..	..	..	Do. do. branch channel	400	..	400	400	..	..	
				Total ..	1,800	..	1,800	1,800	..	..	
514	No. 679 I. of 29th Aug. 1892 and No. 220 I. of 4th March 1885.	(3) C.	..	East side channel, head sluice improvements	3,554	2,480	1,074	3,554	..	..	
515	Para. 10 of the note printed in No. 3573 of 19th Dec. 1874 and No. 834 I. of 23rd Sept. 1885.	..	..	Bridge across west side channel, Tsandole road ..	1,305	..	1,305	1,305	..	..	
516	Do. do.	..	..	Do east do. do. ..	1,750	..	1,750	1,750	..	..	
				West side channel extension—							
517	No. 404 I. of 5th May 1893 ..	..	0-3-185	Aqueduct	4,440	..	4,440	4,440	..	..	
518	....	..	..	Drop	670	..	670	670	..	..	
519	....	..	3-6-350	West side branch channel, head sluice	440	..	440	440	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
				KISTNA WESTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
			M. CH.	*Nizampatam canal*—cont.							
520	Para. 10 of the note printed in No. 3573 of 19th Dec. 1874, and S. E's. No. 784 K.S. of 5th July 1891.	..	..	Minor masonry sluices in the 1st reach of west side channel	1,680	15	5,665	5,680	4,000	..	Lump sum.
521	....	..	..	Masonry works on west side channel	..	..	6,000	6,000	6,000	..	
522	....	..	..	Do. on east do.	..	..	6,000	6,000	6,000	..	
523	....	..	..	Minor masonry sluices on east side channel	..	..	10,000	10,000	10,000	..	
				Total ..	13,839	2,495	37,344	39,839	26,000	..	
524	Para. 10 of the note printed in No. 3573 of 19th Dec. 1874 and G.O. No. 404 I. of 5th May 1893.	(3) L.	..	West side channel extension	3,340	..	3,340	3,340	..	..	
525	Do. do.	..	..	Do. branch channel	1,540	..	1,540	1,540	..	..	
526	....	..	..	Improvements to east side channel	..	..	15,000	15,000	15,000	..	
527	....	..	..	Do. west do.	..	..	15,000	15,000	15,000	..	
				Total ..	4,880	..	34,880	34,880	30,000	..	
528	Para. 10 of the note printed in No. 3573 of 19th Dec. 1874 and G.O. No. 404 I. of 5th May 1893.	(3) O.	..	West side channel extension demarcation stones ..	330	..	330	330	..	..	
529	....	..	..	Do. branch channel	140	..	140	140	..	..	
				Total ..	470	..	470	470	..	..	
				Total (3) Distributaries ..	20,989	2,495	74,494	76,989	56,000	..	
				Total, Nizampatam canal ..	40,024	2,495	1,09,129	1,11,624	71,600	..	
				Bank canal.							
530	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	(2) D.	..	Head sluice improvements	3,390	..	3,390	3,390	..	..	
531	Do. do.	(2) F.	..	Inlets near Vallabhapuram	7,275	..	7,275	7,275	..	..	
532	G.O., No. 358 I. of 22nd April 1893.	(2) F (1)	33 5¼	Syphon sluice	3,320	..	3,320	3,320	..	..	
533	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	(2) H.	..	Kollipara surplus weir channel	2,865	..	2,865	2,865	..	..	
534	E. I's. No. 105 K.S. of 6th Nov. 1888 and No. 528 I. of 13th June 1892.	(2) I.	..	Head lock improvements	500	..	500	500	..	..	
535	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	..	..	Tidal lock	26,620	..	26,620	26,620	..	..	
536	No. 360 I. of 24th April 1893 ..	..	..	Do. weir at Adivipalem	8,700	2,283	6,417	8,700	..	..	
537	....	..	..	Permanent sheds for lock establishment	..	..	7,440	7,440	7,440	..	
				Total ..	35,820	2,283	40,977	43,260	7,440	..	
538	No. 283 I. of 12th May 1888 ..	(2) L.	..	Bank canal improvements	1,13,715	66,039	47,676	1,13,715	..	..	
539	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874 and E. I's. Memo. No. 28 K.S. of 7th Feb. 1889.	(2) O.	..	Ramps	970	..	970	970	..	..	
540	Do. do.	..	..	Eight cattle crossings	8,780	3,150	5,630	8,780	..	..	
541	Superintending Engineer's No. 2817 K.S. of 9th Feb. 1891.	..	..	Fixing demarcation stones on both sides of Bank canal ..	2,200	1,029	1,171	2,200	..	..	
542	....	..	..	Eight additional cattle crossings	..	..	6,250	6,250	6,250	..	
				Total ..	11,950	4,179	14,021	18,200	6,250	..	
				Total (2) Main canals and branches ..	1,78,335	72,501	1,19,524	1,92,025	13,690	..	
543	Superintending Engineer's No. 1495 K.S. of 15th Sept. 1892.	(3) A.	..	Granite bench mark stones at south end of north and south lines of Vellatur block under Vellatur channel.	250	37	213	250	..	..	
544	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	(3) B.	..	Kollur channel	940	..	940	940	..	..	
545	Do. do.	..	..	Vellatur channel	870	..	870	870	..	..	
546	Do. do.	..	..	Isukapalli channel	585	..	585	585	..	..	
547	Do. do.	..	..	Aravapalli channel	505	..	505	505	..	..	
548	Do. do.	..	..	Ullipalem do.	715	..	715	715	..	..	
549	Do. do.	..	..	Allaparru do.	715	..	715	715	..	..	
550	Do. do.	..	..	Kuchinapadi channel	595	..	595	595	..	..	
551	Do. and No. 227 I. of 9th March 1891.	..	..	Potameraka do.	1,070	..	1,070	1,070	..	..	
552	Do. do.	..	..	Tsodayapalem branch	190	..	190	190	..	..	
553	No. 537 I. of 6th June 1884	..	..	Kuchanapudi north channel	129	23	106	129	..	..	
554	Do. do.	..	..	Do. channel extension	100	27	73	100	..	..	
555	Do. do.	..	..	Edupalli channel	124	26	98	124	..	..	
				Total ..	6,538	76	6,462	6,538	..	..	
556	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	(3) C.	..	Kollipara channel	705	..	705	705	..	..	
557	Do. do.	..	..	Kollur side channel	640	..	640	640	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA WESTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Bank canal.							
558	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	..	..	Kollur channel	1,920	..	1,920	1,920	..	..	
559	Do. do. ..	..	..	Vellatur channel	1,600	..	1,600	1,600	..	..	
560	Do. do. ..	..	..	Do. side channel	450	..	450	450	..	..	
561	Do. do. ..	..	..	Vemavaram do.	700	..	700	700	..	..	
562	Do. do. ..	..	..	Jagajjeru channel	990	..	990	990	..	..	
563	Do. and Superintending Engineer's No. 2917 K.S. of 2nd May 1892.	..	..	Aravapalli do.	440	335	105	440	..	..	
564	Do. do. ..	..	..	Ullipalem do.	3,030	391	2,639	3,030	..	..	
565	Do. do. ..	..	..	Allaparru do.	3,815	584	3,231	3,815	..	..	
566	Do. do. ..	..	..	Kuchinapudi do.	3,415	514	2,901	3,415	..	..	
567	No. 227 I. of 9th March 1891 ..	..	1 7	Nallur channel	270	102	168	270	..	..	
568	Do. do. ..	..	..	Do. drop 100 feet below	260	99	161	260	..	..	
569	*No. 537 I. of 6th June 1884 ..	..	..	Minor channels	13,534	..	13,534	13,534	..	..	Lump sum.
				Total ..	31,769	2,025	29,744	31,769	..	..	
570	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	(3) L.	..	Kollur channel	6,370	..	6,370	6,370	..	..	
571	* Do. do. ..	..	..	Vellatur channel	16,720	..	16,720	16,720	..	..	
572	Do. do. ..	..	..	Jagajjeru do.	2,110	..	2,110	2,110	..	..	
573	* Do. do. ..	..	..	Isukapalli do.	19,330	734	18,596	19,330	..	..	
574	Do. do. ..	..	..	Aravapalli do.	2,465	..	2,465	2,465	..	..	
575	Do. do. ..	..	..	Ullipalem do.	3,430	..	3,430	3,430	..	..	
576	Do. do. ..	..	..	Allaparru do.	2,720	..	2,720	2,720	..	..	
577	Do. do. ..	..	..	Kuchinapudi channel	2,635	..	2,635	2,635	..	..	
578	Do. and No. 246 I. of 13th Mar. 1891 and No. 733 I. of 21st Sept. 1891.	..	..	Nallur channel	1,400	1,023	377	1,400	..	..	
579	Do. do. ..	..	..	Do. No. 1 branch	1,010	..	1,010	1,010	..	..	
580	Do. do. ..	..	..	Do. No. 2 do.	290	..	290	290	..	..	
581	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874 and No. 227 I. of 9th Mar. 1891.	..	..	Potumeraka channel	4,120	2,159	1,961	4,120	..	..	
582	No. 537 I. of 6th June 1884 ..	..	..	Minor channels	9,862	..	9,862	9,862	..	..	Lump sum.
				Total ..	72,462	3,916	68,546	72,462	..	..	
583	No. 246 I. of 13th Mar. 1891 ..	(3) O.	..	Nallur channel demarcation stones	160	32	128	160	..	..	
584	Do. do. ..	..	..	Do. No. 2 branch do.	50	9	41	50	..	..	
				Total ..	210	41	169	210	..	..	
				Total (3) Distributaries ..	1,11,229	6,095	105,134	1,11,229	..	..	
				Total, Bank canal ..	2,89,564	78,596	224,658	3,03,254	13,690	..	
				Commamur canal.							
585	No. 124 I. of 9th Feb. 1885 ..	(2) B.	..	Ist, 2nd and 3rd reaches	12,428						
586	....	..	..	New cut from the Guntúr nallah to the culvert ..	875						
587	....	..	..	Vejendla quarries	975	13,931	2,137	16,068	..	..	
588	....	..	..	Apperu outfall channel	170						
589	....	..	..	Stop bank between Alleru and Apperu	720						
590	....	..	..	Emileru diversion bank	900						
				Total ..	16,068	13,931	2,137	16,068	..	..	
591	* No. 797 I. of 9th Oct. 1882 ..	(2) F.	23 20	Nakkavagu aqueduct	22,570	..	22,570	22,570	..	..	
592	....	..	..	Surplus vents to Kollimerla aqueduct	..	..	2,000	2,000	2,000	..	
593	*	..	..	Kollimerla new aqueduct	..	..	50,000	50,000	50,000	..	
594	*	..	..	Pondrapad aqueduct	..	..	25,000	25,000	25,000	..	
595	....	..	..	Widening Alleru surplus sluices	..	..	5,720	5,720	5,720	..	
596	No. 797 I. of 9th Oct. 1882 ..	..	49 39	Apperu inlet	380	..	380	380	..	..	
597	No. 429 I. of 4th May 1892 ..	..	..	Inlet and outlet below Inkollu bridge	3,060	2,178	882	3,060	..	..	
				Total ..	26,010	2,178	1,06,552	1,08,730	82,720	..	
598	Superintending Engineer's No. 2949 K.S. of 7th Mar. 1892.	(2) F. (1)	..	Constructing stone drain in left bank of Commamur canal $\frac{1}{6}$ and $\frac{1}{7}$.	510	156	354	510	..	..	
599	No. 406 I. of 5th May 1893 ..	(2) I.	19 4	Reconstructing and extending revetment in rear of Kollimerla weir.	2,600	..	2,600	2,600	..	..	
600	*	(2) I.	..	Permanent sheds for lock establishment	..	..	15,960	15,960	15,960	..	
601	....	..	..	Santa ravur wharf	..	..	5,870	5,870	5,870	..	
				Total ..	2,600	..	24,430	24,430	21,830	..	
602	No. 797 I. of 9th Oct. 1882 ..	(2) L.	11 0 to 8 30	Improvements to 1st reach	68,379	..	..	..	..	..	
603	....	..	8 30 to 18 70	Do. 2nd do.	60,252	..	..	..	..	..	
604	....	..	18 70 to 30 58	Do. 3rd do.	41,529	..	..	..	..	..	
605	....	..	30 58 to 46 30	Do. 4th do.	32,210	..	..	..	..	..	
606	....	..	46 30 to 55 30	Do. 5th do.	46,656	..	..	..	..	..	
607	....	..	..	Cost of original line from Firangidibba to Romperu ..	18,202	..	..	..	..	..	
608	....	..	..	Petty supervision at 3 per cent.	8,017	..	..	..	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA WESTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Commamur canal—cont.							
609	....	..	..	Contingencies	5,345	..	..	..	..	..	
610	No. 359 I. of 24th April 1893 ..	..	$\frac{21}{1}$ to $\frac{21}{6}$	Constructing revetment to left slope	2,80,590	2,34,235	11,095	2,45,330	..	35,260	Balance
					5,500	..	5,500	5,500	..	..	Rs. 35,260 not required and surrendered.
				Total ..	2,86,090	2,34,235	16,595	2,50,830	..	35,260	
				Total (2) Main canals and branches ..	3,31,278	2,50,500	1,50,068	4,00,568	1,04,550	35,260	
611	No. 797 I. of 9th Oct. 1882 ..	(3) B.	7 50	Left bank Tungabhadra side channel	2,470	1,940	530	2,470	..	..	
612	Do. do. ..	..	23 10	Pundla channel	1,600	..	1,600	1,600	..	..	
613	No. 612 I. of 12th July 1893 ..	(3) B.	29 17	Bapatla channel	500	32	468	500	..	..	
614	Do. do. ..	..	..	Do. first east branch	600	..	600	600	..	..	
615	Do. do. ..	..	..	Do. first west	700	..	700	700	..	..	
616	Do. do. ..	..	..	Cherukur channel	230	..	230	230	..	..	
				Total ..	6,100	1,972	4,128	6,100	..	..	
617	No. 343 I. of 24th Sept. 1887 ..	(3) C.	7 50	Tungabhadra side channel, head sluice	1,360	6	1,354	1,360	..	..	
618	Do. do. ..	..	..	Do. bridge at Tenali road and elsewhere ..	9,150	..	9,150	9,150	..	..	Lump sum.
619	Do. do. ..	..	..	Do. Aremanda sluice	550	..	550	550	..	..	Do.
620	....	..	..	Do. aqueduct	..	..	5,000	5,000	5,000	..	
621	....	..	..	Do. Alanala sluice	..	..	1,500	1,500	1,500	..	
622	No. 343 I. of 24th Sept. 1887 ..	..	..	Do. minor channels	2,000	..	2,000	2,000	..	..	Lump sum.
623	No. 520 I. of 13th June 1885 ..	..	..	Yedlapalli channel, Tail escape	109	24	85	109	..	..	
624	No. 343 I. of 24th Sept. 1887 ..	..	8 30	Chebrole do. head sluice	630	..	630	630	..	..	
625	Do. do. ..	..	..	Do. minor channel and sluices	150	..	150	150	..	..	
626	Do. do. ..	..	13 30	Mannava channel, head sluice	400	..	400	400	..	..	
627	Do. do. ..	..	..	Do. tail escape weir	380	..	380	380	..	..	
628	Do. do. ..	..	..	Do. minor channels	200	..	200	200	..	..	
629	Do. do. ..	..	21 10	Commamur tank supply channel, minor channels ..	900	..	900	900	..	..	
630	Do. do. ..	..	23 10	Pundla channel, head sluice	2,040	..	2,040	2,040	..	..	
631	Do. do. ..	..	..	Appicatla channel do.	500	..	500	500	..	..	
632	Do. do. ..	..	..	Ravanappa do. do.	500	..	500	500	..	..	
633	Do. do. ..	..	..	Tail escape weir	530	..	530	530	..	..	
634	Do. do. ..	..	..	Minor channels	800	..	800	800	..	..	
635	Do. do. ..	..	23 70	Retur side channel head sluice	690	..	690	690	..	..	
636	....	..	..	Minor channels	200	..	200	200	..	..	Lump sum.
				Bapatla channel.							
637	No. 612 I. of 12th July 1893 ..	(3) C.	29 17	Dividing sluice for first east and west branches ..	2,950	..	2,950	2,950	..	..	
638	Do. do. ..	..	..	Head sluice to Kunkatapalem branch	1,330	..	1,330	1,330	..	..	
639	Do. do. ..	..	..	Do. to Mulapalem do.	1,790	..	1,790	1,790	..	..	
640	Do. do. ..	..	..	Do. to Cherukur channel	760	..	760	760	..	..	
641	Do. do. ..	..	..	Bapatla first west branch, tail escape weir	440	..	440	440	..	..	
642	Do. do. ..	..	..	Drop at 2/5 mile and 410 feet of Mulapalem	720	..	720	720	..	..	
643	Do. do. ..	..	..	No. 1 sluice at 9/2 mile of Kunkatapalem branch ..	360	..	360	360	..	..	
644	Do. do. ..	..	..	„ 2 do. at 6 mile of do. do. ..	590	..	590	590	..	..	
645	Do. do. ..	..	..	„ 3 do. at 1—4½ mile of do. do. ..	620	..	620	620	..	..	
646	Do. do. ..	..	..	„ 1 do. at 0—1 mile and 66 feet of Mulapalem branch.	560	..	560	560	..	..	
647	Do. do. ..	..	..	„ 2 do. at 1—1 „ and 396 „ of do. do.	590	..	590	590	..	..	
648	Do. do. ..	..	..	„ 3 do. at 2—0 „ and 396 „ of do. do.	620	..	620	620	..	..	
649	Do. do. ..	..	..	„ 4 do. at 2—5 „ and 396 „ of do. do.	650	..	650	650	..	..	
				Total ..	33,069	30	39,539	39,569	6,500	..	
650	No. 797 I. of 9th Oct. 1882 ..	(3) L.	7 50	Tungabadra side channel	8,660	..	8,660	8,660	..	..	
651	Do. do. ..	..	..	Do. minor do.	4,100	..	4,100	4,100	..	..	
652	No. 520 I. of 13th June 1885 ..	..	8 30	Chebrole do. channels	300	..	300	300	..	..	Lump sum.
653	No. 797 I. of 9th Oct. 1882 ..	..	13 30	Mannava channel	600	..	600	600	..	..	Do.
654	Do. do. ..	..	21 20	Commamur tank supply channel	1,800	..	1,800	1,800	..	..	Do.
655	Do do. ..	..	23 10	Pundla channel	7,450	..	7,450	7,450	..	..	Do.
656	Do. do. ..	..	..	Do. minor channels	1,700	..	1,700	1,700	..	..	Do.
657	Do do. ..	..	..	Retar channel minor channels	500	..	500	500	..	..	Do.
658	No. 612 I. of 12th July 1893 ..	..	23 70	Bapatla channel from head to 5 furlongs 1,960 feet	1,960	..	1,960	1,960	..	..	Do.
659	Do. do. ..	..	27 17	Do. from 0-5 to 2 miles and 250 feet ..	1,630	..	1,630	1,630	..	..	
660	Do. do. ..	..	..	Bapatla minor channels	6,000	..	6,000	6,000	..	..	
661	Do. do. ..	..	..	Do. 1st east branch	2,880	..	2,880	2,880	..	..	
662	Do. do. ..	..	..	Do. 1st west do.	2,860	..	2,860	2,860	..	..	
663	Do. do. ..	..	..	Do. Mulapalem branch	5,080	..	5,080	5,080	..	..	
664	Do. do. ..	..	..	Do. Kumkatapalem branch	3,140	..	3,140	3,140	..	..	
665	Do. do. ..	..	..	Do. Cherukur channel	150	..	150	150	..	..	
				Total ..	48,880	..	48,810	48,810	..	..	
666	No. 797 I. of 9th Oct. 1882 ..	(3) O.	..	Tungabhadra side channel, seven cattle crossings ..	2,000	..	7,000	7,000	5,000	..	Lump sum.
667	No. 612 I. of 12th July 1893 ..	..	..	Bapatla channel, Kunkatapalem branch—							
668	Do. do. ..	..	..	No. 1 cattle crossing at 5½ furlongs	550	..	550	550	..	..	
669	Do. do. ..	..	..	„ 2 do. at 1 mile ½ furlong	480	..	480	480	..	..	
670	Do. do. ..	..	..	„ 3 do. at 1 „ 4 furlongs	520	..	520	520	..	..	
				„ 4 do. at 2 miles 4½ furlongs ..	540	..	540	540	..	..	
671	Do. do. ..	..	..	Bapatla channel, Mulapalem branch—							
672	Do. do. ..	..	..	No. 1 cattle crossing at 2 miles 6 furlongs ..	910	..	910	910	..	..	
673	Do. do. ..	..	..	„ 2 do. at 4 „ ½ furlong	960	..	960	960	..	..	
674	Do. do. ..	..	..	„ 3 do. at 4 „ 5 furlongs	1,010	..	1,010	1,010	..	..	
675	Do. do. ..	..	..	Demarcation stones for Bapatla channel	170	..	170	170	..	..	
676	Do. do. ..	..	..	Do. for Mulapalem branch	270	..	270	270	..	..	
				Do. for Kunkatapalem branch	330	..	330	330	..	..	
				Total ..	7,740	..	12,740	12,740	5,000	..	
				Total (3) Distributaries ..	95,719	2,002	1,05,217	1,07,219	11,500	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA WESTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Guntúr nallah.							
677	Superintending Engineer's No. 118 K.S. of 12th April 1890.	(4) C.	..	Compensation for land	144	78	66	144	..	..	
678	Superintending Engineer's No. 3061 K.S. of 11th March 1893.	(4) L.	..	Cutting approach of Nakkavagu straight to the aqueduct.	760	..	760	760	..	..	
				Total, Guntúr nallah ..	904	78	826	904	..	..	
				Total, Commamur canal ..	4,27,901	2,52,580	2,56,111	5,08,691	1,16,050	35,260	
				Repalle drain.							
679	Superintending Engineer's No. 2422 K.S. of 31st Dec. 1890, and No. 1624 K.S. of 9th Oct. 1891, and No. 1058 I. of 15th Dec. 1892.	(4) A.	..	Establishment for surveying and levelling boundary mark stones.	330	..	330	330	..	..	
680	* No. 889 I. of 8th Nov. 1883 ..	(4) B.	..	Repalle drain	18,300	2,390	15,910	18,300	..	..	
681	Do. do. ..	..	..	Nandivelugu affluent	600	..	600	600	..	..	
682	Do. do. ..	..	..	Jaggadigunta do.	210	..	210	210	..	..	
683	Do. do. ..	(4) B.	..	Gunderu do.	960	..	960	960	..	..	
684	Do. do. ..	..	..	Nagaram do.	810	..	810	810	..	..	
				Total ..	20,880	2,390	18,490	20,880	..	..	
685	Do. do. ..	(4) C.	8 20	Bridge	7,430	..	7,430	7,430	..	..	
686	*	..	..	Do.	..	..	15,000	15,000	15,000	..	
				Total ..	7,430	..	22,430	22,430	15,000	..	
687	* No. 889 I. of 8th Nov. 1883 ..	(4) L.	..	Repalle drain	1,42,700	1,07,008	65,692	1,72,700	30,000	..	
688	Do. do. ..	..	..	Nandivelugu affluent	2,050	1	2,049	2,050	..	..	
689	Do. do. ..	..	..	Jaggadigunta do.	1,760	1	1,759	1,760	..	..	
690	Do. do. ..	..	..	Gunderu affluent	9,390	..	9,390	9,390	..	..	
691	Do. do. ..	..	..	Nagaram do.	4,826	..	4,826	4,826	..	..	
				Total ..	1,60,726	1,07,010	83,716	1,90,726	30,000	..	
				Total, Repalle drain ..	1,89,366	1,09,400	1,24,966	2,34,366	45,000	..	
				Bhattiprole drain.							
692	....	(4) B.	..	Bhattiprole drain	..	..	5,000	5,000	5,000	..	
693	* Appendix D printed in No. 181 I. of 28th Feb. 1882.	(4) L.	..	Earthwork	28,166	..	48,166	48,166	20,000	..	Lump sum.
694	Do. do. ..	(4) O.	..	Miscellaneous works	2,439	..	2,439	2,439	..	..	Do.
695	Superintending Engineer's No. 1495 K.S. of 15th Sept. 1892.	..	..	Granite bench mark stones along Gundern-Bhattiprole drain.	170	25	145	170	..	..	
				Total ..	2,609	25	2,584	2,609	..	..	
				Total, Bhattiprole drain ..	30,775	25	55,750	55,775	25,000	..	
				Pedapalli drain.							
696	....	(4) C.	..	Aqueduct	..	..	5,000	5,000	5,000	..	
697	....	(4) L.	..	Earthwork	..	..	5,000	5,000	5,000	..	
				Total, Pedapalli drain ..	..	..	10,000	10,000	10,000	..	
				Nizampatam drain.							
698	No. 988 I. of 8th Nov. 1883 ..	(4) C.	..	Bridge at 4 miles	6,740	..	6,740	6,740	..	..	
699	Do. do. ..	(4) L.	..	Earthwork	6,801	..	6,801	6,801	..	..	
				Total, Nizampatam drain ..	13,541	..	13,541	13,541	..	..	
				Tungabhadra drain.							
700	Superintending Enginee's No. 2422 K.S. of 31st Dec. 1890.	(4) A.	..	Survey establishment for Tenali affluent	330	2	328	330	..	..	
701	No. $\frac{39}{A}$ I. of 16th Jan. 1884 and No. 447 I. of 9th May 1892.	(4) B.	..	Main drain	3,500	2,731	769	3,500	..	..	
702	* No. 447 I. of 9th May 1892 ..	..	..	Tenali affluent	12,150	..	12,150	12,150	..	..	
703	No. 499 I. of 27th Aug. 1888 ..	..	..	Nallamada affluent	3,000	2,228	772	3,000	..	..	
				Total ..	18,650	4,959	13,691	18,650	..	..	
704	* Appendix D printed in No. 181 I. of 28th Feb. 1882 and No. 447 I. of 9th May 1892.	(4) C.	..	Masonry works	62,175	..	1,80,000	1,80,000	1,17,825	..	Lump sum.
705	Do. do. ..	..	16 41	Rolled iron-girder bridge near Ponnur	11,600	2,443	9,157	11,600	..	..	
				Total ..	73,775	2,443	1,89,157	1,91,600	1,17,825	..	
706	* No. 99 I. of 2nd Feb. 1885 and No. 447 I. of 9th May 1892.	(4) L.	..	Excavating main drain	2,01,111	95,254	1,80,857	2,76,111	75,000	..	
707	* No. 449 I. of 27th Aug. 1888 ..	..	..	Nallamada affluent	1,32,065	92,712	59,353	1,52,065	20,000	..	
708	* No. 447 I. of 9th May 1892 ..	..	..	Tenali affluent	56,658	6,337	50,321	56,658	..	..	

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Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—*cont.*

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	Expenditure			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892–93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
			M. CH.	KISTNA WESTERN SECTION—*cont.*	RS.	RS.	RS.	RS.	RS.	RS.	
				Tungabhadra drain—cont.							
709	* No. 447 I. of 9th May 1892 ..	..	..	Kunderu affluent	13,751	..	13,751	13,751	..	..	
710	* Do. do. ..	..	..	Kollimerla affluent	1,25,185	..	1,25,185	1,25,185	..	..	
711	* Do. do. ..	..	..	Doppalapudi affluent	5,510	..	15,510	15,510	10,000	..	
712	* Do. do. ..	..	..	Pundla affluent	45,600	..	45,600	45,600	..	..	
				Total ..	5,79,880	1,94,303	4,90,577	6,84,880	1,05,000	..	
713	No. 99 I. of 2nd Feb. 1885 ..	(4) O.	..	Wooden gauges of main drain	420						
714	Do. and No. 447 I. of 9th May 1892.	..	..	Bench mark stones for do.	214						
715	No. 447 I. of 9th May 1892 ..	..	..	Furlong stones for main drain	300	1,060	2,329	3,389	..	..	
716	Do. do. ..	..	..	Mile stones for do.	150						
717	Do. do. ..	..	..	Four ramps for do.	2,000						
718	Do. do. ..	..	..	Demarcation stones for main drain	305						
719	Do. do. ..	(4) O.	..	Bench mark stones for Tenali affluent	2,892	81	2,811	2,892	..	..	
				Total ..	6,281	1,141	5,140	6,281	..	..	
				Total, Tungabhadra drain ..	6,78,916	2,02,848	6,98,893	9,01,741	2,22,825	..	
				Romperu drain.							
720	No. 286 I. of 3rd Sept. 1877 ..	(4) B.	..	Compensation for land	1,000	..	1,000	1,000	..	..	
721	Do. do. ..	..	..	Parachurvagu	500	..	500	500	..	..	
				Total ..	1,500	..	1,500	1,500	..	..	
722	*	(4) C.	..	Bridge	..	..	15,000	15,000	15,000	..	
723	* No. 286 I. of 3rd Sept. 1877, No. 15 I. of 10th Jan. 1877 and No. 377 I. of 12th August 1889.	(4) L.	..	Romperu drain	98,900	65,497	33,403	98,900	..	..	
724	* No. 286 I. of 3rd Sept. 1877 ..	..	..	Bapatla affluent	14,800	..	14,800	14,800	..	..	
725	* Do. do. ..	..	..	Parachurvagu	16,290	..	16,290	16,290	..	..	
726	Do. do. ..	..	..	Swerna affluent	4,400	..	4,400	4,400	..	..	
727	* Do. do. ..	..	..	Alleru do.	10,870	..	10,870	10,870	..	..	
728	*	..	..	Perali creek new cut	..	..	70,000	70,000	70,000	..	
				Total ..	1,45,260	65,497	1,49,763	2,15,260	70,000	..	
				Total, Romperu drain ..	1,46,760	65,497	1,66,263	2,31,760	85,000	..	
				Koppalli drain.							
729	No. 39 I. of 14th Jan. 1893 ..	(4) B.	..	Compensation for land	1,540	..	1,540	1,540	..	..	
730	Do. do. ..	(4) C.	..	Bridge at 40 feet	1,650	320	1,330	1,650	..	..	
731	Do. do. ..	(4) L.	..	Excavation	1,910	..	1,910	1,910	..	..	
				Total, Koppali drain ..	5,100	320	4,780	5,100	..	..	
732	No. 859 W. of 29th Mar. 1893 ..	(4) A.	..	Clearing jungle in connection with survey operations of certain canals and drains	90	..	90	90	..	..	
733	*		..	Ten inspection bungalows at Rs. 2,500 each	..	..	25,000	25,000	25,000	..	
				Total, Kistna Western section ..	23,94,068	11,42,333	18,30,640	29,72,973	6,14,165	35,260	
				Total, Kistna Delta system ..	33,92,291	14,35,792	26,63,553	40,99,345	7,42,314	35,260	

Abstract of Statement II.

	RS.	RS.
Total amount provided for works (column 9 of statement II)	..	40,99,345
Outlay to end of 1892–93 (column 9 of statement I)	76,92,184	..
Deduct outlay incurred against current sanctions (column 7 of statement II) ..	14,35,792	..
		62,56,392
Balance available for unforeseen works		3,75,257
Total, I works		1,07,30,994

(Signed) J. W. MARTIN,
Superintending Engineer, II Circle.

STATEMENT showing the amount of the Kistna Delta completion estimates by Main and Sub heads to correspond with the Statement No. II sent with this office letter, No. 1111 K.S. of the 30th July 1893.

Particulars.	(1) HEAD WORKS.					(2) MAIN CANALS AND BRANCHES.												
	2	3	4	5		1	2	3	5	6	7	8	9	11	12	15	16	
	Land.	Works.	Buildings.	Miscellaneous.	Total.	Preliminary expenses.	Land.	Regulators.	River and hill torrent works.	Other cross drainage works.	Bridges.	Escapes.	Navigation works.	Buildings.	Earthwork.	Miscellaneous.	Maintenance.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Old outlay	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Outlay on completed works	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Head works ..	..	6,500	..	1,025	7,525	..	..	..	..	..	..	..	..	..	..	..	..	..
Eastern Section.																		
Masulipatam canal	..	..	..	..	..	..	..	..	..	..	..	..	..	1,530	1,44,400	..	..	1,45,930
Pulleru do.	..	..	..	..	..	..	3,795	..	..	..	..	..	..	..	22,000	3,105	..	28,900
Pamarru junction canal	..	..	..	..	..	..	..	..	..	..	..	..	..	810	..	..	..	810
Polraz canal	..	..	..	..	..	..	..	..	..	..	..	..	..	330	..	300	..	630
Bantumilli do.	..	..	..	..	..	..	6,230	..	..	..	..	..	35,910	1,610	65,830	3,710	..	1,13,290
Ellore do.	..	..	..	..	..	..	30	..	190	..	..	..	12,185	..	..	436	..	12,841
Ryves do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bank do.	..	..	..	..	..	..	5,000	..	..	..	..	..	..	..	..	..	..	5,000
Kanakavalli drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Drain from Inampudi aqueduct to Dayyapu calva	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lazabanda drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Uppulur do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sultanagaram drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gudur swamp	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chendraya drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Polraz do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pullana do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dammidi do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pedakommileru drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pedalanka do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ellamilli do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	15,055	..	190	..	..	..	48,095	4,280	2,32,230	7,551	..	3,07,401

Statement showing the amount of the Kistna Delta completion estimates by Main and Sub heads to correspond with the statement No. II, &c.—*cont.*

Particulars.	(3) DISTRIBUTARIES.						(4) DRAINAGE AND PROTECTIVE WORKS.						Total.
	1	2	3	4	5		1	2	3	4	5		
	Preliminary expenses.	Land.	Works.	Earthwork.	Miscellaneous.	Total.	Preliminary expenses.	Land.	Works.	Earthwork.	Miscellaneous.	Total.	
	20	21	22	23	24	25	26	27	28	29	30	31	32
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Old outlay	..	..	..	..	..	..	..	..	..	..	..	..	30,81,755
Outlay on completed works	..	..	..	..	..	..	..	..	..	..	..	..	31,74,637
Head works ..	..	..	..	..	..	..	..	..	..	..	..	..	7,525
Eastern Section.													
Masulipatam canal	..	7,870	16,760	28,790	1,500	54,920	..	..	..	..	..	..	2,00,850
Pulleru do.	..	15,147	46,583	79,714	4,054	1,45,498	..	..	..	..	..	..	1,74,398
Pamarru junction canal	..	..	..	..	..	..	..	..	..	..	..	..	810
Polraz canal	..	11,122	7,142	21,992	1,804	42,060	..	185	..	3,505	..	3,690	46,380
Bantumilli do.	..	5,261	14,247	15,811	752	36,071	..	..	..	..	..	..	1,49,361
Ellore do.	..	17,444	30,841	30,988	2,485	81,758	..	3,292	5,000	36,958	..	45,250	1,39,849
Ryves do.	..	11,175	10,038	24,986	6,134	52,333	..	..	..	..	..	..	52,333
Bank do.	..	..	..	..	..	..	..	..	..	..	..	..	5,000
Kanakavalli drain	..	..	..	..	..	..	..	3,663	1,580	4,400	1,254	10,897	10,897
Drain from Inampudi aqueduct to Dayyapu calva	..	..	..	..	..	..	..	5,710	..	..	..	5,710	5,710
Lazabanda drain	..	..	..	..	..	..	..	3,540	17,412	60,948	5,576	87,476	87,476
Uppulur do.	..	..	..	..	..	..	..	..	6,717	4,469	261	11,447	11,447
Sultanagaram drain	..	..	..	..	..	..	..	412	..	2,415	..	2,827	2,827
Gudur swamp	..	..	..	..	..	..	..	375	1,500	5,625	..	7,500	7,500
Chendraya drain	..	..	..	..	..	..	..	..	..	..	4,859	4,859	4,859
Polraz do.	..	..	..	..	..	..	..	..	21,528	13,709	190	35,427	35,427
Pullana do.	..	..	..	..	..	..	..	..	2,505	..	1,576	4,081	4,081
Dammidi do.	..	..	..	..	..	..	..	..	1,865	..	95	1,960	1,960
Pedakommileru drain	..	..	..	..	..	..	..	..	550	..	100	650	650
Pedalanka do.	..	..	..	..	..	..	..	3,960	7,200	1,63,707	2,145	1,77,012	1,77,012
Ellamilli do.	..	..	..	..	..	..	..	..	..	..	20	20	20
Total ..	..	68,019	1,25,611	2,02,281	16,729	4,12,640	..	21,137	65,857	2,95,736	16,076	3,98,806	11,18,847

Statement showing the amount of the Kistna Delta completion estimates by Main and Sub-heads to correspond with the statement No. II, &c.—*cont.*

Particulars.	(1) HEAD WORKS.					(2) MAIN CANALS AND BRANCHES.												
	2	3	4	5		1	2	3	5	6	7	8	9	11	12	15	16	
	Land.	Works.	Buildings.	Miscellaneous.	Total.	Preliminary expenses.	Land.	Regulators.	River and hill torrent works.	Other cross drainage works.	Bridges.	Escapes.	Navigation works.	Buildings.	Earthwork.	Miscellaneous.	Maintenance.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Western Section.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Main canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5,67,757	3,464	..	5,71,221
Nizampatam canal	..	..	..	..	..	..	..	..	..	..	17,390	..	6,600	..	10,645	..	..	34,635
Bank do.	..	..	..	..	..	..	..	3,390	7,275	3,320	..	2,865	43,260	..	1,13,715	18,200	..	1,92,025
Commamur do.	..	..	..	..	..	..	16,068	..	1,08,730	510	..	..	24,430	..	2,50,830	..	..	4,00,568
Repalle drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bhattiprole drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pedapalle do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Koppalle do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tungabhadra do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Romperu do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nizampatam do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Miscellaneous drains	..	..	..	..	..	..	..	..	..	..	..	..	..	25,000	..	..	..	25,000
Inspection bungalows	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	..	16,068	3,390	1,16,005	3,830	17,390	2,865	74,290	25,000	9,42,947	21,664	..	12,23,449
Grand Total, Western Delta ..	..	6,500	..	1,025	7,525	..	31,123	3,390	1,16,195	3,830	17,390	2,865	1,22,385	29,280	11,75,177	29,215	..	15,30,850
Unforeseen works	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total requirements for I Works ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total for I Works including old outlay ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Statement showing the amount of the Kistna Delta completion estimates by Main and Sub heads to correspond with the statement No. II, &c.—*cont.*

Particulars.	(3) DISTRIBUTARIES.						(4) DRAINAGE AND PROTECTIVE WORKS.						
	1	2	3	4	5		1	2	3	4	5		
	Preliminary expenses.	Land.	Works.	Earthwork.	Miscellaneous.	Total.	Preliminary expenses.	Land.	Works.	Earthwork.	Miscellaneous.	Total.	Total.
	20	21	22	23	24	25	26	27	28	29	30	31	32
Western Section.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Main canal	..	..	810	..	..	810	..	..	..	..	..	..	5,72,031
Nizampatam canal	..	1,800	39,839	34,880	470	76,989	..	..	..	..	..	..	1,11,624
Bank do.	250	6,538	31,769	72,462	210	1,11,229	..	..	..	..	..	..	3,03,254
Commamur do.	..	6,100	39,569	48,810	12,740	1,07,219	..	..	144	760	..	904	5,08,691
Repalle drain	..	..	..	..	..	..	330	20,880	22,430	1,90,726	..	2,34,366	2,34,366
Bhattiprole drain	..	..	..	..	..	..	..	5,000	..	48,166	2,609	55,775	55,775
Pedapalle do.	..	..	..	..	..	..	..	..	5,000	5,000	..	10,000	10,000
Koppalle do.	..	..	..	..	..	..	..	1,540	1,650	1,910	..	5,100	5,100
Tungabhadra do.	..	..	..	..	..	..	330	18,650	1,91,600	6,84,880	6,281	9,01,741	9,01,741
Romperu do.	..	..	..	..	..	..	..	1,500	15,000	2,15,260	..	2,31,760	2,31,760
Nizampatam do.	..	..	..	..	..	..	..	..	6,740	6,801	..	13,541	13,541
Miscellaneous drains	..	..	..	..	..	..	90	..	..	..	..	90	90
Inspection bungalows	..	..	..	..	..	..	..	..	..	..	..	..	25,000
Total ..	250	14,438	1,11,987	1,56,152	13,420	2,96,247	750	47,570	2,42,564	11,53,503	8,890	14,53,277	29,72,973
Grand Total, Western Delta ..	250	82,457	2,37,598	3,58,433	30,149	7,08,887	750	68,707	3,08,421	14,49,239	24,966	18,52,083	40,99,345
Unforeseen works	..	..	..	..	..	..	..	..	..	..	..	..	3,75,257
Total requirements for I Works ..	..	..	..	..	..	..	..	..	..	..	..	..	44,74,602
Total for I Works including old outlay ..	..	..	..	..	..	..	..	..	..	..	..	..	1,07,30,994

(Signed) J. W. MARTIN,
Superintending Engineer, II Circle.

ABSTRACT comparing the revised amounts with the estimates printed in Proceedings, Madras Government, No. 577 I., dated 1st October 1888.

—	Sanctioned estimate (*vide* G.O., No. 577 I., 1st October 1888.)	Revised estimate.		
		Outlay to end of 1892-93.	Further outlay.	Total.
	Rs.	Rs.	Rs.	Rs.
Old outlay	30,81,755	30,31,755	..	30,81,755
1. Head works—				
Head works—				
2. Land	3,445	5,875	..	5,875
3. Works	1,27,917	51,849	6,500	58,349
4. Buildings	41,081	90,622	..	90,622
5. Miscellaneous	..	2,590	1,025	3,615
Total, 1 Head works ..	1,72,443	1,50,936	7,525	1,58,461
Eastern Section.				
2. Main canals and branches—				
Main canal—				
2. Land	5,188	5,188	..	5,188
3. Regulators	14,344	14,344	..	14,344
7. Bridges	1,550	1,260	..	1,260
9. Navigation works	7,844	7,844	..	7,844
11. Buildings	..	1,486	..	1,486
12. Earthwork	1,04,962	1,04,962	..	1,04,962
Total, Main canal ..	1,33,888	1,35,084	..	1,35,084
Masulipatam canal—				
2. Land	1,878	5,951	..	5,951
6. Other cross drainage	23,117	22,994	..	22,994
7. Bridges	..	..	..	..
9. Navigation works	1,872	1,780	..	1,780
11. Buildings	..	3,350	426	3,776
12. Earthwork	2,65,801	1,61,439	63,562	2,25,001
15. Miscellaneous	5,125	5,070	..	5,070
Total, 2 Main canals and branches ..	2,97,793	2,00,584	63,988	2,64,572
3. Distributaries—				
2. Land	4,725	6,225	7,870	14,095
3. Works	17,889	10,661	16,487	27,148
4. Earthwork	56,919	39,447	28,790	68,237
5. Miscellaneous	1,500	..	1,500	1,500
Total, 3 Distributaries ..	81,033	56,333	54,647	1,10,980
Total, Masulipatam canal ..	3,78,826	2,56,917	1,18,635	3,75,552
Pulleru canal—				
2. Main canals and branches—				
2. Land	6,775	5,469	3,650	9,119
3. Regulators	6,668	6,668	..	6,668
4. Falls and weirs	6,373	6,373	..	6,373
12. Earthwork	90,748	90,006	22,000	1,12,006
15. Miscellaneous	6,881	3,719	2,945	6,664
Total, 2 Main canals and branches ..	1,17,445	1,12,235	28,595	1,40,830
3. Distributaries—				
2. Land				
3. Works	30,946	12,001	13,556	25,557
4. Earthwork	88,945	29,990	44,819	74,809
5. Miscellaneous	1,78,942	51,141	77,687	1,28,828
.. ..	19,314	6,236	3,199	9,435
Total, 3 Distributaries ..	3,18,147	99,368	1,39,261	2,38,629
Total, Pulleru canal ..	4,35,592	2,11,603	1,67,856	3,79,459
Pamarru junction canal—				
2. Main canals and branches—				
2. Land				
7. Bridges	92	92	..	92
11. Buildings	3,850	3,528	..	3,528
.. ..	..	344	466	810
Total, Pamarru junction canal ..	3,942	3,964	466	4,430
Polraz canal—				
2, Main canal and branches—				
2. Land	5,517	2,279	330	2,609
3. Regulators	1,240	3,441	..	3,441
7. Bridges	5,900	..	..	..
8. Escapes	1,932	1,932	..	1,932
9. Navigation works	80,897	79,517	..	79,517
11. Buildings	4,633	2,031	..	2,031
12. Earthwork	39,902	50,604	..	50,604
15. Miscellaneous	7,069	7,027	300	7,327
Total, 2 Main canals and branches ..	1,47,090	1,46,831	630	1,47,461

Abstract comparing the revised amounts with the estimates, printed, &c.—*cont.*

—	Sanctioned estimate (*vide* G.O., No. 577 I., 1st October 1888).	Revised estimate.		
		Outlay to end of 1892-93.	Further outlay.	Total.
	Rs.	Rs.	Rs.	Rs.
Eastern Section—cont.				
Polraz canal—*cont.*.				
3. Distributaries—				
1. Preliminary expenses	378	408	..	408
2. Land	15,825	9,479	6,561	16,040
3. Works	46,582	40,603	6,293	46,896
4. Earthwork	98,852	70,470	18,993	89,463
5. Miscellaneous	6,930	879	1,125	2,004
Total, 3 Distributaries ..	1,68,567	1,21,839	32,972	1,54,811
4. Drainage and protective works—				
2. Land	150	..	185	185
3. Works	..	65	..	65
4. Earthwork	3,505	1,007	3,505	4,512
Total, 4 Drainage and protective works ..	3,655	1,072	3,690	4,762
Total, Polraz canal ..	3,19,312	2,69,742	37,292	3,07,034
Bantumilli canal—				
2. Main canals and branches—				
1. Preliminary expenses	..	76	..	76
2. Land	339	750	5,789	6,539
3. Regulators	785	785	..	785
7. Bridges	6,190	..	..	..
8. Escapes	6,460	..	..	..
9. Navigation works	76,485	57,019	5,927	62,946
11. Buildings	4,549	2,679	1,610	4,289
12. Earthwork	43,460	59,887	11,879	71,766
15. Miscellaneous	3,230	474	3,602	4,076
Total, 2 Main canals and branches ..	1,41,498	1,21,670	28,807	1,50,477
3. Distributaries—				
1. Preliminary expenses	292	295	..	295
2. Land	1,945	2,427	5,210	7,637
3. Works	3,837	14,740	6,545	21,285
4. Earthwork	9,210	14,539	15,704	30,243
5. Miscellaneous	768	111	652	763
Total, 3 Distributaries ..	16,052	32,112	28,111	60,223
Total, Bantumilli canal ..	1,57,550	1,53,782	56,918	2,10,700
Ellore canal—				
2. Main canals and branches—				
2. Land	..	..	30	30
5. River and hill torrent works	1,05,535	1,24,224	190	1,24,414
6. Other cross drainage works	2,430	2,254	..	2,254
7. Bridges	..	12,534	..	12,534
9. Navigation works	885	402	11,783	12,185
11. Buildings	..	2,838	..	2,838
12. Earthwork	..	16,334	..	16,334
15. Miscellaneous	4,265	3,513	436	3,949
Total, 2 Main canals and branches ..	1,13,115	1,62,099	12,439	1,74,538
3. Distributaries—				
2. Land	9,831	5,417	17,444	22,861
3. Works	20,937	25,558	25,179	50,737
4. Earthwork	24,807	15,515	25,667	41,182
5. Miscellaneous	766	840	2,412	3,252
Total, 3 Distributaries ..	56,341	47,330	70,702	1,18,032
4. Drainage and protective works—				
1. Preliminary expenses	..	11	..	11
2. Land	2,538	1	3,292	3,293
3. Works	..	366	5,000	5,366
4. Earthwork	34,080	42,370	16,790	59,160
5. Miscellaneous	10,120	..	..	..
Total, 4 Drainage and protective works ..	46,738	42,748	25,082	67,830
Total, Ellore canal ..	2,16,194	2,52,177	1,08,223	3,60,400
Ryves canal—				
2. Main canals and branches—				
2. Land	10,350	9,976	..	9,976
3. Regulators	20,884	20,541	..	20,541
4. Falls and weirs	5,815	5,815	..	5,815

Abstract comparing the revised amounts with the estimates printed, &c.—*cont.*

—	Sanctioned estimate (*vide* G.O., No. 577 I., 1st October 1888).	Revised estimate. Outlay to end of 1892-93.	Further outlay.	Total.
Eastern Section—cont.	Rs.	Rs.	Rs.	Rs.
Ryves canal—*cont.*				
2. Main canals and branches—*cont.*				
5. River and hill torrent works				
7. Bridges	5,599	5,599	..	5,599
11. Buildings	30,613	30,506	..	30,506
12. Earthwork	2,853	2,853	..	2,853
15. Miscellaneous	3,81,572	3,74,733	..	3,74,733
..	1,641	1,641	..	1,641
Total, 2 Main canals and branches ..	4,59,327	4,51,664	..	4,51,664
3. Distributaries—				
2. Land	13,303	9,884	5,257	15,141
3. Works	35,719	36,767	9,882	46,649
4. Earthwork	65,108	61,418	24,854	86,272
5. Miscellaneous	4,857	4,424	6,055	10,479
Total, 3 Distributaries ..	1,18,987	1,12,493	46,048	1,58,541
4. Drainage and protective works—				
2. Land	457	185	..	185
3. Works	721	717	..	717
4. Earthwork	1,171	970	..	970
Total, 4 Drainage and protective works ..	2,349	1,872	..	1,872
Total, Ryves canal ..	5,80,183	5,66,029	46,048	6,12,077
Bank canal—				
2. Main canals and branches—				
2. Land	10,257	22,817	5,000	27,817
3. Regulators	6,940	9,276	..	9,276
5. River and hill torrent works	3,58,500	112	..	112
6. Other cross drainage works	6,650	..	..	..
7. Bridges	44,650	..	..	..
8. Escapes	5,830	..	..	..
9. Navigation works	17,195	18,859	..	18,859
11. Buildings	8,460	..	..	..
12. Earthwork	3,35,555	91,462	..	91,462
15. Miscellaneous	9,665	87	..	87
16. Maintenance	32,000	..	..	..
Total, 2 Main canals and branches ..	8,35,702	1,42,613	5,000	1,47,613
3. Distributaries—				
2. Land	21,017	..	..	..
3. Works	48,585	..	..	..
4. Earthwork	1,16,615	..	..	..
Total, 3 Distributaries ..	1,86,217	..	..	..
Total, Bank canal ..	10,21,919	1,42,613	5,000	1,47,613
4. Drainage and protective works—				
1. Sub-section—				
Drain along left bank of Masulipatam canal—				
2. Land	607	607	..	607
4. Earthwork	931	931	..	931
5. Miscellaneous	58	54	..	54
Total, Drain along left bank of Masulipatam canal ..	1,596	1,592	..	1,592
Kanakala drain—				
2. Land	1,908	..	..	..
3. Works	2,725	..	..	..
4. Earthwork	14,687	..	..	..
Total, Kanakala drain ..	19,320	..	..	..
Devarapalli drain—				
4. Earthwork	333	..	..	..
Taleru (Divi) drain—				
2. Land	1,333	..	..	..
3. Works	2,500	..	..	..
4. Earthwork	16,667	..	..	..
Total, Taleru (Divi) drain ..	20,500	..	..	..

Abstract comparing the revised amounts with the estimates printed, &c.—*cont.*

—	Sanctioned estimate (*vide* G.O., No 577 I., 1st October 1888).	Revised estimate. Outlay to end of 1892-93.	Further outlay.	Total.
Eastern Section—cont.	Rs.	Rs.	Rs.	Rs.
Gudimotu drain—	667	..	..	..
2. Land	3,166	..	..	..
3. Works	4,500	..	..	..
4. Earthwork				
Total, Gudimotu drain ..	8,333	..	..	..
Mopidevi drain—	167	..	..	..
4. Earthwork				
Sivaganga drain—	211	211	..	211
2. Land				
Drain from Inampudi aqueduct to Dayyapu calva—	5,710	1,849	3,861	5,710
2. Land	51,610	47,793	..	47,793
4. Earthwork	..	575	..	575
5. Miscellaneous				
Total ..	57,320	50,217	3,861	54,078
3. Sub-section—				
Uppuluru drain—	1,033	1,033	..	1,033
2. Land	6,717	..	6,717	6,717
3. Works	12,968	8,499	4,469	12,968
4. Earthwork	261	..	261	261
5. Miscellaneous				
Total, Uppuluru drain ..	20,979	9,532	11,447	20,979
Chendroyakodu drain—	19,740	4,024	..	4,024
2. Land	23,805	18,950	..	18,950
3. Works	82,763	52,585	..	52,585
4. Earthwork	3,119	141	4,718	4,859
5. Miscellaneous				
Total, Chendroyakodu drain ..	1,29,427	75,700	4,718	80,418
Polrazkodu main drain and affluents—	23,830	2,559	..	2,559
2. Land	28,731	10,269	18,743	29,012
3. Works	90,042	68,928	13,709	82,637
4. Earthwork	4,716	1,511	190	1,701
5. Miscellaneous				
Total, Polrazkodu main drain and affluents ..	1,47,319	83,267	32,642	1,15,909
Kolleru embankment—	904	..	..	..
2. Land	17,935	..	..	..
4. Earthwork				
Total ..	18,839	..	..	..
4. Sub-section—				
Pullava main drain and affluents—	850	484	..	484
2. Land	2,505	..	2,505	2,505
3. Works	21,787	24,445	..	24,445
4. Earthwork	365	430	1,146	1,576
5. Miscellaneous				
Total, Pullava main drain and affluents ..	25,507	25,359	3,651	29,010
Damidi drain—	220	97	..	97
2. Land	1,865	..	1,865	1,865
3. Works	5,986	5,107	..	5,107
4. Earthwork	448	398	95	493
5 Miscellaneous				
Total, Damidi drain ..	8,519	5,602	1,960	7,562
Peddakommileru main drain and affluents—	2,200	1,313	..	1,313
2. Land	3,762	..	550	550
3. Works	37,590	61,275	..	61,275
4 Earthwork	424	2,900	100	3,000
5. Miscellaneous				
Total, Peddakommileru main drain and affluents ..	43,976	65,488	650	66,138
Peddalanka drain and affluents—	3,410	212	3,867	4,079
2. Land	945	..	7,200	7,200
3. Works	84,090	56,500	1,07,207	1,63,707
4. Earthwork	778	32	2,113	2,145
5. Miscellaneous				
Total, Peddalanka drain and affluents ..	89,223	56,744	1,20,387	1,77,131

Abstract comparing the revised amounts with the estimates printed, &c.—*cont.*

—	Sanctioned estimate (*vide* G.O., No. 577 I., 1st October 1888).	Revised estimate. Outlay to end of 1892-93.	Revised estimate. Further outlay.	Revised estimate. Total.
Eastern Section—cont.	Rs.	Rs.	Rs.	Rs.
4. Sub-section—*cont.*				
Lingala drain—				
2. Land	476	476	..	476
4. Earthwork	3,052	3,052	..	3,052
5. Miscellaneous	1,099	..	..	..
Total, Lingala drain	4,627	3,528	..	3,528
5. Sub-section—				
Lazzabanda drain and affluents—				
2. Land	18,975	4,166	3,275	7,441
3. Works	40,612	16,170	17,412	33,582
4. Earthwork	1,55,011	90,283	60,948	1,51,231
5. Miscellaneous	7,618	1,377	5,576	6,953
Total, Lazzabanda drain and affluents	2,22,216	1,11,996	87,211	1,99,207
Sultanagaram drain—				
2. Land	601	189	412	601
4. Earthwork	2,415	..	2,415	2,415
Total, Sultanagaram drain	3,016	189	2,827	3,016
Kanakavalli drain—				
1. Preliminary expenses	..	..	..	..
2. Land	1,117	1,844	1,819	3,663
3. Works	16,815	10,107	603	10,710
4. Earthwork	8,760	12,763	4,400	17,163
5. Miscellaneous	492	..	1,254	1,254
Total, Kanakavalli drain	27,184	24,714	8,076	32,790
Gudur swamp—				
2. Land	375	..	375	375
3. Works	1,500	..	1,500	1,500
4. Earthwork	5,625	..	5,625	5,625
Total	7,500	..	7,500	7,500
Saradayapeta drain—				
2. Land	1,600	1,600	..	1,600
Juvikanama drain—				
4. Earthwork	..	2,203	..	2,203
Yellamalli drain—				
15. Miscellaneous	..	..	20	20
Total, Eastern section	41,05,598	25,09,853	8,25,388	33,35,241
Western Section.				
Main canal—				
2. Main canals and branches—				
2. Land	10,870	10,734	..	10,734
3. Regulators	15,702	15,702	..	15,702
5. River and hill torrent works	465	465	..	465
7. Bridges	610	..	..	..
8. Escapes	2,124	2,124	..	2,124
9. Navigation works	212	212	..	212
11. Buildings	..	1,264	..	1,264
12. Earthwork	5,21,506	4,46,326	1,37,185	5,83,511
15. Miscellaneous	2,405	2,613	3,464	6,077
Total, Main canals and branches	5,53,894	4,79,440	1,40,649	6,20,089
3. Distributaries—				
3. Works	..	..	810	810
Total, Main canal	5,53,894	4,79,440	1,41,459	6,20,899
Nizampatam canal—				
2. Main canals and branches—				
7. Bridges	19,486	11,095	17,390	28,485
9. Navigation works	600	629	6,600	7,229
12. Earthwork	10,645	..	10,645	10,645
Total, 2 Main canals and branches	30,731	11,724	34,635	46,359
3. Distributaries—				
2. Land	..	..	1,800	1,800
3. Works	8,702	3,588	37,344	40,932
4. Earthwork	8,787	6,732	34,880	41,612
5. Miscellaneous	..	..	470	470
Total, 3 Distributaries	17,489	10,320	74,494	84,814
Total, Nizampatam canal	48,220	22,044	1,09,129	1,31,173

Abstract comparing the revised amounts with the estimates printed, &c.—*cont.*

—	Sanctioned estimate (*vide* G.O., No. 577 I., 1st October 1888).	Revised estimate. Outlay to end of 1892-93.	Revised estimate. Further outlay.	Revised estimate. Total.
Western Section—cont.	Rs.	Rs.	Rs.	Rs.
Bank canal—				
2. Main canals and branches—				
1. Preliminary expenses	..	700	..	700
2. Land	2,050	2,432	..	2,432
3. Regulators	3,390	..	3,390	3,390
5. River and hill torrent works	7,275	..	7,275	7,275
6. Other cross drainage works	..	..	3,320	3,320
7. Bridges	19,310	..	..	..
8. Escapes	2,865	..	2,865	2,865
9. Navigation works	82,610	67,565	40,977	1,08,542
11. Buildings	4,961	5,342	..	5,342
12. Earthwork	1,13,715	75,980	47,676	1,23,656
15. Miscellaneous	10,063	4,380	14,021	18,401
Total, 2 Main canals and branches	2,46,239	1,56,399	1,19,524	2,75,923
3. Distributaries—				
1. Preliminary expenses	..	1,041	213	1,254
2. Lands	7,548	464	6,462	6,926
3. Works	53,888	8,710	29,744	38,454
4. Earthwork	81,765	9,610	68,546	78,156
5. Miscellaneous	..	1,845	169	2,014
Total, 3 Distributaries	1,43,201	21,670	1,05,134	1,26,804
Total, Bank canal	3,89,440	1,78,069	2,24,658	4,02,727
Commamur canal—				
2. Main canals and branches—				
1. Preliminary expenses	..	384	..	384
2. Land	16,068	13,931	2,137	16,068
3. Regulators	2,593	2,593	..	2,593
5. River and hill torrent works	2,44,434	1,85,821	1,06,552	2,92,373
6. Other cross drainage works	..	156	354	510
7. Bridges	45,876	45,896	..	45,896
9. Navigation works	1,40,078	1,43,727	24,430	1,68,157
11. Buildings	3,928	3,927	..	3,927
12. Earthwork	3,07,055	2,47,616	16,595	2,64,211
15. Miscellaneous	9,562	17,560	..	17,560
Total, 2 Main canals and branches	7,69,594	6,61,611	1,50,068	8,11,679
3. Distributaries—				
1. Preliminary expenses	360	159	..	159
2. Land	19,588	7,058	4,128	11,186
3. Works	58,659	26,308	39,539	65,847
4. Earthwork	1,49,707	67,939	48,810	1,16,749
5. Miscellaneous	2,000	1,045	12,740	13,787
Total, 3 Distributaries	2,30,314	1,02,509	1,05,217	2,07,726
4. Drainage and protective works—				
2. Land	..	78	..	78
3. Works	..	..	66	66
4. Earthwork	..	1,423	760	2,183
Total	..	1,501	826	2,327
Total, Commamur canal	9,99,908	7,65,621	2,56,111	10,21,732
4. Drainage and protective works—				
Drainage channel from Emileru stream to Feringhi-dibba inlet—	900	891	..	891
2. Land	9,528	5,403	..	5,403
4. Earthwork				
Total	10,428	6,294	..	6,294
Repalle drain—				
1. Preliminary expenses	..	198	330	528
2. Land	21,698	2,706	18,490	21,196
3. Works	39,847	36,409	22,430	58,839
4. Earthwork	1,79,824	1,27,906	83,716	2,11,622
5. Miscellaneous	5,140	4,060	..	4,060
Total, Repalle drain	2,46,509	1,71,279	1,24,966	2,96,245

Abstract comparing the revised amounts with the estimates printed, &c.—*cont.*

	Sanctioned estimate (*vide* G.O., No. 577 I., 1st October 1888).	Revised estimate.		
		Outlay to end of 1892-93.	Further outlay.	Total.
Western Section—cont.	Rs.	Rs.	Rs.	Rs.
4. Drainage and protective works—*cont.*				
Bhattiprole drain—				
2. Land	..	..	5,000	5,000
3. Works	15,501	22,684	..	22,684
4. Earthwork	28,166	12,158	48,166	50,324
5. Miscellaneous	2,439	25	2,584	2,609
Total ..	46,206	24,867	55,750	80,617
Peddapalli drain—				
2. Land	123	96	..	96
3. Works	..	..	5,000	5,000
4. Earthwork	2,210	1,930	5,000	6,930
Total ..	2,333	2,026	10,000	12,026
Nizampatam drain—				
2. Land	3,350	..	..	..
3. Works	6,740	..	6,740	6,740
4. Earthwork	6,801	..	6,801	6,801
Total ..	16,891	..	13,541	13,541
Tungabhadra drain—				
1. Preliminary expenses	..	252	328	580
2. Land	17,172	4,959	13,691	18,650
3. Works	99,794	2,497	1,89,157	1,91,654
4. Earthwork	4,92,153	1,87,966	4,90,577	6,78,543
5. Miscellaneous	6,152	1,141	5,140	6,281
Total ..	6,15,271	1,96,815	6,98,893	8,95,708
Romperu drain—				
2. Land	2,593	976	1,500	2,476
3. Works	21,790	..	15,000	15,000
4. Earthwork	1,59,717	99,190	1,49,763	2,48,953
Total ..	1,84,100	1,00,166	1,66,263	2,66,429
Vetapalem-Kunderu drain below Vetapalem—				
4. Earthwork	..	2,699	..	2,699
Koppalla drain—				
2. Land	..	..	1,540	1,540
3. Works	..	320	1,330	1,650
4. Earthwork	..	..	1,910	1,910
Total, Koppalla drain ..	..	320	4,780	5,100
1. Preliminary expenses	..	..	90	90
2. Main canals and branches—				
11. Buildings	..	..	25,000	25,000
Total, Western section ..	31,13,200	19,49,640	18,30,640	37,80,280
Unforeseen works ..	2,57,998	..	3,75,257	3,75,257
Total for works ..	1,07,30,994	76,92,184	30,38,810	1,07,30,994
Establishment	25,07,268	18,33,752	6,73,516	25,07,268
Tools and plant	6,68,043	5,23,564	1,44,479	6,68,043
Loss by exchange	20,000	9,929	10,071	20,000
Total ..	1,39,26,305	1,00,59,429	38,66,876	1,39,26,305
Less receipts on capital account ..	6,521	15,196	—8,675	6,521
Net Total ..	1,39,19,784	1,00,44,233	38,75,551	1,39,19,784
Indirect Charges.				
Capitalized abatement of Land Revenue	5,52,200	4,16,204	1,35,996	5,52,200
Leave and pension allowances	4,28,960	3,34,667	94,293	4,28,960
Total indirect charges ..	9,81,160	7,50,871	2,30,289	9,81,160
Grand Total ..	1,49,00,944	1,07,95,104	41,05,840	1,49,00,944

(Signed) R. R. E. DRAKE-BROCKMAN, Lt.-Col., R.E.,
Ag. Secretary to Govt., P.W.D.

28th Sept. 1893.

ORDER—dated 11th October 1893, No. 857 I., Public Works.

The statement showing the works of the Kistna delta system on which expenditure has still to be incurred is approved and will be printed with the two abstracts appended to the note by the Chief Engineer for Irrigation.

2. The Superintending Engineer, II Circle, will expedite the submission of the estimate called for by the Chief Engineer for Irrigation for rendering the Ryves canal efficient for the contemplated extension of irrigation under that canal.

3. Ordered that a copy of these Proceedings be forwarded to the Government of India with a request that the extension of sanction accorded to the Kistna delta completion estimates in the Government of India letter, No. 10 I., dated 22nd January 1889, which expired on the 31st March 1893, be extended for a further period of 5 years from 1st April 1893.

[Here enter No. 858 I., dated 11th October 1893.]

(True Extract.)

(Signed) R. R. E. DRAKE-BROCKMAN, Lt.-Col., R.E.,
Ag. Secretary to Govt., P.W.D.

To the Chief Engineer for Irrigation, with two statements.
" Superintending Engineer, II Circle.
" Examiner, Public Works Accounts.
" Revenue Department.

Exd. C. A. Munisawmy.
Spare Copies

A 891 W 93

IRRIGATION.
ACCOUNT.

Govt. of {1893} Madras.

PUBLIC WORKS.

Dated October, 11th.

Read. *Encl.*

G.O., 11th Oct. 1893, No. 857 I.

OCTOBER.

Kistna Delta System

The statement showing the works of the — on which expenditure has still to be incurred, approved, and a copy of these Proceedings ordered to be forwarded to the Government of India for an extension of the sanction to the completion estimates for a period of five years from 1st April 1893.

IRRIGATION.
ACCOUNT.

Government {1896} of Madras.

PUBLIC WORKS.

Recd. } 1896. *Enclosures*

Regd. *Spare copies*

G.O., No. 813 I., 9th October 1896.

OCTOBER.

Channel

Estimate of Rs. 6,600 for improving the head sluice —, Bank Canal, Kistna Western division, sanctioned.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following paper :—

From Major W. L. C. BADDELEY, R.E., Superintending Engineer, II Circle, to the Chief Engineer for Irrigation, dated Bezwada, 25th August 1896, No. 1373 K.W.

I have the honour to forward herewith, for your approval and sanction of Government, plan and estimate amounting to Rs. 6,600 for improving the head sluice channel of the Bank canal, Kistna Western division, and to request that you will be so good as to sanction the estimate from the balance of the provision as per item No. 710 of the statement printed with G.O., No. 857 I., dated 11th October 1893.

2. The report which accompanies the estimate explains the necessity for the work.

ENCLOSURE.

REPORT to accompany estimate for improving the head sluice channel of the Bank Canal.

	RS.
Amount of estimate	6,600

2. The estimate is prepared under instructions of the Superintending Engineer.

3. The head sluice channel of the Bank Canal is in very bad order.

The scour hole in rear of it has gone down to 16 feet below true bed level at the deepest point, the sides continue to scour out and the revetments slip and cannot be properly maintained.

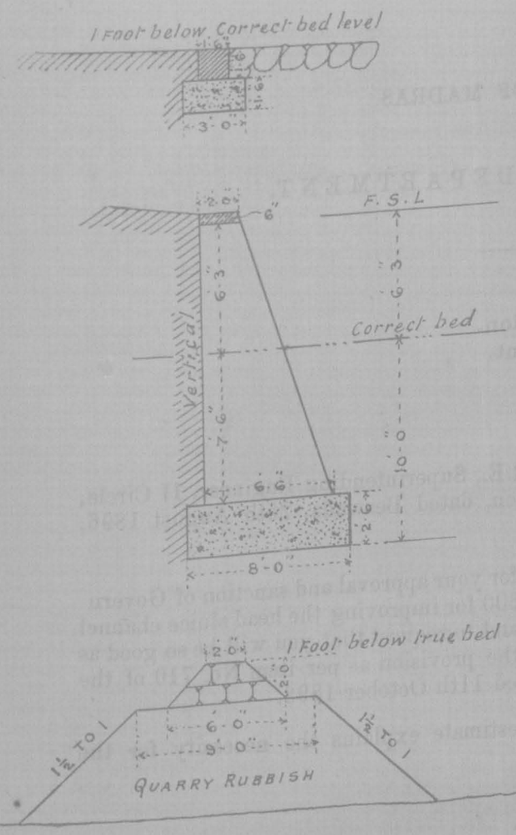
Owing to the strong current from the head sluice, navigation into and out of the lock is difficult and the left bank below the lock is also being eroded.

4. The estimate provides for the following work :—

(1) To demolish the small piece of revetment on right bank of head sluice channel and rebuild it in a new alignment with a masonry footing wall and a 9-feet apron and continue it to the end of the 30-feet apron in rear of the retaining wall.

(2) To demolish the existing revetment in left bank of lock channel below sounding line No. 11 and rebuild it in a correct alignment and continue it to 100 feet below tne 30-feet apron in rear of retaining wall.

A masonry footing wall is not required to this revetment, but it will be taken down to 2 feet below correct bed level.



(3) To construct a cross retaining wall with a 30-feet apron as shown on survey. The retaining wall to be of the sections shown in sketch, and its top and the apron below it will be laid at 1 foot below true bed level. The object of this is that it may be found necessary hereafter to run the canal 7 feet instead of 6 feet deep.

(4) To demolish the existing revetment between sounding lines Nos. 5 and 6 at nose of lock island and build masonry wall running out to a point 2½ feet wide at sounding line No. 9.

The foundation of this wall will average about 10 feet below correct bed level, and the average section will be somewhat as shown in sketch.

This wall is necessary to protect the boats entering and leaving the lock channel from the action of the strong current which flows down the head sluice channel.

(5) A bank across the whole width of the channel on sounding line No. 9, a partial cross bank on sounding line No. 6 and a connecting bank as shown on the survey.

The two banks on sounding lines will have the section shown in sketch.

The stone wall on the top of the quarry rubbish bank will be built in mortar across the lock channel to prevent damage from poling bamboos.

The connecting bank will be found entirely of quarry rubbish.

The object of the connecting bank is (1) to protect foundations of the masonry nose wall against scour, and (2) to restrict the space and facilitate baling when the foundations of the wall are being put in.

The other cross banks are intended to check the scouring action in the bed.

(6) A special provision of 10 per cent. under contingencies to meet unforeseen expenditure which is likely to occur in laying the foundations of the nose wall at the required level, it may be necessary to put in some piling for this work and to allow for earthwork which cannot be foreseen and estimated.

(Signed) L. D. VENKATARAMA AIYAR,
Asst. Engr. in charge, Kistna Western Divn.

28th July 1896.

ORDER—No. 813 I., dated 9th October 1896.

The following estimate is sanctioned from the balance of the provision made for item 710 of the statement printed in Proceedings of Madras Government, No. 857 I., dated 11th October 1893:—

Capital Expenditure not charged to Revenue.
49 Irrigation.
Kistna Delta System.
Western Section.
I. Works.
Bank Canal.
2. Main Canals and Branches.
11. Earthwork.
Improving the head sluice channel.

	RS.
Estimate	6,600

2. This sanction is registered as No. 111 I. of 1896–97.

(True Extract.)

(Signed) W. HUGHES,
Joint Secy. to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
„ Superintending Engineer, II Circle, with four enclosures.
„ Examiner, Public Works Accounts.

Exd. T. K. Narayana Aiyangar.

PUBLIC WORKS DEPARTMENT,
IRRIGATION BRANCH.

No. 813. I dy 9th October 1896.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the

READ the following

Trichy Supdg Engr. II Circle No. 1373 K.W. 925-8-96

The following estimate is sanctioned from the balance of the provision made for item 710 of the statement printed in P.Mg dy 11th Oct/93:—

Capital Expenditure not charged to Revs.
49. Irrigation
Kistna Delta System
Western Section
I. Works.
Bank Canal
2. Main Canals & Branches.
11. Earthwork.
Improving the head sluice channel.
Estimate Rs 6,600

2. This sanction is registered as No. 111 I of 1896-97.

Issue

"I"

To the Chief Engr for I.
Supdg Engr II with 4 encls
Ex. Dno.

Accts 12/9 Bdr. C.C. 28/9 R.S. 10

Public Works (1896) Department.

Receipt

~~CURRENT~~ No. ~~279 H.S.~~ 8583

Order

From The Supdg. Engineer
II Circle.

No. 1373 K.W.

Dated 25th August 1896.

Received ~~28~~ do 24.9.96

Enclosures ~~4~~ 5 (1 plan)

Spare copies

SUBJECT.

Head sluice Channel of the Kistna Western Div. II — Forwards for sanction an estimate of Rs 6660 for improvements to the

7.S.3-8/10

Recd 9/10

Rep 9/10

E. I. Form No 1—1,000 -27-11-96.

O&S 440 R7/10

BACK PAPERS.

G.O.	No.	Department.	Date.
	857J	Rd.	11-10-93

FURTHER PAPERS.

G.O.	No.	Department.	Date.

Superintending Engineer's Office
Bezwada

No. 1373 K.W.

II CIRCLE,

Dated 25 August 1896

From, Major A. L. C. Baddeley R.E
~~Esquire,~~
Superintending Engineer,
II Circle.

To,
The Chief Engineer
for Irrigation

Enclos.
1 Draft Estr
1 Report
1 Traing
1 Data
4

Sir,

I have the honour to forward herewith for your approval & sanction of Government plan & estimate amounting to Rs: 6600 for improving the Head Sluice channel of the Bank canal Kistna Western Division and to request that you will be so good as to sanction the estimate from the balance of the provision as per item No 710 of the Statement printed with G.O. No. 857J dated 11th October 1893.

2. The report which accompanies the estimate explains the necessity for

for the work.

I have the honour to be,
Sir,
Your most Obt Servant
Hurbadderley Major RE
Supg Engineer II Circle

ate.

CHIEF ENGINEER
FOR IRRIGATION.
29 AUG 96
No. 2798

From,

The Superintending Engineer,

II Circle.

To,

The

Dated

Received } 18

Enclosures.

NO.

SUBJECT.

CHIEF ENGINEER FOR IRRIGATION. 26 AUG. 96 No. 279 Rs

From

The Supg Engineer
Second Circle

To The Chief Engineer
For Irrigation

Dated 25 August 1896

Encls 4

No. 1373 KW

Head Sluice channel of the Bank Canal KWD.

— Forwards for sanction, an estimate of Rs 6600 for improvements to —

Report to accompany Estimate for Improving the Head sluice channel of the Bank canal.

1. Amount of Estimate Rs 6600.
2. The Estimate is prepared under instructions of the Superintending Engineer.
3. The Head Sluice channel of the Bank canal is in very bad order.
The scour hole in rear of it has gone down to 16 ft below true bed level at the deepest point; the sides continue to scour out & the revetments slips & cannot be properly maintained.
Owing to the strong current from the Head Sluice, navigation into & out of the lock is difficult & the Left Bank below the lock is also being eroded.
4. The estimate provides for the following work.
(1) To demolish the small line of revetment on Right bank of Head sluice channel & rebuild it in a new alignment with a masonry footing wall & a 9 ft apron & continue it to the end of the 30 ft apron in rear of the retaining wall.
(2) To demolish the existing revetment in Left bank of lock channel below sounding line No. 11 & rebuild it in a

correct alignment & continue it to 100 ft below the 30 ft apron in rear of retaining wall.

A masonry footing wall is not required to this revetment but it will be taken down to 2 ft below correct bed level.

(3) To construct a cross retaining wall with a 30 ft apron as shown on survey.

The retaining wall to be of the sections shown in sketch & its top and the apron below it will be laid at 1 ft below true bed level.

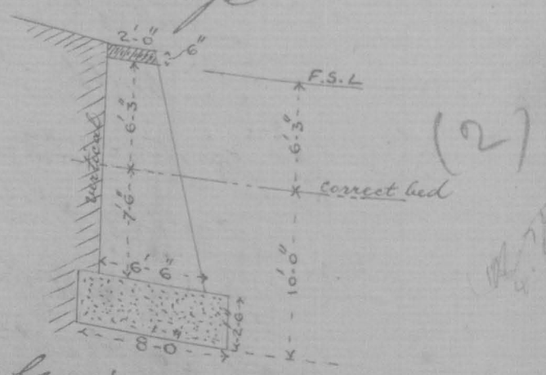


(1)

The object of this is that it may be found necessary hereafter to ruin the canal 7 ft instead of 6 ft deep.

(4) To demolish the existing revetment between sounding lines Nos 5 & 6 at nose of lock island & build masonry wall running out to a point 2½ ft wide at sounding line No. 9.

The foundation of this wall will average about 10 ft below correct bed level & the average section will be somewhat as shown in sketch.

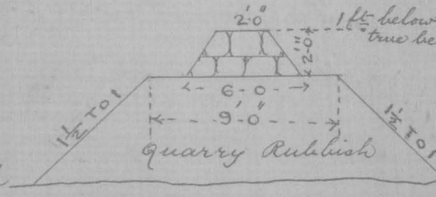


(2)

This wall is necessary to protect the locality entering & leaving the lock channel from the action of the strong current which flows down the Head Slue channel

(5) A bank across the whole width of the channel in sounding line No. 9, a partial cross bank on sounding line No. 6 & a connecting bank as shown in the Surveys.

The two banks on sounding lines will have the section shown in sketch.



The stone wall on the top of the quarry rubbish bank will be built in mortar across the lock channel to prevent damage from poling bamboos

The connecting bank will be found entirely of quarry rubbish.

The object of the connecting bank is (1) to protect foundations of the masonry nose wall against scour & (2) to restrict the space & facilitate sealing when the foundations of the wall are being put in.

The other cross banks are intended to check the scouring action in the bed.

(6) A special provision of 10 per cent under Contingencies to meet unforeseen expenditure which is likely to occur in laying the foundations of the nose wall at the required level, it may be necessary to put in some piling for this work & to allow for earth work

which cannot be foreseen & estimated.

L D Venkatasamy
2817.
Asst
Executive Engineer. incharge
Kistna Western Dn

CHIEF ENGINEER
FOR IRRIGATION
20 AUG. 96
No. 2792

OW 2
858/96