M.R.O. 1—77,006—8-6-31.

(1) Number of pages 292

(2) Date of repair [illegible]

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public Works **DEPARTMENT.**

Cons. 4. 1. 59

G.O. No.	2	Press / Mis.
4 Dated	3 – 1 –	1859.

Not to be folded or roughly handled

No. 16

Superintending Engineer's Office &c.
Fort St George 16th November 1858.

From
The Actg Superintending Engineer
Northern Circle.
To
The Offg Chief Engineer.

Sir,

Having carefully examined Budget Lists Nos 1 & 2 for the districts comprised in the Northern Circle as noted in the margin, received with your Memorandum yesterday, I have the honor to return them with the Works which I consider most deserving of being first prosecuted duly marked, by having either the whole balance of the estimate entered in red ink under the original figures or such sum as, with reference to your instructions to limit the average expenditure in the districts to half a lac of Rupees, I think may advantageously be apportioned to each.

Ganjam
Vizagapatam
Rajahmundry
Masulipatam
Guntoor
Kurnool
Bellary

In List No 1 I find no Work that can be selected as more necessary than another.

In List No 2 the expenditure

I

I proposed may be thus abstracted.

	Irrigation	Communication	Buildings	Total
Ganjam	10,910	36,231	1780.	48,921
Vizagapatam	"	"	5550	5,550
Rajahmundry	33,840	19,126	2,060	55,026
Masulipatam	83,660	"	15,380	99,040
Guntoor	50,540	5,000	"	55,540
Kurnool	"	20,266	6027	26,293
Bellary	19,123	"	25,000	44,123

The larger Amounts allowed for Rajahmundry and Masulipatam are due to the Character and number of the great Works projected for the improvement of these Districts, and in Masulipatam more especially 1st to the formation of the Bunder Canal having been ordered to be proceeded with as a Military Work at an estimated outlay during the year of Rs 60000, reduced by me to Rs 50000. 2nd to the improvement of the Kistnah River Embankment having been sanctioned as an Emergent Work, for which not less than Rs 10,000 can, I think, be allotted, and 3rdly to the erection of Buildings at Razapoor in Juggiapettah, at an estimated Cost of Rs 14,210, being indispensable

as

as Military Works for the accommodation of the newly raised Sibbendy Corps.

In Vizagapatam there being no irrigation Works, and no roads of more importance than those which every where else have been brought to a stand still, I have only allowed the small sum of Rs 5540 for the erection of a Sea Custom House, Flag Staff &c at Vizagapatam, of a Store room for the Signal Serjeant at Bimlipatam, a Lightning Conductor to the Grand Magazine at Vizagapatam and the erection of a Skittle Alley for the use of the Veterans at that Station.—

Adverting to para 7 of your Memorandum, I have the honor to state that having looked over the rough draft of dist. No 3 I do not think less than you have allotted to each of the Districts in the Circle can be allowed as the sums there entered as estimated by the District Engineers from their acquaintance with the requirements of their respective charges as absolutely necessary. Experience has shewn that the Amounts allowed last year, and which have to a great extent guided the requisitions for this, have proved insufficient for the repair of irrigation Works, leading to applications for additional grants, and as we now know that the Monsoon has been unusually trying, especially in Bellary, it is quite clear that timely provision must be made for the performance of more than the ordinary extent of Repairs.—

I do not think it possible therefore to recommend any reduction but on the Contrary would raise the Amount allotted to irrigation repairs in Bellary from Rs 78,986 to Rs 100,000.—

With regard to the remarks of Government in E. Mins: Cons: of the 18 January 1858 No 93 as to the large proportion the cost of repairs of irrigation Works bear to the Nunjah Beriz in the Districts of Rajahmundry Masulipatam, and Guntoor, I beg to refer to the letters from the District Engineers on the subject, and to say that

that, in my opinion, the reason is, that in Rajahmundry neither the true extent of the land irrigated, nor the water rate to be charged, has been ascertained, and that in Masulipatam and Guntoor, the comparative cost of repairs must necessarily be extremely heavy, in bringing into order tanks and water courses which for many years have been utterly neglected, and in maintaining Channels which do not yet make returns, or are only beginning to do so, partly from being unfinished and still only partially irrigating the lands under them and partly from those lands either not being assessed at all or only in full after the fourth year of being watered.—

The old Nunjah Beriz is therefore no guide to the value of the Works in the Deltas of the Godavery and the Kistnah in the Districts named, and any comparison therefore of those Districts with Tanjore, where all the Works of irrigation have been carefully maintained, and all make direct returns, is premature and necessarily unfavorable.—

I have the honor to be,
Sir
Your most Obed. Servant
Archd: Orr Capt
Ag Supg Engr N Circle

Report 30th Nov/58 No 5888.

1858 Dept.

No

From

The Regl Supg Engr

N.C.

To the Offg Chief Engr

Dated 16 } Nov/58

Recd 16 }

In [illegible] 30th [illegible]

No 2909/58 Enc 9

Returns Budget Lists Nos 1 & 2 of the Districts comprised in the Northern Circle with Memorandums_

9

Central Office of P.W.
Fort Saint George
10th December 1858.

No 6197

From
The Officiating Chief Engineer

To
The Secretary
to Government D.P.W.

Sir,

Public

Encl 1

+ No 5888.

With reference to my letter + of the 30th November last para 3 transmitting the Budget Lists for the Official Year 1859/60, I have the honor to forward herewith the Lists Nos 1. 2. and 3 for Secunderabad prepared from Statements which were received from Major Boileau on the 6th Instant. —

Extract Minutes of Consultation 4th October 1858. No 2214

2. The Works recently sanctioned by the Government of India have been transferred to List No 2 agreeably to rule, but the Acting Chief Engineer not having proposed any expenditure on them for the remaining half of the Current Year, none has been entered in the Central

Office, but I am unable to say whether the omission was intentional or not on his part. —

Central Office of P.W.
Fort Saint George
10th December 1858.

I have the honor to be,
Sir,
Your most obedient Servant

Lieut Col.
Officiating Chief Engineer

From the Offg. Chief Engr.
D/ 30th Novr./58 C No. 7609 inclo

P.W. 1838 Department
Dated Cong 4th January/59.
3010

From
The Offg Chief Engineer

To
The Secretary to Government
P.W.D.

dated 10th December 1858
Recd. 11

No. 6197

Enclos

Forwards with reference to his letter of 30th Jan. last para 3 transmitting Budget Lists for the year 1859/60, his lists 1.2 & 3 for Secunderabad prepared from statements received from Major Boileau. States that certain works recently sanctioned by the Govt. of India have been transferred to list No. 2 and for reasons [illegible] mentioned no Expenditure has been entered in the Central Office on them.

No. 2.

c 23d Decr R 3 Jany

C23 Dec N° 33

13

General Abstract of the proposed expenditure on New Works and Repairs in the Madras Presidency within the Official year 1859/60.

		In Budget No. 1				In Budget No. 2				Total for New Works				Repairs				Grand Total			
		Irrigation works	Communications	Buildings	Total	Irrigation works	Communications	Buildings	Total	Irrigation works	Communications	Buildings	Total	Irrigation works	Communications	Buildings	Total	Irrigation works	Communications	Buildings	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
		Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs
1	Ganjam	"	"	"	"	10910	36231	2190	49331	10910	36231	2190	49331	32800	27834	7000	67634	43710	64065	9190	116965
2	Vizagapatam	"	"	"	"	"	16661	4740	21401	"	16661	4740	21401	10500	9785	3000	23285	10500	26446	7740	44686
3	Rajahmundry	"	59170	"	59170	33840	19126	2060	55026	33840	78296	2060	114196	180000	30684	4000	214684	213840	108980	6060	328880
4	Masulipatam { Godv Divn	"	"	"	"	"	"	5460	5460	"	"	5460	5460	60000	20000	4000	84000	60000	20000	9460	89460
	Kistna Dn	"	"	"	"	83660	"	9920	93580	83660	"	9920	93580	80000	13992	10000	103992	163660	13992	19920	197572
5	Guntoor	"	"	"	"	47540	5000	"	52540	47540	5000	"	52540	60000	10000	4000	74000	107540	15000	4000	126540
6	Nellore	"	"	"	"	13528	44010	1220	58758	13528	44010	1220	58758	180000	45937	5400	231337	193528	89947	6620	290095
7	Cuddapah	"	"	"	"	11482	9885	7444	28811	11482	9885	7444	28811	55000	61185	5000	121185	66482	71070	12444	149996
8	Bellary	"	"	"	"	19123	"	26200	45323	19123	"	26200	45323	100000	78735	9594	188329	119123	78735	35794	233652
9	Kurnool	"	"	"	"	"	84166	6027	90193	"	84166	6027	90193	29000	28732	3600	61332	29000	112898	9627	151525
10	Chingleput	"	"	"	"	41526	2242	12460	56228	41526	2242	12460	56228	60000	148806	13390	222196	101526	151048	25850	278424
11	North Arcot	"	"	"	"	12301	20063	9901	42265	12301	20063	9901	42265	50000	77955	11500	139455	62301	98018	21401	181720
12	South Arcot	"	"	"	"	780	23960	15920	40660	780	23960	15920	40660	55000	59225	3000	117225	55780	83185	18920	157885
13	Tanjore	"	"	"	"	6790	63555	1850	72195	6790	63555	1850	72195	263500	41380	4910	309790	270290	104935	6760	381985
14	Trichinopoly	"	"	"	"	13100	40550	20234	63884	13100	40550	20234	63884	114000	33626	7000	154626	127100	74176	27234	248510
15	Madura	"	"	"	"	"	18868	4250	23118	"	18868	4250	23118	62000	33472	1800	97272	62000	52340	6050	120390
16	Tinnevelly	"	"	"	"	4491	41644	8300	54435	4491	41644	8300	54435	78000	47100	5082	130182	82491	88744	13382	184617
17	Coimbatore	"	"	"	"	14436	40255	13700	68391	14436	40255	13700	68391	40000	60970	9000	109970	54436	101225	22700	178361
18	Salem	"	"	"	"	930	32920	19576	53426	930	32920	19576	53426	54000	47421	1720	103141	54930	80341	21296	156567
19	Canara	"	"	"	"	"	33614	14668	48282	"	33614	14668	48282	"	107488	10300	117788	"	141102	24968	166070
20	Malabar	"	"	"	"	"	39438	33074	72512	"	39438	33074	72512	800	29820	12910	43530	800	69258	45984	116042
21	Madras { Civil Architect	"	"	"	"	1745	769	16609	19123	1745	769	16609	19123	1520	3020	39294	43834	3265	3789	55903	62957
	Garrison Engineer	"	"	667700	667700	"	15817	275706	291523	"	15817	943406	959223	"	"	100000	100000	"	15817	1059223	1075040
	Municipal Commssrs	"	"	"	"	"	"	"	"	"	"	"	"	"	24397	"	24397	"	24397	"	24397
22	Mysore	"	"	"	"	"	"	332590	332590	"	"	332590	332590	"	6000	5000	11000	"	6000	337590	343590
23	Jackatalla	"	"	"	"	"	"	355483	355483	"	"	355483	355483	"	3050	3510	6560	"	3050	358993	362043
	Total.	"	59170	667700	726870	316182	558577	1199532	2104341	316182	617747	1867232	2831211	1596120	1050814	234010	2930944	1912302	1698561	2151292	5762155

Central Office of P.W.
Fort Saint George
30th November 1858

E Lawford Lieutenant Colonel
Officiating Chief Engineer P.W.

1858 Department

No

Enclosure in a letter from the Officiating Chief Engineer

To The Secretary to Government P.W.D.

Dated 30th } November 1858
Received }

No. 5888

OM 2909/58

General Abstract of the proposed Expenditure on New Works and Repairs in the Madras Presidency within the Official Year 1859/60.

Index for Budget No. 2.

District	No. in the Budget	Work	Orders of Govt. No.	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the expenditure of 1859/60
Ganjam	183 I.	Head Sluice across the Nagaricullum channel	321	29th Feb 1856	3410	3410
	319 C.	Road from Berhampore to Russelcondah	453	19th 1853	142,246	3927
	320	Completing the above line from Aska to Russelcondah	2202	28th Nov 1857	10,000	"
	321	Road from Russelcondah to Kimjoree	1847	10th Oct 1856	14465	9465
	308	Planting Six nurseries	2087	10th Nov 1856	540	"
	322	Road from Chicacole to Calingapatam	2410	23rd Dec 1856	24,000	10,000
	514	Canal from the Nowpada salt pans to the port of Calingapatam	57	9th Jan 1857	18,100	"
	323	Road from Nursannapettah to Calingapatam	148	21st Jan 1857	14,580	4,669
	324	Road from Kimedy to Poondy	329	18th Feb 1857	2,450	"
	325	Trunk Road between Byree and Nursampetta	380	27th Feb 1857	5,400	3,840
	326	Branch road to connect the road from Aska to Russelcondah	626	7th April 1857	570	"
	327	Trunk Road from Santhoshapooram to Dendagoodah	1628	24th Aug 1857	46,500	"
	328	Do Do between Chicacole and Santhoshapooram	do	do	37,200	"
	329	Road from Nowpada Salt pans to Tekkali	2128	19th Nov 1857	5,330	5,330
	445	Bridge across the surplus channel of the Vaddadah &c	Do	Do	350	"
	42 B.	Flag Staves at Poondy & Sonapore	1952	23rd Oct 1856	2,240	1120
	45	Police Ameen's Cutcherry at Berhampore	1978	27th Do	1280	640
	132	Six Overseers' Store sheds	2087	10th Nov 1856	540	135
	154	Civil Dispensary at Berhampore	2262	5th Dec 1856	3510	1755
	81	Additional room to the Collector's Cutcherry	712	18th April 1857	1210	605
	155	Native Choultry at Moojagodah	1719	9th Sep 1857	880	415
	66	District Moonsiff's Court House at Palasa &c	2011	26th Oct 1857	2300	1150

District	No in the Budget	Work	Orders of Govt. No	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the Expenditure of 1859/60
Ganjam continued	125 B.	Wall round the burial ground at Itchapore	2154	23rd Nov 1857	470	235
	126	Do Do at Purlakimedy	856	4th May 1857	380	190
	564	Travellers' Bungalow at Chicacole &ca	2248	23rd Nov 1857	3,980	„
	565	Do Do at Berhampore	do	do	2,180	„
	566	Do Do at Aska	do	do	1,520	„
	567	Do Do at Calingapatam	2391	24th Dec 1857	1,350	„
	46	Police Cutcherry at Aska	1541	5th Aug 1858	1,780	1,780
	47	Do Do at Chicacole	2610	30th Dec 1858	1,700	1,700
	9	Alterations &ca to the Staff Sergeant's Quarters at Russelcondah	2741	20th do	410	410
						4,315
Vizagapatam	330 C.	Trunk road No. 4, 41 miles	1628	24th Aug 1857	93,460	„
	446	Masonry work on Trunk Road No. 4	Do	Do	31,910	„
	331	Road from the ferry at Vizagapatam to Punchadarla &ca	1405	12th Aug 1856	45,700	„
	447	Works in connection with the bridge across the Chittivalsa river	329	18th Feb 1857	7,000	„
	332	Branch roads from Palcondah to Cheepurpilly &ca	42. 407.	27th Jan 1854 22nd Sep 1854	30,175	„
	448	Bridges on the new road from Vizagapatam to Yamoolavalsa	194. 776.	29th April 1854 26th May 1856	8,565 2,120	43
	449	Bridges on the road from Palcondah to Parvattipore &ca	91.	26th Feb 1855	4,478	428
	333	Road from Ankapilly on Trunk Road No. 4 to the ferry landing place	116.	25th Jan 1856	10,048	5,363
	334	Road from Nellemoorloo to Gauzavanta	2029.	3rd Nov 1857	7,140	7,140
	103 B	Sea Custom House at Vizagapatam and a flag staff &ca	752	26th May 1856	5,610	1,956
	130	Converting a building into a girls' school	2339	17th Dec 1856	1,000	500
	118	Compound wall &ca for the Waltair Church	973	25th May 1857	875	437
		~~Skittle Alley for the European Veterans at Vizagapatam~~				
					630	630
Rajahmundry	184 I.	Calingulah across the Jamesaroo Channel &ca	1296.	22nd Nov 1853	57,135	4,579
	302	Aqueduct for the drainage water	344.	21st Nov 1854	7,260	174

District	No in the Budget	Work	Orders of Govt. No	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the Expenditure of 1859/60
Rajahmundry continued	185 I.	Channel from Dungairoo to Koodapoor	698.	17th June 1854	1,875	„
	186	Widening the Samulcottah channel	346.	21st Mar 1854	48,227	8,402
	187	Works of Irrigation and Navigation in the Central Delta	321.	10th July 1855	315,932	„
	188	Irrigation and drainage channels in certain Talooks	857.	30th Nov 1855	21,000	4,676
	303	Channels to drain the land irrigated by the Mundapetta channel	157.	5th Feb 1856	3,623	2,954
	304	Excavating a drainage channel	Do	Do	2,300	„
	189	Branch channels of the Cocanada channel	Do	Do	1,101	1,094
	190	Canal from Samulcottah to Toonee	2109	12th Nov 1856	224,305	„
	191	Calingulah across the Ryanee river	9	3rd Jan 1857	7,420	6,064
	192	Channels &ca between Yanamadooroo and Bandada	414.	4th Mar 1857	4,080	„
	305	Drainage channels from Chicarole to the river Yalairoo	do	do	3,180	3,150
	193	A wooden foot bridge at Doorak	2128	19th Nov 1857	1,150	„
	194	Aqueduct over a drain crossed by the Amlapoor channel	do	do	5,400	
	299	Yenamadooroo channel embankment	do	do	7,500	
	172 C.	Improvement of the Coringa Harbour	321.	10th July 1855	62,838	„
	545	Towing path to the Nagarum Aqueduct	938.	20th Dec 1855	23,360	„
	335	Road from Juddungly to Yalaiswaram	157.	5th Feb 1856	17,200	„
	546	Canal from Mogultore to Cocanada	2109	12th Nov 1856	122,357	„
	547	Canal from Samulcottah to Cocanada	do	do	117,339	19,12
	539	47 Crossing places on the Cocanada &ca channels	1596	6th Sep 1856	5,620	„
	548	Lock &ca in the Cocanada Canal	2213.	13th Dec 1856	12,430	„
	336	Road from Cottoor to the bank of Godavery	2409	23rd Dec 1856	1,200	„
	337	Branch roads from Rajahmundry road to Dowlaishwaram	do	do	2,210	„
	549	Lock, Calingulah & aqueduct in certain Talooks	2128	19th Nov 1857	13,610	„
		~~Completing the Kistnapoor Lock Canal~~			23,500	„

District	No in the Budget	Work		Orders of Govt. No	Date	Amount of the Estimated Cost	Amount required for the expenditure of 1859/60
Rajahmundry continued	82	B. Talook Cutcherries at Nursapore &c		35	8th Mar 1856	11,000	"
	171	3 Privies in Dowlaisweram		2409	23d Dec 1856	1,230	"
	43	Dead House to the Seamen's Hospital at Cocanada		164	22d Jan 1857	260	130
	104	Sea Custom House at Cocanada		1783	19th Sep 1857	12,280	2,000
	127	Compound wall to the burial ground at Juggannaikpooram &c		1639	21st Aug 1857	2,495	1,247
	48	Additional Cells to the Police Cutcherry at Cocanada		2128	19th Nov 1857	830	25
	83	Sub Officer's Cutcherry at Horrumpolin		do	do	570	25
	128	Compound wall to the burial ground at Dowlaisweram		1918	13th Oct 1857	1,010	505
	67	Cocanada District Moonsiff's Court House		2247	3d Dec 1857	850	425
	75	Additions &c to the Jail at Rajahmundry		407	8th Mar 1858	3,698	3,698
	49	Adding a tiled shed to the Police Cutcherry at Rajahmundry		2595	2d Dec 1858	310	310
Masulipatam	195	I. Canal of Irrigation &c from the Nayairoo to Ellore	Godavery Division	64	10th Feb 1855	287,644	"
	196	Locks and Calingulahs at Yaloorpaud &c		43	8th Jan 1857	64,820	
	306	Drainage channel to the Venkiah channel &c		44	4th Mar 1857	19,510	•
	197	High level channel from the Koodoor main to Dendalore	Kistnah Division	2109	12th Nov 1856	294,385	•
	198	Channel from Poolairoo to the Canal badin		do	do	237,107	50,000
	199	Banks of the main channel from the northern flank of the Anicut		2287	10th Dec 1856	20,240	10,000
	200	Tunnel under the Mopedavy channel		2289	do	4,110	•
	300	Embankments on the eastern bank of the Kistnah		329	18th Feb 1857	51,910	10,000
	201	Branch channel from the main channel towards the river embankment near Royoor		44	4th Mar 1857	3,080	•
	202	50 miles of small irrigating channels		do	do	16,500	•

3

District	No in the Budget	Work		Orders of Govt. No	Date	Amount of the Estimated Cost	Amount required for the expenditure of 1859/60
Masulipatam Continued	203	I. Channel from Yenekapaud to Mootoor		414	4th Mar 1857	23,200	"
	204	Do Valoopoor to Nundevada		do	do	9,500	"
	205	Lock & Calingulah near Calarapilly		2128	19th Nov 1857	13,660	13,660
	257	Hobellapaud tank &c		2148	23d Do	786	"
	338	C. Road from Ellore to Chintalapoody	Godavery Division	116	25th Jan 1856	24,630	•
	550	Lock and Calingulah at the head of Venkiah channel		2242	17th Dec 1856	13,130	•
	173	Two beacon buoys for the port of Masulipatam		2315	14th Dec 1857	4,300	•
	562	Improving the river and port of Masulipatam	Kistnah Division	253	20th Feb 1856	14,520	"
	552	Lock in the Mopedavy channel		2009	30th Oct 1856	3,250	•
	551	Extending the Hezoorah and Masulipatam Canal		2248	3d Dec 1856	12,800	"
	450	Bridge across Mopedavy channel		2121	13th Nov 1856	7,500	"
	129	B. Burial ground at Condapilly	Kistnah Division	163	21st Jan 1857	1,000	500
	178	Additions &c to Point Devy Light House		64	10th Jan 1857	920	"
	568	Travellers' Bungalow on the North bank of the Kistnah		2128	19th Nov 1857	2,000	"
	76	Improvements to the Jail at Masulipatam		2035	20th Oct 1858	1,870	1,870
	50	Place of Arms &c for the Sebundy Corps at Juggiapett		2558	30th Nov 1858	8,750	8,750
Guntoor	206	I. Widening &c the Toongabudra channel		220	20th Feb 1854	220,417	20,000
	207	Channel from Vellabapoorum to tide water		1405	12th Aug 1856	139,700	"
	208	Do from Toongabudra to Inganampada		1635 1636	12th Sep 1856	146,787	4,000
	209	Lock &c near Vellabapoorum		2009	31st Oct 1856	7,540	7,540
	210	Banks of the main channel from the Southern flank of the Anicut		2358	18th Dec 1856	22,870	10,000
	211	Channels from Toomapoody to Doogerala		126	21st Jan 1857	2,470	•

District	No. in the Budget	Work	Orders of Govt. No.	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the expenditure of 1859/60
Guntoor continued	212	I. Channel from Doogerallah to Pedderavoor	146	21st Jan 1857	7,400	"
	213	Do from Pedderavoor to Nizampatam	do	do	7,400	"
	214	Do from Doogerallah to Yavanie	do	do	1,160	"
	215	60 miles of small irrigating channels	414	4th Mar 1857	19,800	6,000
	216	Channel from Inganampauda to near Inkole	1628	24th Aug 1857	3,26,100	
	217	Calingulah with a Platform bridge &ca across the Toongabuddra Nullah	2128	19th Nov 1857	2,800	
	218	Dam across the Vellatoor channel	2101	14th Nov 1857	500	
	339	C. District road from Guntoor to Mundalah	45	8th Feb 1853	5,622	"
	340	Trunk Road No. 7 from Copperapaud to Pondigul	247	5th June 1854	8,778	"
	451	Timber bridge over the Kistnah Anicut	321	10th July 1855	1,999.31	"
	341	Road from Seetanagrum to Guntoor	893	12th Dec 1855	2,499	"
	540	80 boats for the Kistnah channels	241	23rd Feb 1856	14,000	"
	452	Bridges for completing Trunk Road No. 7	1405	12th Aug 1856	42,424	"
	453	Bridge across High level channel for Guntoor &c road	2421	13th Nov 1856	7,700	"
	454	Do at Chabrole	do	do	7,500	"
	455	Do near Sandole	do	do	7,500	"
	456	Do near Vellatoor	do	do	7,500	"
	553	Locks in the Nizampatam Channel &c	2009	30th Oct 1856	20,040	"
	457	Platform bridge near Kistapollium	2141	14th Nov 1857	4,500	
	541	Cargo boats for the Delta works	2148	22nd Nov 1857	10,000	5,000
	68	B. Moonsiff's Court House at Nar-pettah	357	19th May 1854	1,630	365
	156	Civil Dispensary at Guntoor	86	22nd Jan 1857	2,600	1,152
	69	Moonsiff's Court House at Kasimpody	598	12th Aug 1858	525	525

District	No. in the Budget	Work	Orders of Govt. No.	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the expenditure of 1859/60
Nellore	219	I. Head Sluice to Vapoor Channel	116	25th Jan 1856	2,063	"
	220	Do to Doovoor tank supplying channel	do	do	2,063	2063
	221	Do &ca to Pelairoo channel	do	do	2,256	"
	222	Channel from Gollacondacoor Lodoom to Nellore &ca	do	do	9,868	4,224
	223	Channel from Vencataghery river to the Chennoor tank	221	27th Feb 1856	13,910	7,241
	224	Anicut across the Mamady Calwah	do	do	5,150	"
	225	Pennair Anicut posts and Shutters	786	15th May 1856	5,176	"
	258	Improving the Nellore tank	2021	28th Oct 1857	17,100	"
	342	C. Trunk Road No. 6 from Cavoor to Moodegoondah	200	2nd May 1854	1,07,113	"
	343	Do No. 7	247	6th June 1854	45,313	1,300
	554	Water Communication between Kistnapatam & Goodoor	524	14th Dec 1854	14,000	"
	458	Bridge over Attimacoor tank supplying channel	577	24th Sep 1855	3,959	"
	459	Do across the Kundalairoo river	887	31st Nov 1855	13,060	"
	344	Communication between Kistnapatam and Goodoor	355	8th Mar 1856	17,790	"
	460	Masonry works on Trunk Road No. 6	1405	12th Aug 1856	84,580	25,000
	461	Bridge over the Hooqairoo	do	do	38,558	"
	462	Masonry works on Trunk Road No. 7	do	do	47,010	"
	345	Tramway of granite along the crown of the Pennair Anicut	2318	16th Dec 1856	5,010	"
	346	Road from Nellore to Jodairoo	2021	28th Oct 1857	8,000	8000
	347	Do Do to Gungapatam	do	do	4,000	4,000
	542	Ferry boats for the rivers on Trunk Road No. 6	2708	15th Dec 1858	5,550	5,550
	543	Paddle ferry boat for the Cheppalaim	do	do	160	160
	113	B. Additional room to the Chapully Salt Cutcherry	1840	28th Sep 1857	360	180
	51	Police Tannah at Tullakhamp..	2012	27th Oct 1857	190	95

District	No in the Budget		Work	Orders of Govt. No	Date	Amount of the Estimated Cost	Amount required for [illegible] 1859/60
Nellore continued	119	B.	Stair case to the Belfry of the Nellore church	2670.	9th Dec 1858	430.	430
			~~Powder magazine at Nellore~~			~~240.~~	~~240~~
Cuddapah	259	I	Cheppully Kaneegala Tank.	2318.	16th Dec 1856	430.	430
	260		Kistnamanoyneo tank	do	do	1,250	1250.
	261		New tank &ca at Manchpully	2221.	28th Oct 1857.	6,300.	6300
	301		Dyke to protect the wet lands of Yaparilla &ca	2246.	30th Dec 1857.	3,510.	3510.
	348	C.	Cuddapah and Madras road for 69½ miles	1720.	25th Sep 1858.	128,237	
	309		Planting 15 nurseries	1682.	18th Sep. 1858.	2,550.	1955
	349		Road from Oottoor tank channel to Cuddapah	2124	14th Nov 1858.	2,240.	1980
	463		Six bridges between Kulloor and Kulcudda	1628.	24th Aug 1857.	39,142 56	
			Eight bridges between Kulcudda and Goolcheroo	do	do	55,732	
	350		Portion of road from Cuddapah to Kurnool.	1000.	26th May 1857.	3,720	3720
	464		Rough Stone Apron below the Kallee bridge &ca	2256.	12th Nov 1857.	1,070.	1070
	465		Dam across the Moolavunkah on Trunk Road No 11 &c	2148.	23rd Nov 1857.	1,160.	1160.
	133	B	Powder magazine and Civil Engr's Office	1593	6th Sep 1856.	3,280.	1582
	134		15 Overseers' store sheds	1682	18th Sep 1858	1950.	524
	569		Travellers' Bungalow at Pedair	2148.	23rd Nov 1857.	2420	2420
	10		Additions &ca to the Hospital at Cuddapah	2616.	4th Dec 1858	1,250	1250
Bellary	226	I	Head Sluice to Cummacul channel	173.	8th Feb 1856.	4270	4270
	227		Cummacul Channel	do	do	4,620	4620
	262		Cummacul tank	do	do	4750.	4750.

District	No in the Budget		Work	Orders of Govt. No	Date	Amount of the Estimated Cost	Amount required for the expenditure of 1859/60
Bellary	228	I	Wells below the Culpee Tank	2161	14th Oct 1858	1000	1000
	229		Channel from Pennaur for Pengondah	2161	14th Oct 1858	865.	865
	263		Hallykal tank	2196.	19th do.	3,150.	3,150.
	264		Mullapoor &ca Nuddoocuttah	2257.	26th do	718.	718.
			~~Wells below the Culpee Tank~~	~~2161.~~	~~14th do~~	~~1,000.~~	~~1000~~
	351	C.	Portion of Trunk Road No 12	209	6th May 1854	57,051.	"
	466		Bridge over the Pennair river	576.	9th Dec 1854.	35280	"
	352		Road from Oojenee to Humpsagur	333.	12th July 1855	11,456.	"
	353		Bellary and Hospett road	355	8th Mar 1856.	19,430	"
	467		Bridging the road from Turnagul &	do	do	24,380	"
	468		Do Bellary &ca road	1405	12th Aug 1856.	59,250.	"
	310		Planting 12 nurseries	1207.	18th July 1856.	2040	"
	354		Road from Pennacondah to Gooty	1794.	2nd Oct 1857.	5,460	"
	469		Bridge over the Moodlapoorvunka	2019.	24th do	7,480	"
	355		Road in the Cantonment of Bellary	2148.	23rd Nov 1857	2,050.	"
	470		Bridge near Coodoolany	2153.	do	2,680.	"
	471		Do Pemmapoor	do	do	4,710	"
	135	B.	12 Overseers' Sheds	1204.	18th July 1856.	1,200	600
	84		Taluk Cutcherry at Hoovinhudgully	289.	10th Feb 1857	4,220	335.
	11		Hospital for European Infantry Regiment	1405.	12th Aug 1856.	82,330.	25,000
	12		Barracks for 10 married soldiers at Ramandroog.	1431.	25th July 1857.	16200	10467
	13		Outhouses to the European Hospital	2207.	28th Nov 1857	5,650	2825
	136		Carpenters' Shed of the Engineer's Yard	2458.	20th Nov 1858.	950.	950.
	14		Skittle Alleys in the Cantonment of Bellary	2625.	6th Dec 1858.	1000.	1,000
	15		Shed for depositing Iron targets	do	do	325.	325
	16		Guard room for the H. F. Battery	do	do	410.	410
	17		Quarters for the Garrison Serjeant Major at Bellary	do	do	2970.	2970
	85		Peishcar's Cutcherry at Oorvacondah	2479.	22nd Nov 1858	800	800
	18		Racquet Court &ca for the European Troops in Bellary	2536.	26th do.	3,772	3772
	356	C.	Roads from Kurnool to Nundicanama	64	10th Feb 1855.	107,160	11,37
	472		Bridge across the Koondaur	91	24th do	13,263	279
	473		Bridging the road from Kurnool to Bellary	271	23rd Feb 1856.	22,110.	"
	311		Planting 4 nurseries	1207	18th July 1856.	680	"

District	No. in the Budget	Work	Orders of Govt. No.	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the appropriation of 1859/60
Kurnool continued	357 C.	Road from Cumbum to Vinacondah	2021	28th Oct 1857	3900	3,900
	358	Passage on the Muntoral Canama Ghaut	1680	17th Sep 1856	13,300	6,392
	474	Bridges on the road from Kurnool to Nundy Canama	2363	22d Dec 1857	9,700	9,700
	359	Completing the Nundy Canama Ghaut	2135	12th Oct 1858	50,000	25,000
	161 B.	Bowry at Lingapoor	315	24th July 1854	120	35
	157	Mr Scott's Choultry at Ganzoolapully	538	19th Dec 1854	480	168
	137	4 Overseers' sheds	1207	18th July 1856	400	164
	19	Windows to the Hospital at Kurnool	1622	10th Sep 1856	2,000	1,000
	138	District Engineer's Yard and office	1454	28th July 1857	3,210	1,446
	86	Talook Cutcherry at Nundicotoor	120	17th Jan 1857	210	105
	162	Purchase of a Stock of Timber	2009	30th Oct 1856	1,500	750
	163	Dismantling the Cumbum Fort	2488	23d Nov 1858	5,692	5,690
Chingleput	230 I.	Palaur Anicut project	1667	20th Dec 1854	293,273	25,000
	231	Vulloor river channel head sluice	359	25th Mar 1854	2,152	1,460
	265	Shatome tank &ca	1958	19th Oct 1857	470	470
	266	Panapaukum ruined tank	do	do	670	670
	267	Calingulah &ca to Keelanoor tank	do	do	1,640	1,640
	268	Under sluice to the Rungaporam tank	do	do	290	290
	269	Thenapaukum Spring pond	do	do	211	211
	270	Tank, Calingulah &ca in Vulloor village	2388	24th Dec 1857	3,070	3,070
	271	Tank bank and Masonry works in Keelmony village	do	do	1,330	1,330
	272	do do in Arnee village	do	do	4,030	4,030
	273	do do in Tanecrolum village	do	do	2,220	2,220
	232	Goodoopaukum &ca tank supply channel	538	19th Dec 1854	4,881	344
	274	Malipaundoo ruined tank	677	24th Sep 1855	3,350	466
	275	Calingulah to Cooroovambadoo tank	do	do	325	325
	360 C.	Road from Palaur Causeway to Vetry	1405	12th Aug 1856	41,120	
	361	Road between Cuddapah and Madras	1780	25th Sep 1856	10,966	〃
	362	Road across Puningaddee backwater	1405	12th Aug 1856	33,023	〃
	363	Road from Tivalore to Ramanjainy	169	12th April 1854	3,982	1,152
	312	8 Gardeners' huts and 8 Nurseries	1207	18th July 1856	600	201
	475	Widening Marnalong bridge	1956	23d Oct 1856	21,400	〃

District	No. in the Budget	Work	Orders of Govt. No.	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the appropriation of 1859/60
Chingleput continued	476 C.	Tunnel &ca on the road between Dacumbode and Trivellore	1949	22d Sep 1858	650	650
	364	Road from Corattoor to Trivellore	524	11th Dec 1852	14,417	277
	365	Do Trivelloor to the Cortelier river	443	22d Aug 1855	6,236	〃
	366	Road from Sadras to Tirrocalycoonum &ca	116	25th Jan 1856	14,500	〃
	367	Road from Streepermatoor to Mylapoor	321	29th Feb 1856	18,070	〃
	555	Adyaur and Palaur Canal	321 1243	10th July 1855 25th June 1857	218,873	〃
	556	Water communication between Madras and Ameer Coil	1405	12th Aug 1856	72,800	〃
	557	Canal from Doograuzpatam to Kistnapatam backwater	2109	12th Nov 1856	139,665	〃
	558	Completing the Canal at Sadras	414	4th Mar 1857	7,800	〃
	52 B.	3 Jummah Chavadies at Chingleput	600	18th do	990	495
	53	do do at Sydapett	do	do	990	495
	139	District Engineer's office and Work Yard	2121	15th Nov 1856	4,400	1,970
	140	8 Overseers' store sheds	do	do	800	800
	87	Peishcar's Cutcherry at Streehurrycotah	2021	28th Oct 1857	2,020	1,010
	138	Ward for lepers in the Dispensary at Chingleput	2330	16th Dec 1857	940	470
	20	Hospital &ca for the mounted troops at St Thomas' Mount	2221	22d Oct 1858	2,790	2,790
	21	Verandah round the Bombproof Barracks at St Thomas' Mount	2403	15th Nov 1858	2,020	2,020
	77	Noyer Talook Cutcherry Jail	2507	24th Nov 1858	90	90
	88	Peishcar's Cutcherry at Soonnapagoontah	2843	6th Nov 1858	410	410
	170	Preparing the ground for a wharf and Wood Depôt	2318	16th Dec 1856	23,800	
	141	Shedyancoopum lock office &ca	303	13th Feb 1857	2,380	926
	40	Commissariat Store room at St Thomas' Mount	2628	6th Dec 1858	2,170	2,170
North Arcot	233 I.	Works connected with the Poiney Anicut project	1628	24th Aug 1857	153,283	
	234	Palaur Anicut project	1667	20th Dec 1854	572,871	
	276	Bank of the Vaniembady tank &ca	577	24th Sep 1855	2,569	1,811

District	No in the Budget		Work	Orders of Govt. No	Date	Amount of the Estimated Cost	Amount required for the expenditure of 1859/60
North Arcot continued	277	I	Bund of the Bomanaikenpolliem tank	577.	24th Sep 1855.	988.	988.
	278		Cotamungalum and other tanks	321.	29th Feb 1856.	2,670	2,260.
	235		Aqueduct for the Alamtadoo channel	2121.	13th Nov 1856	260.	210.
	279		Sookwady tank	2318.	16th Dec 1856.	340	320.
	280		Mootoopolliem Dalaway tank	do	do	3,300	2,000.
	236		Ernamangalum tank	do	do	290.	245.
	281		Moottereecoopum tank	do	do	1,090	1,064
	282		Atherambady and Goodalore tanks	414	4th Mar 1857.	2,420	2,125.
	283		Nagalapoorum tank	do	do	600	600
	284		Samulcoonda tank	40.	12th Jan 1852	3,046	227.
	285		Vasanthawada tank	577.	24th Sep 1855	294	109.
	237		Anicut to the Sumpungamellore channel	do	do	357.	357.
	238		Channel from the Cheyaur main channel &c	872	6th May 1857.	3,270.	"
	313	C	Planting 10 Nurseries	868.	4th Dec 1855	1,700.	995
	477		Bridge across the Chittoor river	628.	24th Aug 1857	12,482	"
	478		do Culvagoonta river	do	do.	21,387.	"
	368		Trunk Road No 11 from Chittoor to Poothialpett	437.	16th Oct 1854	9,560.	"
	369		Road from Palmanair to Vencatagherry cottah	64	10th Feb 1855.	32,053.	10,941.
	479		Bridges on the Chittoor and Kuskumbaddy road	91.	24th do	21,426.	"
	370		Road from Palaur Anicut to the 65th mile	157.	5th Feb 1856.	2,940.	1,252.
	480		Bridge over the head sluice of the Cauverypauk channel	271.	23rd Feb 1856.	5,700.	"
	481		do Mylendravaudy channel	do	do	3,700.	"
	482		do Chuckeramallore channel	do	do	5,000.	"
	371		Road from Vencatagherrycottah to Sautghur	889.	4th June 1856.	600.	495.
	372		Road between Cuddapah and Madras				

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District	No in the Budget		Work	Orders of Govt. No	Date	Amount of the Estimated cost	Amount required for the expenditure of 1859/60
North Arcot continued	373	C.	Road from the Cheyaur river to the Palaur Anicut	1405.	12th Aug 1856.	38,600	"
	483		Bridge across the Palaur	do	do.	94,400	"
	484		Masonry works on the road from Nagerry to Kuskumbaddy	69.	27th Feb 1854.	6,102.	1,080.
	164		Slate Quarry at Kuskumbaddy	182	24th Jan 1857.	200.	100.
	374		Road from Arcot to the Palaur Anicut	2148.	23rd Nov 1857.	8,160.	"
	375		Road between Vencatagherry cottah and Mysore limits	do	do.	740	"
	376		Road from Campaupet to Conjeveram	2594	2nd Dec 1858	29,100	15,100
			~~Road between [illegible] and [illegible]~~	~~2410~~	~~16th Nov 1858~~	~~21,240~~	~~22,270~~
	142	B.	Ten Overseers' Sheds	858.	4th Dec 1855.	1,000.	370.
	41		Paymaster's office at Vellore	616.	20 April 1857.	440.	220.
	22		Hospital for a Native Regiment at Vellore	2221.	28th Oct 1858.	8,230	8,230.
	23		Skittle Alley for European troops at Ranee pett	215.	4th Dec 1858.	490.	490.
South Arcot	239	I.	Anicut across the Guddalum river	988.	20th Dec 1855.	24,000	"
	240		Goverapet channel	116.	25th Jan 1851.	79,000	"
	241		Satheyamungalum Anicut	355.	8th Mar 1856.	681.	"
	242		Regulating dam across Mallataur channel	219.	13th Feb 1856	1,230.	750.
	286		Pera Coorchy ruined tank	2148.	23rd Nov 1857	1,000.	"
	287		Verdachellum Cullah ruined tank	do	do.	2,380.	"
	243		Anicuts across the Gomaganuddy	do	do	1,600	"
	244		Head sluice and channel leading from the Vellaur Anicut	do	do	8,050.	"
	245		Head sluice &c to the Punkum channel	1940.	21st Sep. 1858.	2,030.	2,030.
	485	C.	Bridge over the Guddelum	282.	21st June 1855.	12,219.	"
	486		do Ponnyaur	1826.	25th Sep. 1857.	5,115.	2,600.

District	No. in the Budget	Work	Orders of Govt. No.	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the Expenditure 1859/60
South Arcot continued	377 C.	Road from Porto Novo to the Vellaur Anicut	116.	25th Jan 1856.	20,000	
	487	Bridges on the road from Oolundoorpet to Calacoorchy	355.	8th March 1856.	12,400	
	488	Bridge over the Pennaur.	1528.	24th Aug 1857.	1,06,333	
	489	Do Sonnyaur.	1405	12th Aug 1856.	46,901.	
	490	Do Guddelum.	do	do.	25,869	
	491	Do Vellaur	do	do.	35,920	
	348	Trunk Road No 8 between Oolundoorpett and Toldoor	do	do	15,050	1857.
	314	Planting 5 Nurseries	1682.	18th Sept 1856.	850	
	492	Bridge over Manoomoolanuddy river.	2218.	11th Dec 1856.	20,000	
	493	Bridges on the road from Cuddalore to Salem frontier.	150.	21st Jan 1857.	20,870.	
	379	Road from Chengamah to Salem	742.	30th Oct 1855.	4,446	
	380	Do Yailoor to the bank of Vadavaur	638.	19th Dec 1854	3,346	923.
	381	Road from Cuddalore to Chellumbrum.	2148.	23rd Nov 1857.	5,580	5,580.
	382	Do Moveanum to Sendevanum	do	do.	22,800	
	570 B.	5 Travellers' Bungalows.	355.	8th Mar 1856.	10,000	
	89	Sayer Cutcherry at Condamungalum	2009.	30th Oct 1856.	300.	150.
	54	Police Cutcherries at Gingee &ca	2335.	17th Dec 1856	1,700.	650.
	143	Engineer's Yard and Office	444.	4th Mar 1857.	3,450.	1,816.
	571	Travellers' Bungalow at Oolundoorpett.	62.	13th Jan 1858.	3,000	3,000.
	24	Lines for a detachment of Native Veterans &ca.	2108.	9th Oct. 1858	12,820	12,820.
	572	Travellers' Bungalows at Afsanoor &ca.	2598.	13th Dec 1858.	1,096	1,096
Tanjore	246 I.	Dam on the Vennaur and Vellyaur	406.	3rd Nov 1857.	7,050	
	307	Under tunnels &ca for the drainage of Croodithungachairy	53.	9th Jan 1857.	1,380	1,240.
	247	Converting an Aqueduct into an Under tunnel.	2398.	22nd Dec 1856.	650.	650.

District	No. in the Budget	Work	Orders of Govt. No.	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the Expenditure of 1859/60
Tanjore continued	248 I.	Sluice to the Vikramanar	372.	26th Feb 1857.	2,100	2,100.
	249	Head Sluice to the Keertamanaur	2148.	23rd Nov 1857.	2,700.	2,700
	494 C.	Bridge over the Coleroon	321. 35.	10th July 1855 7th Jan 1857.	63,000	2,261.
	495	do across Moodicondaur.	355.	8th Mar 1856.	1,750.	"
	496	do Adupaur.	1266.	27th June 1857	18,107.	"
	441	Road from Mayloor to Perneghery	337.	13th July 1855	2,389.	2,339
	442	do Trivencaud to Tranquebar &c	do	do	1,868.	1,868.
	443	do do to Nayderaffah	do	do.	1,278.	1,278.
	497	Bridge across Muneycornyaur	do	do	2,242	2,242
	498	do Natooniar	321.	29th Feb 1856.	3,300	256.
	499	do do.	do	do	4,200	2,504
	500	do do.	do	do	4,800.	2,365
	501.	do do.	do	do	7,500.	4,458.
	383	Road between Valengamon and Paupanassum.	355.	8th Mar 1856.	4,300.	335
	502	Bridge across Vettaur	do	do	10,900.	5,842
	503	do Moodicondaur	16.	5th Jan 1857	10,880.	5,830.
	504	do Vennaur	do	do	19,500	9,500.
	315	Planting 8 Nurseries	444	4th Mar 1857.	1,360.	700.
	505	Munnyaur bridge	do	do	2,500.	2,500.
	506	Bridge across Moothalymoottyvaukel	2148.	23rd Nov 1857.	6,400	3,000.
	507	do Oodembogy	do.	do	1,300.	
	508	do Devanathy	do	do	4,500	"
	509	do Vandyaur	do	do	1,470.	1,470.
	384	Road from Patoovalacdom to the Sea port.	do	do	10,500.	5,500.
	510.	Masonry works on the road from Kotoor to Shungundy	do	do.	14,630.	7,000.
	573 B.	Travellers' Bungalow at the Lower Anicut	355.	8th Mar 1856.	2,250.	
	90	Talook Cutcherry at Coottalam	1027.	24th June 1856.	1,017.	508.
	144	8 Overseers' Sheds	444.	4th Mar 1857.	1,600.	800.
	574	Travellers' Bungalow at Ammapett	2148.	23rd Nov 1857.	1,750.	
	91	Converting a certain building into a Record Room at Tranquebar	1210.	25th June 1858.	250.	250.

District	No. in the Budget	Work	Orders of Govt. No.	Date	Amount of the Estimated Cost	Amount required for the expenditure 1859/60
Trichinopoly	250 I	Poroovalay channel.	2148.	23rd Nov 1857.	24700.	1700.
	385 C.	Road from Trichinopoly to Coimbatore	2594	22nd Dec 1858.	30,000.	1000.
	511.	Bridge over the Vellaur.	1405.	12th Aug 1856.	37,263.	1,000.
	386	Road from Trichinopoly to Salem.	do	do	50000.	
	387	— do — do — to its junction with Trunk Road No 9.	do	do	43,600.	
	388	Trunk Road No 8 between Oolundoorpett and Samiaveram	do	do	19,263.	
	512	Bridge across Nuddoocumay hallow Vaikal	2148.	23rd Nov 1857	2200.	"
	389	Road No 8 between Trichinopoly and Salem	do	do	8850.	"
	390	Road from Coombaconum to Woodiarpolliem	do.	do.	10420.	
		Reconstructing Coodamoorty bridge	2430.	17th Nov 1858	11450.	11450.
	575 B.	Travellers' Bungalow at Peragamuny.	1178.	15th July 1856	1795.	1795.
	576	— do — do — at Lalapettah	do	do	1798.	1798.
	577	— do — do — at Voyelullapoodelloor.	do.	do	2250.	2250.
	578	— do — do at Padaloor	do.	do.	1998.	1998.
	145	Engineers' Yard and Office	186.	24th Jany 1857.	4000.	2000.
	146	Nine Overseers' Sheds	do.	do	900.	450.
	25	Hospital at Pooloor.	2222	22nd Oct 1858.	2390.	2390.
		Roof of the European Infantry Barracks.				
					10000 1513	10000 12
Madura	391 C.	Repairing road No 22.	273.	18th June 1855.	3610.	"
	392	Making a portion of Road No 25.	305.	5th July 1855.	8812.	5133.
	513	Bridge across the Goondaur	do.	do	7300.	"
	393	Portion of road No 18.	do.	do	7884.	854.
	514	Bridge over the Shummooganuddi	do.	do	15425.	918.
	394	Road &c. on Pulney Hills	1173.	15th July 1856.	6000.	
	515	Bridge across the Vyga river	1405.	12th Aug 1856.	42200.	
	395	Road from Nullacottah to Pulkanook	do.	do	25560.	"

District	No. in the Budget	Work	Orders of Govt. No.	Date	Amount of the Estimated Cost	Amount required for the Expenditure of 1859/60
Madura Continued	316 C	Planting 7 Nurseries	2199	28th Nov. 1857	1190	"
	559	Deepening Paunilan channel	1719	25th Augt 1858	15700	3700
	70 B	Moonsiff's Court House at Dindigul	1762	16th Sept 1857	1500	500
	147	Seven Store Sheds	2199	28th Nov. 1857	700	350
	148	Converting the late Head Assistant Collector's Cutcherry into an Engineers' Office &c.	2148	23rd Nov. 1857	3570	1785
	78	Prison rooms to the Salt Amildar's Cutcherry at Ramnad	1753	28th Augt 1858	870	870
	55	Cutwall's Choultry at Dindigal	2049	5th Octr 1858	880	880
		Staff Serjeants Quarters at — do.			3900	2000
Tinnevelly	288 I	Keelapavoor Paracolum tank	839	22nd July 1853	5246	473
	289	Pillaymolum tank	42	5th Jany 1855	896	448
	290	Marthandasapoorum tank	do	do	957	479
	291	Manikumolum tank	do	do	208	"
	292	Subsidiary tank in rear of Nainmany tank	488	1st Sept 1855	4876	2550
	251	Cunnadian channel	2225	28th Nov. 1856	3700	"
	252	Anicut at Streevigoontum	1628	24th Augt 1857	385000	
	253	Syphon sluice under the supplying channel of Ellundracoondam tank	723	20th June 1854	371	371
	293	Sluice and Calingulah in Arunsanairy Colum	42	5th Jany 1855	170	170
	396 C	High road No 4	26	15th Jany 1855	7470	997
	516	Bridge across the Channel of Manaloor tank	242	2nd June 1855	500	"
	397	Portion of road No 4	742	30th Octr 1855	24745	12919
	398	Do	do	do	9941	4498
	174	Jetty at the Port of Tuticorin	355	8th March 1856	4650	
	399	Road No 8 from Palamcottah to Tuticorin	1405	12th Augt 1856	67311	10000
	317	Planting 13 Nurseries	1682	18th Sept 1856	996	-

District	No. in the Budget		Work	Orders of Govt. No.	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the year 1859/60
Tinnevelly continued	400	C	Road between Soolachmeum's bridge and Hatchanulloor	1328	10th July 1857	6450	.
	401		Portion of High road No. 4	2148	25th Novr 1857	20,200	6000
	402		Portion of road No. 4	2709	15th Decr 1858	2,850	2850
	403		Portion of road No. 12	do	do	4380	4380
	149	B	13 overseers' sheds	1682	18th Feby 1856	1300	650
	71		Moonsiff's Court House at Naddoomundalam	513	20th March 1857	1051	525
	92		Arm Racks for Muskets	1377	18th July 1857	280	140
	93		Chowkry Cutcherry at Davadanum	2148	25th Novr 1857	180	90
	94		Compound wall round the Talook Cutcherry at Santoor	1225	30th June 1858	400	400
	95		Peishcar's Cutcherry at Kuddayum	2488	25th Novr 1858	450	450
	96		Portion of the Talook cutcherry at Shermadavy	2632	6th Decr 1858	2640	2640
	97		Chowky Cutcherry &c at Pamhoolypatam	do	do	2300	2300
	105		Sea Custom Cutcherry at Vypaur	do	do	530	530
	114		Salt Pan Treasury at Arasady	do	do	235	235
	115		Do do at Vypaur	do	do	235	235
Coimbatore	294	I	Hampaporam tank	419	13th April 1853	918	.
	254		Padapully channel &c	1094	27th Septr 1853	23,631	4236
	255		Caliugaroyen channel	1405	12th Augt 1856	64898	11,000
	517	C	Bridges on the road from Metropollium to Trichinopoly	116	25th Jany 1856	11,500	
	404		Road from Collegal to Hassanoor Ghaut	do	do	3500	
	518		Bridges on the road from Sattimangalum to Bunnary	do	do	21600	.
	519		Bridge over the Amhravaty river	1405	12th Augt 1856	63830	.
	520		Bridge over the Sanganoor Nullah	2406	25th Octr 1856	3000	.
	521		Truss Bridge across the Bellical stream	233	30th Jany 1857	2200	.
	522		Bridges on the road from Coimbatore to Metoopollium	742	31st Octr 1855	6240	.

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District	No. in the Budget		Work	Orders of Govt. No.	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the expenditure of 1859/60
Coimbatore Continued	405	C	Hassanoor Ghaut	840	1st May 1857	5600	2600
	7		Coonoor Cantonment roads	1993	23rd Octr 1857	950	450
	406		Halting places at the Coonoor &c Ghaut	1881	5th Octr 1857	1470	870
	407		Road from the Railway Station at Wottocoolly to Trunk road No. 6	2633	6th Decr 1858	12,140	12,140
	408		— do to connect the Trunk road No. 5 & the Town of Coimbatore	do	do	11,200	11,200
	409		— do at Shomanoor to Trunk road No. 5	do	do	4260	4260
	410		do from Parindoray to the Railway Station	do	do	8735	8735
			Cast Iron pipes for conveying water	2660	8th do	2750	2750
	120	B	Coonoor Church	1741	12th Sept 1857	4900	2900
	98		Collector's Cutchery	2102	14th Novr 1857	1800	800
	79		Jail at Ootacamund	2274	28th Octr 1858	30000	15000
Salem	295	I	Nattekapetty Agarum tank	577	24th Sept 1856	430	430
	256		Sallimpetty Anacut	do	do	500	500
	296		Mullagherry ruined tank	186	9th Feb 1856	2000	"
	297		Vellyapetty new tanks	858	4th May 1857	5510	"
	523	C	Woodyapetty bridge	389 994	9th Sept 1854 25th May 1857	1332 1,068	"
	411		Road from 12th Mile Stone	557	24th Sept 1855	5300	2179
	412		— Do — Adamancottah to Malapoorum	742	30th Octr 1855	15280	15280
	524		Bridge on the Peryagarum Nullah	936	12th June 1856	720	"
	525		— do over the stream of the Luddavaddy tank	2121	13th Novr 1856	630	"
	526		do Vellaur river	2318	16th Decr 1856	8000	"
	527		do at Sashen's Choultry	do	do	1800	"
	528		do over the Kullaur river	do	do	3500	"
	529		do over a jungle stream	do	do	1400	
	413		Road from Salem to Trichinopoly	152 1992 7	21st Jan 1857 23rd Oct 1857 6th Jan 1858	1000 1480 500	3541
	414		Road to connect the town and the Railway Station at Vaniembaddy	444	4th Mar 1857	7500	2500
	530		Bridge over the Vapabittoo river	1248	28th Novr 1857	2040	"
	415		Road from Dharampoory to Mooroonoor	do	do	4200	2200

District	No. in the Budget	Work	Orders of Govt No.	Orders of Govt Date	Amount of the Estimated Cost	Amount required for Expenditure 1859/60
Salem continued	416 C.	Salem and Yercaud Cattle Ghaut	215	23rd Nov 1857	1500	1500
	417	Road between Namacul and Trichengode	2691	13th Dec 1858	3,000	3,000
	418	Road to connect the town and Railway Station at Salem	2121	4th do	11100	11100
	579 B.	Choultry at Hosoor	1296	29th July 1856	4,000	4000
	150	District Engineer's office &c at Salem	1622	10th Sep 1856	3,640	783
	580	Choultry at Adamancottah	44	4th Mar 1857	1000	1000
		New Sick Stables at the Remount Depot			12200	12200
Canara	419 C.	Road from Oopenangady & Bentwall	277	28th July 1853	8081	7117
	420	Ghaut and road from Yellapoor to &c	38	25th Aug 1854	5700	1383
	421	Road from Guersappah Sirsy	524	14th Dec 1854	20426	4234
	422	Yellapore, Sircy &c road circuits	321	18th July 1855	34996	"
	175	Quay at Mangalore	91	24th Feb 1855	10713	"
	531	Bridge on the Guersappah Ghaut and road	1405	12th Aug 1858	25994	"
	560	Canal from the Tuddry river to Coomptah	do	do	3528	"
	318	Forming 12 Kundrees	1207	18th July 1856	2020	"
	532	Bridges on the Palloor &c road	69	16th Feb 1854	2440	96
	176	Improving the Mangalore Harbour	491	4th April 1856	3385	"
	423	Road from Coomptah to the Sea Coast	344	26th Nov 1857	2069	332
	533	Bridge across the Mungalpody Stream	1860	30th Sep 1857	2220	2220
	424	Metalling the Sumpajee Ghaut	909	18th June 1856	17200	6000
	425	Improving the Charmardy Ghaut	380	6th March 58	6,000	6000
	581 B.	Six 2d Class Bungalows	91	24th Feb 1855	4225	
	99	Tahsildar's Cutcherry at Hilgly	116	25th Jan 1856	4000	2000
	100	do do at Poltoor	do	do	4200	2100
	101	Peishcar's Cutcherry at Hillalangady	do	do	2558	1279
	582	Travellers' Bungalow at Sedasheghur	do	do	2090	
	151	12 Overseers' sheds	1207	18th July 1856	1200	600

District	No. in the Budget	Work	Orders of Govt No.	Orders of Govt Date	Amount of the Estimated cost	Amount required for the expenditure of 1859/60
Canara continued	106 B.	Sea Custom House at Coomptah	344	25th Nov 1857	1747	587
	107	Embankment at the Coomptah Sea Custom House	do	do	300	150
	56	Police Tannah at Heeragooty	91	24th Feb 1855	31	10
	108	3 Weighing Sheds at Coomptah	do	do	125	61
	179	Light House at Coomptah	192	15th July 1853	1796	466
	72	District Moonsiff's Court at Karkull	79	27th Jan 1855	1392	688
	8	Cutwall's Choultry at Mangalore	116	25th Jan 1856	390	74
	57	Police Tannahs at Muneekery &c	do	do	132	66
	583	Travellers' Bungalow at Guersappah	2074	6th Nov 1857	13170	"
	80	Improvements to the Jail at Honore	557	27th Mar 1858	9432	9432
	116	Salt Koties at Sanecottah	586	31st do	1300	1300
	109	Sea Custom House at Cassergode	1496	30th July 1858	215	215
	73	Moonsiff's Cutcherry at Coondapore	2189	8th Oct 1858	1690	1690
	180	Light House at Carwar Head	2414	16th Nov 1858	2070	2070
	181	do at Tuddry	do	do	1710	1710
Malabar	534 C	Bridge over Vadakancherry and Kanady rivers	321	18th July/55	49061	
	426	Road from Calicut to Paulghaut	do	do	52083	11585
	427	Road from Vadakancherry to Tattamungalum	742	31st Oct/55	8630	5984
	428	Road from Malliapooram to Teroovengady	789	15th Nov/55	3501	"
	429	Do from Mundoor to Angadypooram	857	30th do	1570	1108
	430	Do from Toycad to Vylancoonoor	do	do	2300	"
	431	Do from Munjerry to Condoty	do	do	1767	"
	585	Bridges on the road from Ootacamund to Avalanche	116	25th Jan/56	2190	"
	536	Culputty Bridge	do	do	20000	"
	537	Ponaparamba Canal Bridge &c	278	23rd Feby/56	19920	"
	561	Canal to the Chetwye Lake	321	29th Do	1470	"
	444	Road for opening up the Wynaad Country	1300	7th July/57	10000	5000
	177	Boat for deepening the Bar of the Cochin harbour	1438	25th July/57	760	760
	432	Road from Tellicherry to Cootiaddy	2148	23rd Nov/57	5980	

District	No. in the Budget	Work		Orders of Govt. No.	Date	Amount of the estimated cost	Amount required for the expenditure of 1859/60
Malabar Continued	433 C	Road from Tamberchery to Nerppanum		2148	25th Nov/57	5600	"
	434	Road from Goodalore to the Mysore Frontier		do	do	7500	"
	435	Do from Wadakancherry to the Cochin frontier		1962	25th Sept/58	3330	3330
	436	Perumbaddy Ghaut and road on Trunk Road No 4		2594	2d Sept/58	61000	31000
	110 B	Additional Ware-rooms at Cochin		577	24th Sept/55	866	433
	74	Moonsiff's Court Houses at Puttamby &c		857	31st Nov/55	4240	2120
	152	Engineer's Office Yard &c at Beypoor		2087	10th do/56	3500	1750
	584	Moosaferkanah at Nedalwingal &c		713	18th April/57	930	930
	585	Converting the old Hospital of the Malabar Police Corps into a Travellers' Bungalow		814	28th April/57	100	100
	182	Hollow Iron Columns over the old Dutch Tower at Cochin		908	12th May/57	3530	3530
	159	Detached Cells to the Dispensary at Calicut		1729	10th Sept/57	1030	515
	121	Church at Calicut		1692	7th do	4820	2410
	122	Building at Malliapoorum for Divine Service		1740	12th do	2920	1460
	111	Sea Custom House at Beypoor		1835	26th do	670	335
	586	Travellers' Bungalow at Vythery		1226	31st June/58	4010	4010
	26	Racket Court &c at Calicut		2327	5th Nov/58	5234	5234
	27	Do at Malliapoorum		do	do	4794	4794
	28	Converting certain Buildings &c at Malliapoorum		1748	27th Augt/58	2440	2440
Madras	298 I	Mylapoor tank Calingulah	Architect	2622	4th Dec/58	1745	1745
	538 C	Barber's Bridge		2318	16th do/56	4760	"
	563	Banks of the Cooum river		1475	26th July/58	8580	8580
	437	Road from the North end of No 3 Platform to the basin bridge		2661	8th Decr/58	406	406

District	No. in the Budget	Work		Orders of Govt. No.	Date	Amount of the estimated cost	Amount required for the expenditure of 1859/60
Madras Continued	165 C	Light House Groyne	Garrison Engineer	618	2d May/56	3000	"
	166	Groynes Nos 14-15 and 16		do	do	12010	"
	438	Road within Clive's Battery		do	do	23820	2855
	167	2 Small intermediate groins &c		816	29th do	4000	2162
	168	5 Groynes for the protection of the Boatmen's Village		1181	15th July do	21000	1394
	439	Road across the new Town Esplanade		1281	1st do/57	3430	"
	440	Foot path from Vepery to Black Town		do	do	840	"
	169	Dwarf Groynes between the Custom House and Clive's Battery		1345	13th July/57	3600	"
		Drains &c Fort Saint George				10800	10800
	58 B	Constables' quarters &c John Pereira's	Civil Architect	415	4th March/57	3080	1540
	59	Tallair Naigue's Tannah at Cow Moideenpettah		do	do	580	291
	60	Duffadar's Tannah in Comuleeswarens pettah		do	do	530	265
	61	Constables' Quarters at Chintadrepettah		do	do	3220	1610
	62	Tallair Naigue's Tannah Poodoopantum		do	do	530	265
	63	Do do at Mowbray's road		do	do	570	285
	64	Jamadar's Tannah, Saint Thome		do	do	440	220
	160	Foundling Hospital at the Money Choultry		2029	8th Nov/56	5390	2677
	44	Room in the upper story of the Office of the Secretary to the Marine Board		916	14th March/58	1160	1160
	102	Arrack distillery		1742	27th Augt/58	15400	"
	117	Shed at the Salt Cotaurs		2661	8th Decr/58	445	445
	65	Shed &c within the compound of the Royapettah Police Court		2714	16th Decr/58	700	700

Dist.	No. in the Budget	Work	Order of Govt No.	Date	Amount of the Estimated cost	Amoun requi for expendi 1859/
Madras continued Garrison Engineer	112 B	External accommodation of the Sea Custom house	1318	21st July/56	19700	985
	131	Re-building the Civil Audit Office	1405	13th Aug/56	37350	
	39	Furnace Store rooms &c to Clives Battery	1885	11th Oct/56	11770	"
	1	A portion of the Sea face on the South of the Flag Staff of the Fortifications	288	19th Feby/58	34500	247
	2	Do do North of do	do	do	34500	276
	3	Do of the North East Orillon Demi Bastion on the Sea face do	do	do	43000	369
	4	Saint Thome Caponniere do	1616	13th Aug/58	40630	335
	5	Do Ravelin do	do	do	75000	700
	6	South Lunette of Saint Georges Ravelin	do	do	48630	436
	153	Enclosing the mint with a wall	2594	2nd Dec/58	60000	"
		Prisons of the Euro: Barracks in the Fort			15400	1840
		Do in the Saint George's Bastion			9400	940
		Wash House & Purcherry prisons in the Fort			6700	670
		Public prisons in the Fort			4700	470
	123	Wooden Stand to swing the Bell of Saint Mary's Church	2533	26th Nov/58	420	420
Mysore	29 B	Old Dragoon Barracks at Bangalore	1299 1405	29th July/56 12th Aug/56	155600	57,000
	30	New do do	2136	21st Nov/57	592260	200,000
	31	Quarters for Color Serjeants	640	3rd May/58	23750	11750
	32	Purchasing a Building at Hoonsoor	902	11th do/57	1260	1260
	33	Female Ward &c to the Dragoon Hospl	2561	30th Nov/58	6110	6110
	34	Married men's Quarters in the Old Dragoon Barrack Square	2054 2594	5th Oct/58 2nd Dec do	98000	49000
	124	Compound Wall to the Mootocherry Church	1677	21st Aug/58	970	970
Hydrabad.	35 B	Certain buildings for the European artillery &c	2594	2nd Dec/58	123502	73000
Jackatallah	36 B	European Infantry Barracks at Jackatallah	1509 637	18th Aug/57 25th March/58	1363010	345,663
	37	Punishment Shed	329	18th Feby/57	3270	1635
	38	Barrack Serjeants Quarters	1570	10th Aug/58	4800	4800

Public Works Budget for the Madras Presidency for the year 1859/60

Part II Works previously sanctioned and new sanctions by local Government

Page of the Item.	No	Description of work.	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State				
		A. Military				
Fortification	1	Rebuilding a portion of the Sea face on the South of the Flag Staff of the Fortifications of Fort Saint George	34500	9798	24702	Portion of the Budget No 10 of 1858/59 Item No 1
	2	Do a portion of the Sea face on the North of the Flag Staff of the Fortifications of Fort Saint George	34500	6829	27671	Do Do
	3	Do a part of the North East Orillion Demi Bastion on the Sea face of the Fortifications of Fort St George	43000	6033	36967	Do Do
	4	Do the Saint Thome Caponniere of the fortifications of Fort St George	40630	7094	33536	Do Do
	5	Do the Saint Thome Ravelin of the Fortifications of Fort St George	75000	5000	70000	Do Do
	6	Do the South Lunette of Saint George's Ravelin of the Fortifications of Fort Saint George	48630	5000	43630	Do Do
		Total Fortifications	275260	39754	236506	

Nature of the Item.	No	Description of work.	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd). A. Military (Contd).				
Cantonments.	7	Widening and improving the Coonoor Cantonment Roads. Coimbatore	950	500	450	Budget No 2 of 1858/9 No 2.
	8	Compound wall to the Cutwall's choultry at Mangalore. Canara	390	316	74	Do No 3.
		Total Cantonments	1340	816	524	

Nature of the Item.	No	Description of work.	Estimated Cost	Computed expenditure up to 30th April 1859.	Amount required for expenditure in 1859/60	Remarks.
		I. State (Contd). A. Military (Contd).				
Accommodation for Troops.	9	Alterations & additions to the Staff Sergeants' Quarters at Russelcondah Ganjam	410	"	410	Recommended Govt 22 Nov/58 No 5636.
		Erecting a ~~Skittle Alley for the use of the European Veterans at Vizagapatam~~	~~630~~	"	~~630~~	~~Recommended Govt 9 Nov/58 No [illegible]~~
	10	Alterations & additions to the Hospital at Cuddapah	1250	"	1250	
	11	Constructing a Hospital for European Infantry Regt. Rs 79930 Do Buildings in connection with the above. Bellary 2400	82330	38909	25000	Budget No 2 of 1858/59 No 6.
	12	Constructing Barracks for 10 married Soldiers at Ramandroog. Bellary	16200	5733	10467	Do No 7.
	13	Constructing out houses to the European Hospital at Bellary	5650	2825	2825	Do No 8.
	14	Building 2 Skittle alleys in the Cantonment of Bellary	1000		1000	
	15	Building a shed in the vicinity of the Butts of the 74th for depositing iron targets. Bellary	325	"	325	
	16	Constructing temporary Guard room for the use of No 7. H. A. Battery in the Fort of Bellary	410		410	
	17	Constructing Quarters for the Garrison Sergeant Major at Bellary	2970		2970	
	18	Constructing a Racket Court & Ball alley for the European Troops in the Garrison of Bellary.	3772	"	3772	
	19	Inserting double windows &c to the Hospital at Kurnool.	2000	1000	1000	Do No 9.

Nature of the Item	No	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State. (Contd)				
		A. Military (Contd).				
Accommodation for Troops.	20	Constructing a Hospital and necessaries for the followers of the mounted Troops at St Thomas' Mount. Chingleput	2790	.	2790	
	21	Constructing a wooden verandah round the Bomb proof Barracks in the Horse Artillery Lines at St Thomas' Mount Chingleput	2020	.	2020	
	22	Constructing a new Hospital for a Regiment of Native Infantry at Vellore. N. Arcot.	8230		8230	
	23	Constructing a Skittle Alley for European Troops at Ranee-pett. North Arcot.	490	.	490	
	24	Constructing Lines for a detachment of Native Veterans and for enlarging the Civil Dispensary at Cuddalore South Arcot.	12820	.	12820	
	25	Alterations &c to the building used by the 21st Regt N.I. as Hospital at Pootoor. Trichinopoly.	2390		2390	
		Additional outlay for renewing the roof of the European Infantry Barracks Trichinopoly.	10,000	.	10,000	Recommended to Govt 21st Oct/58 No 4754 for immediate execution
		Constructing Staff Serjeants Quarters at Dindigul Madura.	3900	.	2000	Submitted to Govt 9th Mar/58 No 523
			115,457	28467	[illegible]	

Nature of the Item	No	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State. (Contd).				
		A. Military. (Contd).				
Accommodation for Troops.	26	Constructing Racket Court for the use of the European Detachment at Calicut. Malabar Rs 2850 — Do — a skittle alley — 980 — Do — a Quoit shed — 1470 5,300 Deduct for items objected to in C.M.C. 29th Septr 1858 No 2016 — 66	5234	.	5234	
	27	Constructing a Racket Court for the use of the European Detachment at Malliapooram Malabar Rupees — 3335 — Do — a Quoit shed Rs 1495 4830 Deduct for items objected to in C.M.C. 29th Septr/58 No 2016 — 36	4794	.	4794	
	28	Converting a certain buildings at Malliapooram into quarters for the non. Comd Officers for the Malabar Police Corps &c Constructing a Cook House & verandah & thatching the building for Serjeants — 780 do — quarters for Serjeants — 1,130				

Nature of the Item	No	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for Expenditure in 1859/60	Remarks
		I. State (Contd)				
		A. Military (Contd)				
Accommodation for Troops.		Constructing Quarters for Apothecary — 1,70 Adding a cook House & Verandah and thatching the building - Malabar — 760	2440	..	2440	
		Taking down and rebuilding the European Barracks Prisons in the Fort	18400	—	18400	
		Creating prisons in Saint Georges Bastion for the Department of Artillery in the Fort	9400	—	9400	
		Constructing wash House and Purchery Privies in the Fort	6700	..	6700	
	29	Improving the Dragoon Barracks at Bangalore intended for occupation by the European Infantry Mysore	155600	98600	57000	Budget No 2 of 1858/59 No 18
	30	Construction of New Dragoon Barracks at Bangalore Mysore	592250	32121	200000	Do No 19 Deferred. The report required in para 11 of Major Stacks letter of 28th Sept 1858 No 460 has been called for from the Chief Engr in his letter of 2nd Dec 1858 No 2594 para 14 pending the receipt of which no expenditure will be incurred on this Project
	31	Constructing 16 Quarters without Houses for Color Serjeants in the Old Dragoon Barrack Square Mysore	23750	12000	11750	— Do — No 26
	32	Purchasing a building at Hoonsoor for the use of the Commissariat Staff Serjeant at that station Mysore	1260	.	1260	✓ Do No 29.

Nature of the Item	No	Description of works	Estimated Cost	Computed expenditure up to 30 April/59	Amount required for expenditure in 1859/60	Remarks
		I State (Contd)				
		A Military (Contd)				
Accommodation for Troops.	33	Constructing Female Ward, Native ward and other improvements to the Dragoon Hospital at Bangalore Mysore	6110	..	6110	
		Alterations and improvements to the Dragoon Hospital at Bangalore Mysore	16470	..	16470	
		Constructing married mens quarters without Houses in the old Dragoon Barrack square at Bangalore Mysore	98000	49000	49000	Budget No 1 of 1858/59 No 2
		Constructing the following buildings for the European Artillery and for improving the Quarters of the Staff Serjeant of the Horse Field Battery at Secunderabad.				
		Hospital	50000	20240	29760	Budget No 1 of 1858/59 No 3
		Guard and Conicopillay's Store room to do	10200	4130	6070	
		Serjeants and Medical Pupils' Quarters to do	10200	4130	6070	
		Wards for Small pox to do	7550	3055	4495	
		Dissecting room	2790	1130	1660	
		Punishment Cell	2790	1130	1660	
		Wards for Maniacs	2790	1130	1660	
		Privy for Hospital Guard	320	130	190	
		Do for Hospital Serjeant and Medical Subordinate	320	130	190	

6B.

Nature of the Item	No	Description of work	Estimated Cost	Computed expenditure up to 30th April/59	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd.)				
		A. Military (Contd.)				
Accommodation for Troops		Cook room to Hospital	2010	814	1196	
		Do for Hospital Serjeant and Medical Subordinates	380	154	226	Budget No 1
		Compound Wall to Hospital	2780	1126	1654	1858/59 No 3
		One range of family Quarters for the Non Commissioned Officers	31,000	12551	18,449	
		Double doors and windows to the Staff Serjeants' Quarters of the Horse Field Battery	370	150	220	
	36.	Constructing European Infantry Barracks at the Neilgherries with subsidiary works at Jackatallah as follows: 5 Ranges of Barracks with Staff Quarters ~~Jackatalla~~ Wash Houses and Privies	834922	667121	135832	Portion of item No 13 of Budget No 2 of 1858/59 Rupees 15,71,500
		Canteen and Coffee Room	37,100	16,298	20,802	Do.
		School and Library	58,450	21,929	22,548	Do Do
		Water Course N.W. or No 2	4,020	3,315	705	Do Do
		Barrack Hill excavation ~~Jackatalla~~	15,300	15,160	140	Do Do
		Two Gun Sheds ~~Jackatalla~~	708			D Deferred
		Bridge Bunds and Road ~~Jackatalla~~	37,580	32,877		Do Do
		A Small Bund & culvert South of the Barracks ~~Jackatalla~~	8,830			Do Do
		Stone drainage for the Barracks & Hospital ~~Jackatalla~~	22,640	2,000	9000	Do
		Service Pipes & Cisterns for Barracks Hospital & Married Quarters ~~Jackatalla~~	26,470	11,000	15,470	Do
		Drainage of Barrack roof ~~Jackatalla~~	11,030		11,030	Do
			22,19,355	1051[illegible]	[illegible]84	

6C

Nature of the Item	No	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I State (Contd.)				
		A Military (Contd.)				
Accommodation for Troops		Water Course N.E. or No 1 ~~Jackatalla~~	4,070	1904	2166	Portion of item No 13 of Budget No 2 of 1858/59 for Rs 15,71,500
		Armourer's Forge ~~Jackatalla~~	990	"	990	Do
		Permanent Married Quarters ~~Jackatalla~~	2,60000	123917	1,20000	Do
		Privies for Do ~~Jackatalla~~	12900	5,000	4,000	Do
		Bakery & Mill ~~Jackatalla~~	15,000	"	"	Do The erection of these buildings on a revised plan ordered to be held in abeyance vide Letter 25th Augt 1858 No 1736.
	37	Punishment Shed Jackatallah	3270	1635	1635	Budget No 2 of 1858/59 Item No 14
	38.	Barrack Serjeant's Quarter Jackatalla	4,800	"	1,800	
		Total accommodation for Troops.	2519074	1187344	841375	

Nature of the Item	No	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Re

Nature of the Item	No	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Cont.)				
		A. Military (Cont.)				
Ordnance		Constructing a Powder Magazine at Nellore.	240		240	Recommended by Govt 4th Nov 58 No 5078 for immediate expen
	39.	Constructing Furnace store rooms & other alterations to Clive's Battery Madras	11770	9171	·	Budget No 2 of 57/5 No 440 defer
		Making certain alterations and additions with an upper story to the Building occupied as the Office at the Gun Powder Manufactory Madras.	5400	—		
		Total Ordnance	11770	9171	·	

Nature of the Item	No	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd)				
		A. Military (Contd)				
Commissariat	40	Constructing Commissariat store rooms at St. Thomas Mount. Chingleput	2170	"	2170	
		Total Commissariat	2170	"	2170	

Nature of the Item	No.	Description of work.	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State. (Contd).				
		A. Military (Contd).				
		Constructing new Sick Stables at the Remount Depot Saleem	12,200	"	12200.	Recommended to Govt. 28th Oct/58 No. 4841 for immediate operation.

Nature of the Item	No	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd)				
		A. Military (Contd)				
Staff	41	Making additions to the Paymasters Office in the Fort at Vellore. North Arcot	440	220	220	Budget No 2 of 1858/59 No 31.
		Total Staff	440	220	220	
		Total Military	28,11,055	17,30,305	10,80,750.	

55

Nature of the Item	No	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd)				
Naval		B. Naval.				
	42	Flag Staves at Poondy & Sonapore at Rs 1120 each. Ganjam	2240	1120	1120	Budget No 2 of 1858/59 No 32 The Estt for a Flag Staff at Ganjam is left out since it was ordered to be proceeded with vide Estt 15th April 58 No 688.
		~~Sea Custom House at Vizagapatam with Office for Master Attendant and a Flag Staff at each of the Ports of Vizagapatam and Bimlipatam Vizagm~~	~~5610~~	~~3655~~	~~1955~~	~~Budget No 2 of 1858/59 No 37~~
	43	Dead House to the Seamen's Hospital at Cocanada Rajahmundry	260	130	130	Do No 36.
	44	Constructing an additional room in the upper story of the Office of the Secy to the Marine Board Madras	1160		1160	[illegible]
		Total Naval	3660	1250	2410	

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd)				
		C. Judicial.				
Police	45	Police Ameen's Cutcherry at Berhampore. Ganjam	1280	640	640	Budget No. 2 of 1858/59 No. 37.
	46	Constructing a Police Cutcherry at Aska. Ganjam	1780	„	1780	✓
	47	Do at Chicacole. Ganjam	1700	„	1700	✓
	48	Constructing 2 additional cells to the Police Cutcherry at Cocanada Rajahmundry Rs 666 Do a cooking shed to do for the Native Prisoners. Rs 164	830	415	415	Do No 38.
	49	Adding a tiled shed to the Police Cutcherry at Rajahmundry for Prisoners.	310	„	310	
	50	Constructing a place of arms, Magazine, Hospital Serjeant's quarters &c for the Sebundy Corps at Juggiapett Masulipatam	8750	„	8750	✓
	51	Erecting a Police Tannah at Kuttakhanpett. Nellore	190	95	95	✓ Budget No. 2 of 1858/59 No. 39
	52	Constructing 3 Tannah Chavadis at Chingleput at 330 Rs each	990	495	495	Do No 40.
	53	Do at Sydapet @ Do Chingleput	990	495	495	Do No 41.
	54	Constructing Police Cutcherries at Ginjee & Chaitput S. Arcot.	1700	850	850	✓ Do No 42.
	55	Constructing Cutwalls Choultry at Dindigul. Madura	880	„	880	✗
	56	Police Tannah at Hurregooty Canara.	31	21	10	✓ Do No 45
	57	Police Tannahs at Mimchekerry & Ekumby. Canara	132	66	66	✓ Do No 46

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd).				
		C. Judicial (Contd).				
Police	58	Constructing constable Quarters and Tallier Naique's Tannah at the Arrack Godown Street John Pereira's Madras	3080	1540	1540	Budget No 2 of 1858/59 No. 47.
	59	Do — Tallier Naique's Tannah at Comemoidenpettah road opposite the present Tannah Madras	580	290	290	Do No 51
	60	Do — Duffadar's Tannah near the new Bridge in Comalasumeerspettah Madras	530	265	265	Do No 52
	61	Do — Constable's Quarters at the junction of Sawmy Naick's and Arnachella Naick's road Chintadrepettah Madras	3220	1610	1610	Do No 53
	62	Do — Tallier Naique's Tannah at the Mount road near Pattula's road Poodoopaukum Madras	530	265	265	✓ Do No 54
	63	Do — Do — at Mowbray's road Mylapore opposite Sullivan's Garden Madras	570	285	285	✓ Do No 55
	64	Altering and improving the Jamadar's Tannah at Cutcherry road Saint Thome Madras	440	220	220	Do No 57
	65	Constructing a shed and 2 privies within the compound of the Royapettah Police Court for the accommodation of the mounted Police Madras	700	„	700	✓
		Total Police	29213	7552	21661	✓

Nature of the Item	No	Description of work	Estimated Cost	Complete expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Cont^d)				
		C. Judicial (Cont^d)				
Police						

Nature of the Item	No	Description of work	Estimated Cost	Complete expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Cont^d).				
		C. Judicial (Cont^d				
	66	District Moonsiff's Court Houses at Palesa & Berhampore at Rs 1150 each. Ganjam	2300	1150	1150	Budget No 29 1858/59 No 63.
	67	Completing Cocanada District Moonsiffs Court House. Rajahmundry	850	425	425	D° No 64.
	68	Moonsiffs Court House at Baupatlah. Guntoor.	1630	1265	365	D° No 65.
	69	Repairing the Moonsiff's Court house at Karimpoody. Guntoor.	525	..	525	
	70	Constructing a District Moonsiff's Court House at Dindigal Madura.	1500	1000	500	D° No 67.
	71	Constructing a District Moonsiffs Court House at Nuddoomundalum. Tinnevelly.	1050	525	525	D° No 68.
	72	Court House for the District Moonsiff at Karkull Canara.	1392	704	688	D° No 74.
	73	Constructing a Moonsiff's Cutcherry at Coondapore Canara.	1690	..	1690	
	74	Constructing Moonsiffs' Court Houses at Puttamby, Shernaad, Pynaad Temalpoorum at Rs 1060 each. Malabar	4240	2120	2120	D° No 78
		Total Court Houses	15177	7189	7988	

I. State (Contd)

C. Judicial (Contd)

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
Jails.	75	Additions & alterations to the Jail at Rajahmundry	3698	"	3698.	
	76	Making certain improvements to the Jail at Masulipatam	1870	700.	1170.	Sanctioned out of One lac fund.
	77	Constructing a Jail in the East verandah of the Sayer Talook Cutcherry at Ponnary. Chingleput	90	"	90	
	78	Constructing Prison rooms to the Salt Amildar's Cutcherry at Ramnad. Madura	870	"	870.	
	79	Constructing a Jail for the Principal Sudder Ameen's Court at Ootacamund. Coimbatore.	30000	15000	15000.	Budget No 1 of 1858/9 No 7.
	80	Rebuilding the boundary wall of the Jail at Honore with Stone in mortar. Canara. Rs 5700 Constg a Jailer's House Rs 950 do a dresser's House. Rs 700 do two Cooking sheds. Rs 1824 do two Sentry Boxes. Rs 34 do a Dead House Rs 224	9432	"	9432	
		Total Jails	45960	15700	30260	
		Total Judicial	90,350	30,441	59,909.	

I. State (Contd)

D. Revenue.

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
ued & iscellaneous	81	Additional Room to the Collector's Cutcherry at Chetterpore for the Printing Press. Ganjam	1210	605	605.	Budget No 2 of 1858/9 No 79.
	82	Erecting Talook Cutcherries at Nursapore, Amlapoor & Cotaramachendrapoor. Rajahmundry	11000	"	"	Do No 80. deferred.
	83	Constructing a Sub Officer's Cutcherry at Borrumpolem. Rajahmundry	510	255	255	Do No 81.
	84	Constructing a Talook Cutcherry at Hoovinahudgally. Bellary	4220	3885	335	Do No 82.
	85	Constructing a Peishcar's Cutcherry at Ooravacondah. Bellary	800	"	800	
	86	Constructing an additional verandah to the Talook Cutcherry at Nundecotcoor, Kurnool	210	105	105	Do No 83.
	87	Constructing a Peishcar's Cutcherry at Streeperoomboodoor in Chingleput	2020	1010	1010	Do No 84.
	88	Repairing and improving the Peishcar's Cutcherry at Soonnapagoontah. Chingleput	410	"	410	
	89	Constructing Sayer Cutcherry at Condamungalum. South Arcot.	300	150	150	Do No 86.
	90	Extending Talook Cutcherry at Cootalum. Tanjore.	1017	509	508	Do No 87.
	91	Converting into a Record Room the Stables adjoining the Govt House in the Fort at Tranquebar. Tanjore	250	"	250	
	92	Constructing Arm racks for Muskets in charge of the Sibbundy Sepoys on Guard over the Talook Treasuries. Tinnevelly	280	140	140	Do No 90.
			22227	6659	[illegible]	

Nature of the Item &c	No.	Description of work	Estimated Cost	Computed expenditure up to 30th April /59	Amount required for expenditure in 1859/60	Remarks
		I. State. (Contd)				
		D. Revenue. (Contd)				
Land & Miscellaneous.	93	Constructing Choukey Cutcherry at Davadanum Tinnevelly	180	90	90	Budget No. 2 of 1859 No. 91.
	94	Reconstructing the Compound wall round the Talook Cutcherry at Santoor. Tinnevelly	400	..	400	
	95	Constructing a Peishcar's Cutcherry at Kuddyum. Tinnevelly	450	..	450	
	96	Reconstructing a portion of the Talook Cutcherry at Shermadavy Tinnevelly	2640	..	2640	
	97	Constructing Choukey Cutcherry Nut Godown & Mettoo Choultry at Pamboolypatam Tinnevelly	2300	..	2300	
	98	Enlarging the Collector's Cutcherry. Coimbatore	1800	1000	800	Do No 92
	99	Tahsildar's Cutcherry at Bilghy Canara				
	100	Do at Pootoor. Canara	4000	2000	2000	Do No 94
	101	Peishcar's Cutcherry at Nillangady. Canara	4200	2100	2100	Do No 95
			2558	1279	1279	Do No 96.
	102	Erecting an arrack distillery Madras	15400	160.	..	Sanctioned as Emergency the work is postponed pending the result of certain enquiries now being made by Coll. of Madras vide Chief Engineer's letter 6 November 1858 No 5
		Total Land and Miscellaneous	56155	13288	16627	

Nature of the Item &c	No.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State. (Contd)				
		D. Revenue. (Contd)				
Customs.	103	Sea custom House at Vizagapatam with Office for Master Attendant and a flag staff at each of the Ports of Vizagapatam and Bimlipatam - Vizagapatam	5610	3655	1955	Budget No. 2 of 1858/59 No 97.
	104	Erecting Sea custom House at Cocanada with apartments for the Master Attendants Office. Rajahmundry	12280	10280	2000	Do No 98.
	105	Constructing Sea Custom Cutcherry at Uppaur. Tinnevelly	530	.	530	
	106	Sea Custom House at Coompta Canara	1747	1160	587	Do No 99.
	107	Embankment at the Coompta Sea Custom House. Canara	300	150	150	Do No 100.
	108	Three weighing sheds at Coompta Canara	125	74	51	Do No 101.
	109	Constructing a verandah in front of the Sea Custom House at Cassergode. Canara	215	"	215	
	110	Providing additional ware rooms at Cochin for storing goods Malabar	866	433	433	Do No 102
	111	Constructing a Sea Custom House at Beypoor. Malabar	670	335	335	Do No 103
	112	Improving the external accommodation of the Sea Custom House for the landing and shipping of goods & their conveyance to and from the Custom House Madras	19700	9850	9850	Do No 105
		Total Customs	42043	25937	16106	

Also Annexes

Nature of the Items &c.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
	I State. (Contd) D. Revenue. (Contd)				
Opium.					

Nature of the Items &c.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
	I State (Contd) D. Revenue (Contd)				
Salt.	113 Constructing an additional room to the Eskapally Salt Cutcherry. Nellore.	360	180	180	Budget No. 2 of 1858/59 No. 107.
	114 Constructing Saltpan Treasury at Arasady. Tinnevelly	235	"	235	
	115 Do at Vypaur Tinnevelly	235	"	235	
	116 Reconstructing 3 Salt Kotties at Lanecottah. Canara	1,300	"	1,300	
	117 Enlarging the Merchants' shed at the Salt Colaurs Madras	445	"	445	
	Total Salt	2575	180	2395	
	Total Revenue	1,00,773	39,405	35,728	

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd)				
		E. Ecclesiastical.				
Churches & other Buildings	118	Compound wall with two Gates complete and levelling the ground for the Waltair Church. Vizagm.	875	438	437	Budget No 29 1858/59 No. 111.
	119	Providing a staircase to the Belfry of the Nellore Church.	430	"	430	
	120	Improvement to the Coonoor Church & the construction of a wall round the Burial ground. Coimbatore	4900	2000	2900	Do No 112.
	121	Constructing a church at Calicut: Malabar	4820	2410	2410	Do No 113
	122	Erecting a building at Malliapoorum for Divine Service Malabar	2920	1460	1460	Do No 114
	123	Constructing a wooden Stand with wheel to swing the Bell of St Mary's church in Fort Saint George Madras	420	"	420	
	124	Do a compound wall with gates to the Moottocherry church. Mysore	970	"	970	
		Total Churches & other Buildings.	15335	6308	9027	

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd).				
		E. Ecclesiastical (Contd).				
Burial grounds.	125	Constructing a wall round the Burial ground at Chicacole Ganjam.	470	235	235	Budget No 29 1858/59 No. 118.
	126	Wall round the Burial ground at Purla Kimedy. Ganjam	380	190	190	Do No 119.
	127	Constructing Compound wall to the Burial ground at Juggernaickapoorum. Rs 930 Do at Cocanada Rs 355 Do at Rajahmundry. Rs 1210	2495	1248	1247	Do No 120.
	128	Erecting a compound wall to the Burial ground at Dowlaishweram. Rajahmundry	1010	505	505	Do No 121.
	129	Enclosing the burial ground at Condapilly, Masulipatam	1000	500	500	Do No 122
		Total Burial grounds	5355	2678	2677	
		Total Ecclesiastical	20690	8986	11704	

Nature of the Item &c	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
	I. State. (Contd)				
Educational	F. Educational.				
	130 Converting a Building in the Church Compound into a Girls' School room at Vizagapatam.	1000	500	500	Budget No 2 of 1859, No. 124.
	Total Educational	1000	500	500	

Nature of the Item &c	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
	I. State. (Contd)				
	G. General.				
Government	131 Rebuilding the Civil Audit Office Madras	37,350			Budget No 2 of 1858/59 No 125 Deferred.
	Total Government	37350			

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure 1859/60	Remarks
		I. State. (contd)				
		G. General. (contd)				
Public Works	132	Constructing 6 Overseer's store sheds at 90 Rs each. Ganjam	540	406	135	Budget No 2 of 1858/59 No 126.
	133	Constructing Powder Magazine and Civil Engineer's Office. Cuddapah.	3280	1718	1562	Do No 129.
	134	Constructing 15 Overseer's Store sheds at 130 Rs each. Cuddapah	1950	1426	524	Do No 130.
	135	Constructing 12 Overseer's sheds at Rs 100 each. Bellary.	1200	600	600	Do No 131
	136	Constructing a carpenter's shed along the compound wall of the Engineer's Yard. Bellary	950	-	950	
	137	Constructing four Overseer's sheds at 100 Rs each. Kurnool.	400	231	169	Do No 132
	138	Constructing District Engineers Yard and Office with Magazine. Kurnool.	3210	1764	1446	Do No 133.
	139	Constructing the Chingleput District Engineer's Office and work yard at Guindy. Chingleput	4400	3330	1070	Do No 134.
	140	Constructing 8 Overseer's Store Sheds. Chingleput.	800	-	800	Do No 135 +
	141	Constructing Office & Store yards and Quarters for the Establishment at the Shadayanacoopum lock. Chingleput	2380	1454	926	Do No 137
	142	Constructing 10 Sheds for the accommodation of Overseers & storing tools. North Arcot	1000	630	370	Do No 136
	143	Constructing Engineer's Yard and Office. South Arcot	3750	1884	1866	Do No 138.
	144	Constructing 8 Overseer's Store sheds. Tanjore	1600	800	800	Do No 139.

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (contd)				
		G. General. (contd)				
Public Works	145	Constructing an Engineer's yard and Office with a Powder Magazine. Trichinopoly.	4000	2000	2000	Budget No 2 of 1858/59 No 140.
	146	Constructing 9 Overseer's sheds @ 100 Rs ea Trichinopoly	900	450	450	Do No 141.
	147	Constructing 7 store sheds for Overseers @ 100 Rs each Madura	700	350	350	Do No 142.
	148	Converting the late Head Assistant Collector's Cutcherry into an Engineers Office, Yard & Store room, working shed and Powder Magazine. Madura	3570	1785	1785	Do No 143.
	149	Constructing 13 Overseer's sheds @ 100 Rs each. Tinnevelly	1300	650	650	Do No 144
	150	Constructing an Office with workshops & store sheds for the District Engineer. Salem	3640	2857	783	Do No 147.
	151	Constructing 12 Overseer's sheds at 100 Rs each. Canara	1200	600	600	Do No 149
	152	Constructing an Engineer's Office yard &c at Beypore Malabar	3,500	1750	1750	Do No 150
		Total Public Works	44270	24684	19586	

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
Public Works		I. State (Contd) G. General (Contd)				
		None				

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30th April /59	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd) G. General (Contd)				
		Enclosing the Mint with a strong wall with Bastions and for the enlargement of the Premises Madras.	60000	"	"	Budget No 1 of 1858 No 9 - Deferred ~~[illegible]~~ ~~[illegible]~~ ~~No 269~~ in consequence of a proposition under consideration for removing the Mint from its present site into the Fort. Vide para 6 of [illegible] 8 Dec 1858 No 2594. ~~[illegible]~~ ~~Cons 20 Dec 1858~~ ~~No 2[illegible]~~
		Total Mint	60000	-	-	

Nature of the Item &c	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure 1859/60	Remarks
	I. State (contd).				
	G. General (contd).				
Post Office	None				

Nature of the Item &c		Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (contd).				
		G. General (contd).				
Charitable Institutions	154	Civil Dispensary at Berhampore Ganjam	3510	1755	1755	Budget No 29/1857/58 No 152.
	155	Native Choultry at Mojagadal Ganjam	830	415	415.	Do No 153.
	156	Civil Dispensary at Guntoor	2500	1347	1153.	Do No 154. The Est. is for Rs 4750 but the inhabitants have contributed the remaining sum
	157	Repairing the building called Mr. Scott's Choultry at Gauzoolpully in Kurnool	480	312	168	Do No 155.
	158	Constructing a ward for Lepers in the compound of the Dispensary at Chingleput	940	470	470	Do No 156
	159	Constructing detached Cells for Lunatic patients to the Dispensary at Calicut. Malabar	1030	515	515	Do No 158
	160.	Erecting a Foundling Hospital without Offices &c at the Monegar Choultry Madras	5390	2713	2677	Do No 160 The Estimate is for Rs 9100 of which Rs 5390 is the contribution of Government, the remainder being met from the Charity funds
		Total Charitable Institutions	14680	7527	7153	

Nature of the Item No.	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
	I. State (cont.) G. General (cont.)				
Scientific Institution	None				

Nature of the Item No.	Description of work	Estimated Cost	Computed expenditure up to 30th April/59	Amount required for expenditure in 1859/60	Remarks
	I. State (cont.) G. General (cont.)				
Monuments & Antiquities	None.				

Nature of the Item	No.	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd)				
		G. General. (Contd)				
Miscellaneous.	161	Reconstructing a Bowry at Lingapoor Kurnool	120	85	35	Budget No 2 of 1858/59 No 167
	162	Purchase of a Stock of Timber Kurnool	1500	750	750	Do No 168
	163	Dismantling the Cumbum Fort Kurnool	5690	"	5690	
	164	Examining the Slate Quarry at Kurkumbady North Arcot	200	100	100	Do No 169
	165	Completion of the Light House Groyne and for contingencies of the Fort Groynes Madras	3000	1057	"	Do No 184 &c
	166	Strengthening Groynes No 11, 15 & 16 Madras	12010	10266	"	Do No 185 &c
	167	Constructing two small intermediate Groynes for the protection of the sea face of Fort St George Madras	4000	1838	2162	Do No 186
	168	Do 5 Groynes for the protection of the Boatmen's Village at Royapooram Madras	21000	19606	1394	Do No 171
	169	Do dwarf Groynes between the Custom House & Clives Battery Groynes to arrest the encroachment of the sea Madras	3600	1826	"	Sanctioned on Emergency deferred. One Groyne completed and the rest suspended to ascertain the effect of the former
		Total Miscellaneous	51120	35558	10131	
		Total General	2,07,420	67,769	36,870	
		Total State	3,23,49,48	1,385,65	1,227,316	

Nature of the Item No.	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks

Nature of the Item	No.	Description of work.	Estimated Cost	Computed expenditure up to April 1859	Amount required for expenditure in 1859/60	Remarks.

Nature of the Item	No.	Description of work.	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
		~~II.~~ Public H. Municipal				
Town Buildings.	170	Building a revetment wall to the E. side of the Town Ditch from Cochrane's Bridge to that of the Elephant Gate & otherwise preparing the ground between the Ditch & Town wall for a wharf & wood depot. Chingleput	23800	1850	"	Budget No. 2 of 1858/9 No. 172. Defined
		Total Town Buildings	23800	1850	"	

Nature of the Item	No.	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required to be expended in 1859/60
		II. Public (cont)			
		H. Municipal (cont)			
Markets.		None			
Paving Streets.		None			
Lighting		None			

Nature of the Item	No.	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure 1859/60	Remarks
		II. Public (Cont)				
		H. Municipal (Contd).				
Water Supply.		Laying down cast Iron pipes for conveying water across the Elk Hill cutting at Ootacamund to certain Houses Coimbatore	2750	"	2750	
Sewage.	171.	Constructing 3 Public Privies in the town of Dowlaisweram Rajahmundry	1230	63	"	Budget No. 2 of 1858/59 No. 176. Deferred
		~~Constructing additional drains &c Fort St George Madras~~	~~10800~~	~~"~~	~~10800~~	
		~~Do Public privies in the North east Island of the Fort Madras~~	~~1,700~~	~~"~~	~~1,700~~	
		Total Sewage	1230	63	"	
		Total Municipal	25,930	1913	"	

II. Public (cont.)
I. Marine.

Nature of the Item	No.	Description of work	Estimated Cost	Complete expenditure up to 30 April /59	Amount required for expenditure in 1859/60	Remarks
Harbours & Navigation	172	Improvement of the Coringa Harbour. Rajahmundry	62,838	30,563	"	√ Budget No. 2 of 1858/59 No. 177 deferred
√	173	Constructing 2 beacon buoys with moorings for the Port of Masulipatam	4,300	"	"	√ Do No. 178 Do deferred
√	174	Constructing a Jetty 300 feet long at the port of Tuticorin Tinnevelly	1,650	"	"	√ Do No. 180 Do
√	175	Extension of the Quay at Mangalore Canara	10,713	6221	"	√ Do No. 181 Do
√	176	Improving the Mangalore Harbour Canara	3385	2232	"	√ Do No. 182 Do
√	177	Building a Boat to be employed in deepening the Bar at the entrance of the Cochin Harbour Malabar	760	"	760	√ Do No. 183
		Total Harbours & Navigation	86646	39016	760	√

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for completion	Estimated expenditure for 1859/60	Remarks
		II. Public. (cont.) I. Marine (cont.)				
Harbours & Navigation						

Nature of the Item	No	Description of work	Estimated Cost	Estimated time for completion	Expenditure for 1859/60	Remarks
		II Public. (contd) I. Marine (contd)				
Light Houses.	178	Additions and improvements to the Light House at Point Divy	920	675	"	Budget No 2 of 1858/59 No 187. Deferred
	179	Light House ~~for~~ [illegible] at Coompta. Canara	1796	1330	466	Do No 188
	180	Constructing the Column of the Light House at Carwar Head Canara	2070	.	2070	
	181	Constructing the do of the do at Tadry Canara	1710	.	1710	
	182	Erecting a Hollow Iron Column over the old Stone Tower at Cochin for the exhibition of the light for the Port of Malabar	3530	.	3530	Do No 189
		Total Light Houses	10026	2005	7776	
		Total Marine	96672	44021	8636	

Nature of the Item	No	Description of work	Estimated Cost	Estimated time for completion	Estimated Expenditure for 1859/60	Remarks
		II. Public. (contd) J. Industrial				
Mines.		None				
Manufactures		None				

Nature of the Item	No	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (Contd) K. Agricultural.				
Irrigation Canals.	183	Head sluice across the Nagaricuttum Channel. Ganjam	3410	.	3410	Budget No 2 of 1859/9 Item No 191.
	184	Constructing a Calingulah across the Jainetavoo Channel and excavating branch channels in the Amlapoor & Rallee Talooks. Rajahmundry	59136	54556	4579	Do No 193.
	185	Channel from Dungairoo to Koodapoor. Rajahmundry	1875	1127	.	Do No 195.
	186	Widening the Samulcottah Channel. Rajahmundry	48227	39825	8402	Do No 196.
	187	Works of Irrigation & Navigation in the Central Delta of Rajahmundry	315932	222077	.	Do No 197. Deferred
	188	Irrigation & Drainage channels in the Biccavole, Nagarum and Tanooku Talooks. Rajahmundry	21000	16324	4676	Do No 198.
X	189	Excavating two branch channels for the proper distribution of the water of the Cocanada channel. Rajahmundry	1101	7	1094	Do No 200.
	190	Canal from Samulcottah to Toonee. Rajahmundry	234305	20652	.	Do No 201. Deferred
	191	Constructing a Calingulah across the Byanee River. Rajahmundry	7420	1356	6064	Do No 202.
	192	Cutting Channels & constructing a sluice between Yanamadooroo & Bandada. Rajahmundry	4080	.	.	Do No 203. Deferred
	193	Constructing a wooden foot bridge over the Calingulah at Doovah. Rajahmundry	1150	.	1150	Do No 204.
	194	Constructing an aqueduct over a drain crossed by the Amlapoor channel. Rajahmundry	5400	.	.	Do No 205. Deferred
			723035	346024	29573	

Nature of the Item No	No	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (Contd). K. Agricultural (Contd).				
Irrigation Canals.	195	Canal of Irrigation & Navigation from the Weyaroo near the Godavery Anicut to Ellore. Masulipatam	287644	277001	.	Budget No 2 of 1859/9 No 207. Deferred
	196.	Locks & Calingulahs at Yeloorpaud & Chinnacalaveram and Embankments to Weyaroo. Masulipatam	64820			Do No 208. Deferred
	197.	Northern High level channel from the Boodoomair to Perikeed. Masulipatam — Rs 79550 Do from Perikeed to Dendaloor. Masulipatam Rs 134835	214385	24258		Do No 209. Deferred
	198	Channel from Poolairoo near Weyoor to the Canal Basin Masulipatam	237107	88128	50000	Do No 210.
	199.	Sloping down the banks of the Main Channel for the first four miles from the Northern flank of the Anicut. Masulipatam	20240	112	10000	Do No 211.
	200	Tunnel under the Mopedavy Channel near Madoor Masulipatam	4110	603	.	Do No 212. Deferred
	201.	Small branch channel from the main channel near Pennamaloor towards the river embankment near Royoor Masulipatam	3030			Do No 213. Deferred
	202	50 Miles of small irrigating channels of the average size with sluices, at Rs 330 per mile. Masulipatam	16500			Do No 214. Deferred
	203	Irrigating channel from Yenekepaud to Mootoor. Masulipatam	23200			Do No 215. Deferred
			[illegible]	[illegible]	[illegible]	

II. Public (contd).

K. Agricultural (contd)

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks.
Irrigation Canals.	204	Branch channel from Valoorpoor to Nundewadah. Masulipatam.	9500	–	–	Budget for 1858/59 No. 216. Deferred
	205	Constructing a Calingulah near Casarapilly Masulipatam Rs. 1880. Do Lock near do. Do Rs. 11780	13660	–	13660	Do No. 217.
	206	Widening & deepening the Toongabadra channel & cutting a new channel in continuation as far as Nizampatam. Guntoor	220417	167870	20000	Do No. 219.
	207	Western bank channel from Vullabapoorum to tide water Guntoor	139700	12478		Do No. 220. Deferred.
	208	Southern high level channel from the Toongabaddra near the Kistna Anicut to Ingaunumpada. Guntoor.	146787	29957	4000	Do No. 221.
	209	Lock & calingulah near Vullabapoorum. Guntoor.	7540		7540	Do No. 222.
	210	Sloping down the banks of the main channel for the 1st four miles from the Southern flank of the Anicut. Guntoor	22870	1446	10000	Do No. 223.
	211	Channels from Toomapoody to Doograllah on either side of the main feeder. Guntoor	2470			Do No. 224. Deferred
	212	Channel from Doograllah towards Peddaravoor. Guntoor.	7400			Do No. 225. Deferred
	213	Channel from Peddaravoor towards Nizampatam. Guntoor.	7400	605		Do No. 226. Deferred
	214	Channel from Doograllah to Yavanie. Guntoor	1162			Do No. 227. Deferred

II. Public (contd).

K. Agricultural (contd).

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks.
Irrigation Canals.	215	60 miles of small irrigating channels of the average size with sluices at Rupees 330 per mile. Guntoor	19800	632	6000	Budget for 1858/59 No. 228.
	216	Southern high level channel in continuation from Ingaunumpada to near Inkole Guntoor.	326100			Do No. 229. Deferred
	217	Constructing a calingulah with a platform Bridge & sluices across the Toongabaddra Nullah near the head of the Communoor Channel. Guntoor	2800			Do No. 230. Deferred
	218	Construction of dam across the Vellatoor Channel with drainage tunnel below. Guntoor.	500			Do No. 231. Deferred
	219	Head sluice to Vangoor Channel Nellore	2063	"	"	Do No. 232. do
	220	Head sluice to Davoor Tank supplying channel Nellore	2063		2063	Do No. 233.
	221	Constructing a head sluice and escape Calingulah to Peilairoo channel Nellore	2256	284		Do No. 234 Deferred.
	222	Cutting a new channel from Gollaconda Lodoom to Nellore and constructing a Calingulah across it Nellore	9868	5644	4224	Do No. 235

Nature of the Item	No.	Description of work	Estimate Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (cont^d) **K. Agricultural (cont^d)**				
Irrigation Canals.	223	Cutting a channel from Vencatagherry river to the Chennoor tank Nellore	13910	2989	7241	Budget No 2 of 1858/59 No 236
	224	Constructing an anicut across the Mamidy Calwah Nellore	5150	105	"	Do No 237 Deferred
	225	Pennair Anicut Posts and shutters Nellore	5176	2951	"	Do No 238 Do
	226	Constructing Head sluice to Cumnacal channel Bellary	4270	"	4270	Do No 241
	227	Completing Cumnacal channel Bellary	4620	"	4620	Do No 242
	228	Sinking 2 Wells below the Culpee Tank into Pengondah Talook. Bellary	1000	"	1000	Do
	229	Improving the direction of an Irrigation Channel from the Pennaur for the Villages of Pengondah - Bellary	665	"	665	
	230	Paulaur Anicut project (portion in this District of the Estimate of Rs 866144) Chingleput	293273	38976	25000	Budget No 2 of 1858/59 No 243. The other portion Rs 572871 is taken in North Arcot
	231	Vulloor river channel head sluice Chingleput	2162	702	1460	Do No 244
	232	Goodoopankum & Nammum tank supply channel Chingleput	4881	4537	344	Do of 1855/56 No 93
			235563	461515	61462	

Nature of Item	No.	Description of work	Estimate Cost	Computed ~~Estimated~~ expenditure ~~time for~~ up to 30 ~~Completion~~ April 1859	Proposed ~~Estimated~~ Expenditure for 1859/60	Remarks
		II. Public (cont^d). **K. Agricultural (cont^d)**				
Irrigation Canals.	233	Enlarging the channels from the Poiney river and constructing other subsidiary works connected with the Poiney anicut Project including compensation for land to be taken up - North Arcot	153283	"	"	Budget No 2 of 1858/59 No 245 Do par 10.
	234	Peelaur anicut project (Portion of the Estimate of Rs 866,144) North Arcot	572871	526217	"	Do No 246 The other portion Rs 293273 is taken in Chingleput
	235	Constructing an aqueduct for the Alambadoo channel & for carrying it across the Cuddavanoor channel and for improving the Alambadoo channel North Arcot	260	50	210	Do No 248
	236	Cutting a new supply channel to the Ernamungalum tank North Arcot	290	45	245	Do Do No 299
	237	Building an Anicut to the Sumpunganelloor channel and giving a sluice with a cut from it to the Ul-mailmungapoorum North Arcot	357	"	357	Do Do No 249
	238	Cutting a proposed supply channel from the Cheyaur main channel to the Sheantavanta tank North Arcot	3270	"		Do Do No 250 Deferred
			3583865	1541507	292274	

Nature of the Item	No	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (Contd)				
		K. Agricultural (Contd)				
Irrigation Canals.	239	Constructing annicut across the Guddelum river South Arcot	24,000	1050	..	Budget No 2 of 1858/59 No 251 Deferred
	240	Improving and extending the Goverapet channel South arcot	19000	7743	.	Do No 252 Do
	241	Rebuilding the Satheyamungalum annicut across Gingee river South arcot	681	.	.	Do No 253 Do
	242	Constructing a regulating Dam across the head of the Mullataur channel South arcot	1230	450	780	Do No 255
	243	Constructing 2 annicuts across the Gomagunddy in the talook of Virdachellum and Cullacorchy South Arcot	1600	.	.	Do No 257 Do
	244	Rebuilding the head sluice and altering the channel leading from the Vellaur annicut South Arcot	8050	.	.	Do No 258 Do
	245	Constructing a head sluice and Calingulah to the Punkum Channel South arcot	2030	.	2030	X
	246	Constructing a regulating Dam on the Vennaur and Velljaur at the head of the latter river Tanjore	7050	.	.	X Do No 260 Deferred

[illegible]

Nature of the Item	No	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II Public (Contd)				
		K. Agricultural (Contd)				
Irrigation Canals.	247	Converting an Aqueduct into an under tunnel across the Arrunda Cauvery Tanjore	650	.	650	Budget No 2 of 1858/59 No 261
	248	Constructing a new sluice to the Vikramanar Tanjore	2100	.	2100	X Do No 262
	249	Constructing a head sluice to the Keertamunnaur in the Combaconum Talook Tanjore	2700	.	2700	Do No 263
	250	Deepening the Poorovalay channel widening and strengthening its banks Rupees 14,000 Making a new cut across the Poorovalay channel Trichinopoly 10700	24700	7600	17100	X Do No 265
	251	Repairs and improvements to the Cunnadien Channel Tinnevelly	3700	.	.	X Do No 266 Deferred
	252	Constructing an annicut at Streevigoontum across the Tambrapoorny with Channels to Trichendoor and Tuticorin Tinnevelly	385,000	.	.	X Do No 267 Deferred
	253	Constructing a syphon sluice under the supplying channel Ellenderacoondam tank Tinnevelly	371	.	371	X
	254	Padapully channel and improving the channel building new sluice &c Coimbatore	23631	19195	4436	X Do No 269

403335 615177 524 232441

II. Public (Contd)

K. Agricultural (Contd)

Nature of the Item	No.	Description of work	Estimate Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
Irrigation Canals.	255	Repairing improving and extending Calingaroyen channel Coimbatore	64898	22085	10000	Budget No 2 of 1858/59 No 270
	256	Repairing Tattumpully Anicut constructing calingulahs and a covered drain and clearing channel Salem	500		500	Do No 271
		Total Irrigation Canal	4158754	1599630	242941	

II. Public (Contd)

K. Agricultural (Contd)

Nature of Item	No.	Description of work	Estimate Cost	Estimated time for completion	Estimated Expenditure for 1859/60	Remarks
Tanks.	257	Restoring the Bobellapaud tank and constructing a masonry sluice. Masulipatam	786			Budget No 2 of 1858/59 No 274
	258	Improving the Nellore Tank Nellore	17100			Do 275 Do
	259	Reconstructing Cheppully Kaneegala tank Cuddapah	430	8	422	Do 278
	260	Repairing Kistnamanayanee tank Cuddapah	1250		1250	Do 279
	261	Construction of a new tank with sluices and calingulah at Iraunchpully Cuddapah	6300		6300	Do 281
	262	General repairs to Cummum Tank Bellary	4700		4700	Do 282
	263	Storing and improving the Ballyhal tank Bellary	3150		3150	
	264	Constructing the Mullapoor & Arathalloo in Wuddocuttahs Bellary	718		718	
	265	Restoring the Shatoone tank and constructing a sluice Chingleput	470		470	Budget No 2 of 1858/59 No 283 The other portion viz Rs 57287 is taken in North Arcot
	266	Restoring the ruined small tank in Panapaukum Village and constructing 2 Sluices Chingleput	670		670	Do No 284

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (cont).				
		K. Agricultural (cont).				
Tanks	267	Constructing a Calungulah and under Sluice to the Keelanoor Tank Chinglepput	1640	"	1640	Budget No 2 of 1858 No 285. The other portion viz Rs 572871 is taken in North Arcot
	268	Constructing an under sluice to the Rungaporum Tank Chinglepput	290	"	290	Do Do No 286
	269	Deepening the Thenapankum spring Pond Chinglepput	211	"	211	Do Do No 287
	270	Repairing a large tank improving Calingulah and constructing new under Sluices in Vullore Village of the Pariapolliem Talook Chinglepput	3070	"	3070	Do Do No 288
	271	Repairing the Tank bank and constructing Masonry works in Keelmony Village of the Periapolliem Talook Chinglepput	1330	"	1330	Do Do No 289
	272	Repairing tank bank constructing Masonry works, cutting a new and repairing an old channel in Arnee Village of the Nayer Talook Chinglepput	4030	"	4030	Do Do No 290

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (cont).				
		K. Agricultural (cont).				
Tanks	273	Repairing an old tank bank and constructing masonry works in Tanneer Colum Village of the Periapolliem Talook Chinglepput	2220	"	2220	Budget No 2 of 1858/59 No 291
	274	Reconstructing the Mailpadoo ruined tank Chinglepput	3350	2884	466	Do of 1856/57 No 143
	275	Constructing Calingula to the Cooroovembadoo Tank Chinglepput	325	"	325	Do Do No 144
	276	Raising the bank of the Vaniembaddy tank renewing and heightening the stone facing building a Calingulah & sluice and clearing the supply channel North Arcot	2559	748	1811	Do Do No 292
	277	Raising the bund of the Bomanaickenpolliem tank renewing new Stone facing and constructing a Calingulah & sluice North Arcot	988	"	988	Do Do No 293
	278	Building Calingulahs and Sluices to Cottiamungalum and other				

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (cont.)				
		K. Agricultural (cont.)				
Tanks		other tanks and channels in Windawash Talook North Arcot	2670	420	2250	Budget No 3 of 1858/59 No 295
	279	Raising the bund and constructing a Sluice to Tookwady tank North Arcot	340	20	320	Do Do No 297
	280	Constructing a Calingulah and restoring Mootoopolliem Palayal tank North Arcot	3300		2000	Do Do No 298
	281	Rebuilding two Calingulahs to the Moosterecooppum tank 430 Repairing the Moosterecooppum tank North Arcot 660	1090	26	1064	Do Do No 300
	282	Improving Autherumbady and Goodaloor Tanks North Arcot	2620	500	2120	Do Do No 301
	283	Restoring Nagalapoorum tank North Arcot	600	·	600	Do Do No 302
	284	Do Samalcoonah tank North Arcot	3046	2819	227	Do Do No 303
	285	Building a Calingalah and Sluice to Vasanthavada tank, North Arcot	294	185	109	Do Do No 304
	286	Restoring Peria Coorchy ruined tank, South Arcot	1000	·	·	Do No 307
	287	Restoring Verdachellum Cusbah ruined tank South Arcot	2380	·	·	Do No 308
					42157	

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (cont.)				
		K. Agricultural (cont.)				
Tanks	288	Constructing a sluice and rough stone revetment to Keelapasoor Peria colum tank Tinnevelly	5246	4773	473	Budget No 20 of 1858/59 No 310
	289	Do a tank to be termed Pellayancolum in the limits of Vellamuddam Tinnevelly	896	448	448	Do Do No 311
	290	Do Stone revetment to bund of Marthandasapoorum tank Tinnevelly	957	478	479	Do Do No 312
	291	Do a Calingulah in Manikencolum tank Tinnevelly	208	·	·	Do Do No 313 Deferred
	292	Do a Subsidiary tank in rear of the present Nainamaney tank Tinnevelly	4876	2326	2550	Do Do No 314
	293	Do a Sluice and Calingulah in Arasanairycolum Tinnevelly	170	·	170	
	294	Sluice &c. to Hampapoorum tank Coimbatore	918	·	·	Do Do No 315 deferred
	295	Raising bund of the Nattikapatty Ugrarum tank & constructing a Sluice Salem	430	·	430	Do Do No 317
	296	Restoring ruined tank of Mullaghirry Salem	2000	·	·	Do Do No 320 deferred
	297	Constructing 2 new tanks at Vallyapatty, Salem	5510	·	·	Do Do No 321
					17301	
			21,138	15,35	4,327	

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (Contd)				
		K. Agricultural (Contd)				
Tanks.	298.	Enlarging the Mylapoor Tank Calingula Madras	1745	-	1745	
		Total Tanks	95883	15635	49046	

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (Contd)				
		K. Agricultural (Contd)				
Dykes.	299	Extending the embankment of the Yennamadooroo channel to Doovah. Rajahmundry	7,000	-		Budget No 2 of 1858/59 No 323. Deferred
	300.	Improving & streagthening the embankments on the eastern bank of the Kistna from Yanamalacoodroo to Mopedavy, a distance of 33 miles. Masulipatam	56910	14005	10000	Do No 324.
	301.	Constructing a Dyke to protect the wet lands of Yaparilla and Jurrelpully on the left bank of the Pennair Cuddapah	3510	-	3510	Do No 325
		Total Dykes	67920	14005	13510	

Nature of the Item	No	Description of Work	Estimated Cost	Estimated time for completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (contd).				
		K. Agricultural (contd).				
Drainage	302	Cutting an outlet for the drainage water of the Country on both sides of the Goostanuddy. Rajahmundry	7260	5519	1741	Budget No. 24 of 1858/59 No. 326.
	303	Channels to drain the land irrigated by the Mundapetta channel. Rajahmundry	3623	669	2954	Do No. 327.
	304	Excavating a drainage Channel Rajahmundry	2300	.	.	Do No. 328. Deferred
	305	Excavating 2 drainage Channels from Riccavole to the river Yalairoo & from Gollapaulem Calingulah to the proposed main drain of Yalairoo. Rajahmundry	3180	.	3180	Do No. 329.
	306	A Drainage Channel on the western side of the Venkiah Channel and Nagaroo. Masulipatam	19510	.	.	Do No. 330. Deferred
	307	Building two under tunnels &c for the drainage of Cooditthanyachaery. Tanjore	1340	"	1340	Do No. 331.
		Total Drainage	37213	6188	9215	

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure to 30th April 1859	Amount required to complete 1859/60	Remarks
		II. Public. (contd).				
		K. Agricultural (contd).				
Forests	308	Planting Six Nurseries at 90 Rs each Ganjam	540	90	.	Budget No. 29 of 1858/59 No. 332 Deferred
	309	Planting 15 Nurseries at 170 Rupees each Cuddapah	2550	595	1955	Do No. 333
	310	Planting 12 Nurseries Bellary	2040	3	.	Do No. 334 Deferred
	311	Planting 4 Nurseries Kurnool	680	"	"	Do No. 335 Do
	312	Constructing 8 Gardener's huts and forming 8 Nurseries for trees in Chingleput	600	339	261	Do No. 336
	313	Planting 10 Nurseries at 170 Rs each North Arcot	1700	705	995	Do Do No. 337
	314	Planting 5 Nurseries at Rs 170 each South Arcot	850	16	.	Do No. 338 Deferred
	315	Planting 8 Nurseries at 170 Rupees Tanjore	1360	.	700	Do No. 339
	316	Planting 7 Nurseries at 170 Rs each Madura	1190	.	.	Do No. 340 Deferred
	317	Planting 13 Nurseries at 90 Rs each 1170 Deduct for Vellyoor Garden transferred to the Engineer's Department as one of the 13 Nurseries Rs 174	996	.	"	Do No. 341 Do
	318	Forming 12 Nurseries, Tinnevelly Canara	2040	"	"	Do No. 342 Do
		Total Forests	14546	1748	3911	
		Total Agricultural	4,37,316	1,63,706	3,18,623	

Nature of the Item &c	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
	II. Public (contd). K. Agricultural (contd).				
Forests.					

Nature of the Item &c	No.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
		II. Public. (contd) L. Communications.				
Installed Roads.	319	Road from Berhampore to Russelcondah via Aska. Ganjam —	142246	138319	3927	Budget No. 2 of 1858/59 Item No. 344.
	320	Completing the portion of the above line from Aska to Russelcondah. Ganjam —	10000	"	"	Do No. 345. Deferred.
	321	Road from Russelcondah to Koinjoroo via Durpinghia at the foot of the Koorminghia Ghaut and Tintillgudda. Ganjam —	14465	6000	8465	Do No. 346. ordered to be suspended in a survey of the line by the Kalunghia Ghaut ~~side~~ G.O. 30 August 1858 No. 1768.
	322	Completing the road from Chicacole to Calingapatam as a first class road. Ganjam —	24000	9011	10000	Budget No. 2 of 1858/59 No. 347.
	323.	Road from Narsannapettah to Calingapatam (substituted instead of the line to Maniapaum) Ganjam. —	14580	9911	4669	Budget No. 2 of 1858/59 No. 349.
	324	Completing the road from Kimedy to Poondy. Ganjam. —	2450	456		Do No. 350. Deferred.
	325	Completing across some Paddy flats, the worst portions of Trunk Road No. 6 between Byree and Nursimpetta. 5¼ miles. Ganjam.	5400	1560	3840	Do No. 351.
	326	Branch road into the town of Aska to connect the road from Aska to Russelcondah. Ganjam.	510			Do No. 353. Deferred.
	327	Repairing & improving 34½ miles Trunk Road No. 6 from Sinthasapoorum to Dendagedda near Itchapoor. Ganjam. —	46550			Do No. 354. Deferred.
	328.	Repairing & improving 39½ miles Trunk Road No. 6 between Chicacole & Sinthasapoorum. Ganjam	37200			Do No. 355. Deferred.

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required to expend in 1859/60	Remarks
		II. Public (cont.)				
		L. Communications (cont.)				
Metalled Roads	329	Constructing 2d class road from the salt pans at Nowpada to Tekkally pa on Trunk road No 6. Ganjam	5,330	.	5,330	Budget No 2 of 1858/59 No 356
	330	Construction of Trunk Road No 6 from Chittavalsa to Chicacole 41 miles. Vizagapatam	93,460	.	.	Budget No 2 of 1858/59 No 357. Deferred
	331	Completing branch road from the Ferry at Vizagapatam to Pinchadarla and constructing the line up to Poolapurty on Trunk Road No 6 - 38½ miles. Vizagapatam	45750	"	.	Do No 358. Deferred
	332	Construction of branch road from Palcondah to Cheeperpilly and from Palcondah to Parvatipoor and Bobilly Zemindarry Territory. Vizagapatam	30175	28573	.	Do No 359. Deferred
	333	Improving the road from Anakapilly on the Great Northern Trunk Road No 6 to the Ferry landing place opposite Vizagapatam	10,078	4715	5363	Do No 360.
	334	Constructing a first class District Road from Nelleemookoo to Gawzavanka. Vizag.	7170	"	7170	Do No 361.
	335	Road from Juddunghy to Yalaiswarum. Rajahmundry	17200	11511	.	Do No 362. Deferred
	336	Road from the Village of Cottoor to the bank of Godavery. Rajahy.	1200	847	.	Do No 363. Deferred
	337	Making branch roads from the main or Rajahmundry road to the town of Dowlaiswarum Rajahmundry	2210	1348	"	Do No 364.
	338	Opening the road from Ellore to Chintalapoody Masulipatam	24,630	"	"	Do No 365. Deferred

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required to expend in 1859/60	Remarks
		II. Public (cont.)				
		L. Communications (cont.)				
Metalled Roads	339	Improving the District road from Guntoor to Munchalla Guntoor	8622	7862	.	Budget No 2 of 1858/59 No 367. Deferred.
	340	Trunk road No 7 from Coppera pand to Poodegul (Estimate of Rs 134021) Guntoor	88708	47946	.	Do No 368. Deferred
	341	High Northern road from Seethanagrum to Guntoor	24990	3022	.	Do No 369. Deferred
	342	Constructing Trunk Road No 6 from Covoor to Moodegoondah Nellore	117113	71537		Do No 370. Deferred
	343	Do - No 7 (portion of Estimate for Rupees 134021) Nellore	45313	44013	1300	Do No 371.
	344	Completing the communication partly by the Rampairoo and partly by road between Kistnapatam and Goodoor. Nellore	17790	1063		Do No 373. Deferred
	345	Constructing a Tramway of granite along the Crown of the Pennair Anicut Nellore	5000	2203		Do No 375. Deferred
	346	Do a 2d Class road from Nellore to Sodairoo. Nellore	8000		8000	Do No 377.
	347	Improving the line of road from Nellore to Gungapatam Nellore	4000		4000	Do No 378.
	348	Cuddapah and Madras road for 69½ miles (portion in the Cuddapah District of the Estimate for Rs 192221) Cuddapah	128237	10,976		Do No 379. Deferred Portion for N. Arcot 53018 do Chingleput 10966 do Cuddapah 128237 192221
	349	Completing road from Oothoor tank supplying channel to Cuddapah	2240	260	1980	Do No 381.

II. Public (Contd).

L. Communications (Contd).

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
Metalled Roads.	350	Reforming a portion of the road from Cuddapah to Kurnool and Hyderabad. Cuddapah	3720	"	3720	Budget No 2 of 1858/59 No 382
	351	Constructing a portion of Trunk Road No 12 between Bellary & Coodiar. Bellary	57,051	34,165	"	Do No 384. Deferred
	352	Forming road from Oojence to Humpasagur in Bellary Distt and forming a portion of the Military road from Chittledroog in the Mysore Territory through Bellary to Culladghee in the Bombay Territory. Bellary	11,456	17	"	Do No 385. Do
	353	Extending the Bellary & Hospet road to Hosspoor ferry on the Toombuddra. Bellary	19,430	"	"	Do No 386 Do
	354	Altering part of road from Pennaconda to Gooty. Bellary	5460	1	"	Do No 387 Do
	355	Constructing a 2nd Class branch road from Cowle Bazar in the Cantonment of Bellary to the road from Brucepettah to Bangalore. Bellary	2050	"	"	Do No 388 Do
	356	Completing the following Roads Kurnool. Kurnool to Nundicanama do to Kodamore do to Ghooty	107,160	95,782	11,378	Do No 389.
	357	Repairing the portion of the road from Cumbum to Venacondah lying immediately North of the former place. Kurnool	3900	"	3900	Do No 383 Transferred from Cuddapah.
	358	Opening a passage on the Munteral Canama Ghaut Kurnool	13300	6908	6392	Do No 390.
	359	Completing the Nundy Canama Ghaut from Gunzeenpully to Kistnumshettypully. Kurnool	50,000	25000	25000	Budget No 1 of 1859/ No 26. Transferred from Cuddapah

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II. Public (Contd).

C. Communications (Contd).

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
Metalled Roads.	360	Road from the Palaur Causeway to Tetry through the Town of Ootramulloor. Chingleput	41,130	17	"	Budget No 2 of 1858/59 No 392. Deferred.
	361	Road between Cuddapah and Madras as far as Poonamalee (portion in Chingleput of the Estimate for Rs 1,92,221) Chingleput	10,966	295	"	Do No 393. Deferred The other portions of the Estimate are taken as specified opposite No 348 & 372.
	362	Road across the Penningurdee Backwater on the Northern Trunk road. Chingleput	33,023	1385	"	Do No 394. deferred.
	363	Road from Trivuloor to Ramanjary Chingleput	3982	2928	1054	Do No 395.
	364	Road from Cottoor to Trivellore. Chingleput	14,417	14,140	277	Do of 1856/57 No 92
	365	Metalling the road from Trivuloor to the Corteliar River. Chingleput	6236	"	"	Do of 1856/57 No 147. deferred
	366	Making new road from Sadras to Terocaly coondrum and repairing the present road from Terocaly coondrum to Chingleput. Chingleput	14,500	"	"	Do No 150. Do
	367	Repairing the road from Streeperumatoor to Mylapoor. Chingleput	18,070	"	"	Do No 151. Do
	368	Completing Trunk road No 11 from Chittoor to Poothulpett. North Arcot.	9560	4396	"	Do No 396. Do
	369	Road from Palmanair to Vencatagherry Cottah. North Arcot	32,053	21,112	10,941	Do No 397.
	370	Constructing a branch road from the Palaur Anicut to the 65th Mile on Trunk road No 1 North Arcot	2940	1,688	1252	Do No 400
	371	Tracing road from Vencatagherry cottah to Santypuer. North Arcot	800	5	795	Do No 401.

II. Public. (Contd.)

L. Communications. (Contd.)

Nature of the Item	No.	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
Metalled Roads.	372	Road between Cuddapah and Madras as far as Poonamallee (portion of the Estimate of Rupees 192,221) North Arcot	53,018	"	"	Budget No. 2 of 1858/59 No. 402. Deferred. The other portions of the Estimate are taken as specified opposite Nos. 348 & 361.
	373	Constructing a 2nd Class road No. 5 from the Cheyair river to the Palaur Anicut North Arcot	38,600	"	"	Do. No. 403. Deferred.
	374	Constructing a portion of 2nd Class road No. 5 from old Arcot through the Bazar Street to the Palaur Anicut North Arcot	8160			Do. No. 406. Do.
	375	Restoring a piece of road between Vencataghery cottah and the Mysore limits North Arcot	740	"	"	Do. No. 407. Do.
	376	Constructing 4th ~~class District road from the Railway Station at Company~~ Pett to Conjeveram North Arcot	29,100	14,000	15,700	Budget No. 1 of 1858/59 No. 16.
		Constructing road between [illegible] Tillany and [illegible] North Arcot	24,270	"	24,270	
	377	Completing the road from Porto Novo to the Villaur anicut on Trunk road No. 9 South Arcot	20,000	6,918	"	Budget No. 2 of 1858/59 No. 408 Deferred
	378	Additional metalling on Trunk road No. 8 between Oolundoorpett and Tolodoor (Portion of Estimate of Rupees 37,313) South Arcot	15,050	3,193	11,857	Do. No. 409. The other portion Rs. 19,263 is taken in Trichinopoly. The difference of Rs. 3000 is explained opposite No. 305 of Budget No. 2 of 1857/58
	379	Reconstructing the road from Chengamah to the Salem Frontier, South Arcot	4446	119	"	Do. No. 410. Deferred.
	380	Road from Yailoor to the bank of the Vadavaur, South Arcot	3346	2423	923	Do. No. 411.

Metalling

Nature of the Item	No.	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
Metalled Roads.	381	Metalling the road from Cuddalore to Chellumbrum. South Arcot	8,580	"	8,580	Budget No. 2 of 1858/59 No. 412.
	382	Improving and metalling the road from Meramum to Thiruvannum Rs. 18,300 Metalling the road from the Pattice Bridge at Meramum to the Salt Pans South Arcot Rs. 4,500	22,800	"	"	Do. No. 413. Deferred.
	383	Improving and tunnelling the road between Valiergamon & Paupanassum Tanjore	4,300	3,965	335	Do. No. 415.
	384	Constructing a road from Paroovalandum to the Sea Port at Mootoopettah. Tanjore	10,500	"	5500	Do. No. 416.
	385	Metalling and reforming the road from Trichinopoly to Coimbatore within the limits of the former District. Trichinopoly	30,000	10,000	10,000	Budget No. 1 of 1858/59 No. 18.
	386	Road from Trichinopoly to Salem Boundary. Trichinopoly	50,000	"	"	Do. No. 417. Deferred
	387	Road from Trichinopoly through Arealore and Woodiarpollium to its junction with Trunk Road No. 9. Trichinopoly	43,600	"	"	Do. No. 418. Do.
	388	Additional metalling to Trunk Road No. 8 between Oolcondoorpett and Sannaveram (portion of the Estimate of Rupees 37313) Trichinopoly	19,263	"	"	Do. No. 419. Do. The other portion Viz. Rs. 15050 is taken in South Arcot. See remark opposite item No. 378
	389	Metalling the Road No. 8 from 1st to 15th Mile Stone between Trichinopoly and Salem: Trichinopoly	8,850	"	"	Do. No. 420. Deferred.

Constructing

II. Public. (Contd.)

L. Communications (Contd.)

Nature of the Item	No.	Description of work	Estimated Cost	Completed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
Metalled Roads.	390	Constructing a new road from Combaconum to Woodiarpolliem between the North bank of the Coleroon river & Woodiarpolliem. Trichinopoly	10,420	"	"	Budget No 20 of 1858/59 No 421 Deferred.
	391	Repairing road No 22 between Tripavanum and Meyloor. Madura	3610	"	"	Do No 425. Deferred.
	392	Making a portion of road No 25 between Sattangoody and Oostumpatty. Madura	8812	3679	5133	Do No 426.
	393	Repairing and improving a portion of road No 18 from Buttagoondah to its junction with road No 15 at Palapatty. Madura	7,884	7,030	854	Do No 427.
	394	Road &c on Pulney Hills. Madura	6000	3000	"	Do No 430. Defe
	395	Road No 17 from Nellacotta to Tulkanooth. Madura	25,560	"	"	Do No 431.
	396	High road No 4 between Palamcottah and the Arambooly lines. Tinnevelly.	7,470	6,473	997	Do No 432.
	397	Constructing a portion of road No 4 from Madura to Palamcottah between Sattoor and Vidoopatty, Tinnevelly.	24,745	11,826	12,919	Do No 433.
	398	Do Do between Gangoondan and Shadekhan's Chuttrum. Tinnevelly.	9,941	5,443	4,498	Do No 434.
	399	Road No 8 from Palamcottah to Tuticorin. Tinnevelly	67,361	"	10,000	Do No 435.
	400	Constructing road between Soolochenum's Bridge and Thatchanulloor. Tinnevelly	6450	"	"	Do No 438. Deferred
	401	Improving portion of High Road No 4 from Madura to Palamcottah between Vutcharapatty and Oossulumpatty, Tinnevelly	20,200	"	6000	Do No 439.
Metalled Roads.	402	Repairing and improving a portion of road No 4 between Thatchanulloor and Shadykhan's Choultry. Tinnevelly	2,850	"	2850	
	403	Repairing and improving a portion of road No 12 between Nulloor and Aroomooguneiry salt pans, Tinnevelly	4,380	"	4,380	
	404	Constructing road from Collegal to Hassanoor Ghaut. Coimbatore	8,500	4000	"	Budget No 2 of 1858/59 No 440. Deferred
	405	Widening the Hassanoor Ghaut and improving the drainage of the road surface &c. Coimbatore	5600	3000	2600	Do No 441.
	406	Excavating four halting places at the Coonoor and Segoor Ghauts. Coimbatore	1470	600	870	Do No 443.
	407	Constructing a first Class road from the Railway station at Wottocooly to Trunk road No 5 at Chengapully Coimbatore	12,140	"	12,140	
	408	Do from the Railway station to connect the Trunk road No 5 and the Town of Coimbatore. Coimbatore	11,200	"	11,200	
	409	Do from the Railway station at Shoomanoor to Trunk road No 5 near Kanniathampatty. Coimbatore	4,260	"	4,260	
	410	Do from Perrindoray to the Railway station, Coimbatore	8,735	"	8,735	
	411	Do a road metalled with bridges &c from the 72nd Mile stone on the road between Salem and Namcul, Salem	5,800	3,621	2,179	Budget No 2 of 1858/59 No ~~444~~
	412	Do a road from Adamancottah on Trunk road No 5 to the Railway station at Mullapoorum, Salem	15,280	"	15,280	Do No 447.

II Public (Contd)

L. Communications (Contd)

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required to complete in 1859/60	Remarks
Metalled Road.	413	Repairing the road from Salem to the borders of the District towards Trichinopoly, Salem	10,000 1,480 500	8,439	3,541	Budget No 2 of 1858/59 No 450.
	414	Constructing a road to connect the town and Railway station at Vaniembady including the necessary alterations of Trunk road No 1, Salem	7,500	5,000	2,500	Do No 451
	415	Improving the road from Dharampoory to Moogoor, Salem	4,200	2,000	2,200	Do No 452.
	416	Do the Salem and Yercaud Cattle Ghaut, Salem	1,500	"	1,500	Do No 453
	417	Constructing a road to connect the two Cusbah towns of Namaul & Trichengode, Salem	3,000	"	3,000	
	418	Do a road to connect the town and Railway Station at Salem, Salem	11,100	"	11,100	
	419	Junction road from Oopenangady to Buntwal, Canara	8,081	962	7,119	Do No 454.
	420	Tracing a new Ghaut and road from Yellapoor to the Southern bank of the Black river, Canara	5,000	3,617	1,383	Do No 455.
	421	Making a road from Gersappah to Sircy, Canara	20,426	16,192	4,234	Do No 456.
to modified scheme called for a sum of Rs 11,124 for 1858 to 2504	422	Improving Sircy Kollandee Road (Cross cut)	34,996	"	"	Do No 458 pending the submission
	423	Road from the Town of Coompta to the Sea Coast, Canara	2,069	1,737	332	Do No 460
	424	Metalling the Sunpajee Ghaut, Canara	17,200	11,200	6,000	Sanctioned in emergency
	425	Improving the Charmudy Ghaut, Canara	6,000	"	6,000	
	426	Road from Calicut by Beypoor, Condotty, Mullapoorum, Angadypoorum and Manar to Mundoor on Trunk Road No 4 to Palghaut, Malabar	52,083	40,498	11,555	Budget No 2 of 1858/59 No 461
	427	Improving road from Vadakancherry to Tattamungalum, Malabar	8,630	2,646	5,984	Do No 462.

II Public. (Contd)

L. Communications (Contd)

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859.	Amount required to complete in 1859/60	Remarks
Metalled Road.	428	Improving road from Malliapoorum to Teroovengady, Malabar	3,500	150	"	Budget No 2 of 1858/59 No 463 deferred.
	429	Do from Wandoor to Angadypoorum, Malabar	1,570	462	1,108	Do No 465.
	430	Do from Toyead to Vythircoonoo, Malabar	2,300	"	"	Do No 467 Deferred
	431	Do from Munjerry to Condotty, Malabar	17,570	"	"	Do No 468 Do
	432	Do from Tellicherry to Cootiaddy, Malabar	5,980	"	"	Do No 470. Do
	433	Do from Tambercherry to Nupeparam Rs 3,600 Do Cootyaddy Ghaut and road to Manantoddy, Malabar Rs 2,000	5,600	"	"	Do No 471. Do
	434	Improving the old road from Goodalore to the Mysore Frontier near Tippacandoo, Malabar	7,500	"	"	Do No 472 Do
	435	Metalling and bridging the road from Wadakancherry to the Cochin frontier, Malabar	3,330	"	3,330	
	436	Improving the Perumbaddy Ghaut and road on Trunk Road No 4 Malabar	61,000	30,000	31,000	Budget No 1 of 1858/59 No 24.
	437	Constructing a new road from the North end of No 3 Platform to the basin bridge, Madras	406	"	406	
	438	Constructing a road within Clive's Battery, Madras	23,820	20,965	2,855	Budget No 2 of 1858/59 No 473.
	439	Constructing a road across the Esplanade from the Vepery high road to the Elephant Gate of Black Town, Madras.	3,430	"	"	Do No 474. Deferred

Constructing

II. Public. (cont^d)

L. Communications (cont^d)

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30 April /59	Amount required for expenditure in 1859/60	Remarks
Metalled Roads.	440.	Constructing a foot path from the North of Vepery by the Elephant Gate to Black Town, Madras	840	"	"	Budget No. 2 of 1858/59 No. 475. Deferred.
		Total Metalled Roads	2425453	847130	391120	

II. Public. (cont^d)

L. Communications (cont^d)

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
Metalled Roads.						

Nature of the Item	No.	Description of work	Estimated Cost	Computed Expenditure up to 30th April/59	Amount required for expenditure 1859/60	Remarks
		## II. Public (Cont.)				
		### L. Communication (Cont.)				
Unmetalled Roads.	441	Salt road from Mayloor to Tehnezghery. Tanjore	2,339	"	2,339	Budget No. 2 of 1858/59 No. 477
	442	Salt road from Trivencaud to Tranquebar and Sheally. Tanjore	1868	"	1868	Do. No. 478.
	443	Do. from Trivencaud to Negdawassal. Tanjore	1278	"	1278	Do. No. 479.
	444	Tracing a line of road for opening up the Wynaad Country to the Coast by the Tamberchery Pass. Malabar	10,000	5,000	5,000	Do. No. 469.
		Total Unmetalled Roads	15485	5000	10485	

Nature of the Item	No.	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		## II. Public (Cont.)				
		### L. Communications (Cont.)				
Bridges.	445	Constructing a platform Bridge across the surplus channel of the Baddadah Dasee Geddah. Ganjam	350	.	.	Budget No. 2 of 1858/59 No. 480.
	446	Masonry works on Trunk Road No. 6 from Soobaram to Chittavalsa 22½ miles. Vizagapatam	31,910	.	.	Do. No. 481.
	447	Works in connection with the Bridge across the Chittavalsa river on the high road from Vizianagarum to Bimlipatam. Vizagapatam	7000	44		Do. No. 482.
	448	Constructing 3 Bridges on the new road leading from the Town of Vizagapatam to Yamoolavalsa. Vizagapatam	8565	10642	43	Do. No. 483.
		Completing 2 of the above Bridges	2120			
	449	Bridges &c. on the road from Paleondah to Parvattipore and Bobilly Territories Rs. 15,560 Do. on the road from Paleondah to Cheepurpilly Rs. 20743 Superintendence for both roads. Vizagapatam Rs. 5175	41,478	37,350	4,128	Do. No. [illegible]
	450	1 Bridge of 40 feet across the Tripedary channel for the Inkole and Masulipatam road. Masulipatam	7,500	"		Do. No. 485 Deferred.
	451	Timber Bridge over the Anicut across the Kistna river. Guntoor	199931	151760		Do. No. 486. Deferred.
	452	Masonry Bridges for completing Trunk Road No. 7 from Copperampaud to Pondegul. Guntoor	42424			Do. No. 487. Deferred.
	453	Constructing 4 Bridges on roads crossed by the Kistna channels in Guntoor as follows: 1 Bridge of 60 feet across High level Channel for Guntoor and Coast Road. Guntoor	7700			Do. No. 488. Deferred.

Nature of the Item	No	Description of work	Estimated Cost	Computed Expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
		II. Public. (Contd).				
		L. Communications (Contd)				
Bridges	454	Constructing 1 Bridge of 40 feet at Chabrole for the same road. Guntoor	7,500			Budget No 2 of 1858/59 No 489. Deferred.
	455	1 Do of 40 feet near Sandole for the same road and the Coast road. Guntoor	7,500			Do No 490. Deferred.
	456	1 Do of 40 feet near Vellatoor for the Coast road. Guntoor	7,500			Do No 491. Deferred
	457	Constructing a platform Bridge over the Salt Creek near Kurlapollam. Guntoor	4500			Do No 492. Deferred
	458	Constructing a Bridge over Athmacoor tank supplying channel. Nellore	3959			Do No 493. Deferred
	459	Bridge across the Hundaleroo river. Nellore	13060	1333		Do No 494 Deferred
	460	Masonry works consisting of 16 Bridges and 65 tunnels on Trunk Road No 6. Nellore	84,580	17,620	25000	Do No 495.
	461	Constructing a Bridge over the Boogaroo. Nellore	38,558			Do No 496 Deferred
	462	Do Masonry works on Trunk Road No 7. Nellore	47,010	835		Do No 497 Deferred
	463	Completing the Trunk road No 11 from Chittoor to Cuddapah Estimate of Rs 128753				
		Six Bridges of from 1 to 9 arches and fourteen tunnels between Hulloor and Kulendda (portion of the above estimate) Cuddapah	39,142	13300		Do No 500 & 501. Defer The remaining portion of the General Estimate Rs 33869 is entered in North Arcot vide items No 477 & 478.
		Eight Bridges of from 1 to 11 arches and thirty tunnels between Kulendda and Goolcheroo (portion of the above estimate) Cuddapah	55,742			
	464	Constructing a rough stone apron below the Ralla bridge and for an additional groin in front of the Ralla embankment. Cuddapah	1070		1070	Budget No 2 of 1858/59 No 502
			[illegible]	[illegible]	30241	

Nature of the Item	No	Description of work	Estimated Cost	Computed expenditure up to 30 April 1859	Amount required for expenditure in 1859/60	Remarks
		II. Public. (Contd).				
		L. Communications (Contd)				
Bridges	465	Constructing a road dam across the Moolavunkah on Trunk road No 11 and completing the west approach to the Bridge over that Stream. Cuddapah	1160		1160	Budget No 2 of 1858/59 No 503
	466	Constructing a Bridge over the Pennair River on Trunk Road No 12 near Ooderpedroog. Bellary	35280	9353		Do No 504. Deferred.
	467	Bridging the road from Gurnagul to the foot of the Ramandroog Hills. Bellary	24,380	300		Do No 505. Deferred
	468	Bridging the Bellary & Hunpsagur Road. Bellary	59,250	19		Do No 506. Deferred
	469	Constructing a Bridge over the Moodlapoorvunka. Bellary	7480			Do No 507. Deferred
	470	Constructing a Bridge across the Nullah near Coodlootany on the road from Coodlootany to Darojee. Bellary	2680			Do No 508. Deferred
	471	Constructing a Bridge across the Nullah near Timmapoor on do. Bellary	4710			Do No 509. Do
	472	Bridge across the Koondair on the road from Kurnool to Nundicumma. Kurnool	13,263	10467	2796	Do No 510.
	473	Bridging the road from Kurnool to Bellary Frontier near Kodumore. Kurnool	22,110	5186		Do No 512 Deferred
	474	Constructing three Bridges on the road from Kurnool to Nundy Canama. Kurnool	9700		9700	Do No 513.
	475	Widening the Marmalong Bridge. Chingleput	21,400			Do No 515. Deferred.
	476	Constructing a tunnel Road Dam &c on that portion of the Cuddapah road which lies between the Railway Station at Vandaloor & Trivellore. Chingleput	650		650	
			[illegible]	[illegible]	[illegible]	

Constructing

ature of the Item	No	Description of work	Estimated Cost	Computed Expenditure upto 30 April 1859	Amount required for expenditure in 1859/60	Remarks
		II. Public (Contd)				
		L. Communications (Contd)				
Bridges	477	Constructing a Bridge of 10 Arches of 30 feet span across the Chittoor river on Trunk road No 11 portion of Estimate Rs 128,753. North Arcot	12482			
	478	Constructing a Bridge of 20 Arches of 30 feet span across the Culvagoontah river on Trunk road No 11 portion of Estimate Rs 128,753. North Arcot	21,387			Budget No 2 of 1858/59 Nos 516 & 517. Deferred. The other portion of the general Estimate viz Rs 94884 is entered in Cuddapah vide items No 463.
	479	Nine Bridges on the Chittoor & Hurtaumbaudy road. North Arcot	21,426			Do No 518. Deferred.
	480	Constructing a Bridge of 6 arches over the Head sluice of the Cumiray-punk channel. North Arcot	5700			Do No 519. Deferred
	481	Do a Bridge of 3 arches over the Mylandrnoandy channel. North Arcot	3700			Do No 520. Do
	482	Do Do of 5 Do over the Chinkeramelloor channel. North Arcot	5000			Do No 521. Do
	483	Building a Bridge of 53 arches across the Palaur in connection with the Anicut. North Arcot	74400			Do No 522. Do
	484	Masonry works on the road from Nagery to Kirtcumbaud. North Arcot	6102	3022	1080	Do No 523
	485	Bridge over the Guddelum on Trunk road No 8. South Arcot	12219	231		Do No 524. Deferred
	486	Bridge over an arm of the Ponnyar called the Mullatar and adjoining a creek. South Arcot	5165	2565	2600	Do No 525.
	487	Constructing 2 Bridges on the Road from Oolundoorpettah to Callacoorchy. South Arcot	12400	2544		Do No 526. Deferred
	488	Bridge over the Pennar on Trunk road No 8. South Arcot	106333			Do No 527 Do
	489	Bridge over the Ponnyar on Trunk road No 9. South Arcot	46901	156		Do No 528. Do
	490	Bridge over the Guddelum on Trunk road No 9. South Arcot	25569	265		Do No 529. Do
	491	Bridge over the Vellaur near Bhowany ferry. South Arcot	35020	367		Do No 530. Do
	492	Bridge over the Manoomootanuddy river at Virdachellum on the Cuddalore and Salem road. South Arcot	20000	155		Do No 531. Do
			1236210	240514	48227	

Nature of the Item	No	Description of work	Estimated Cost	Computed Expenditure upto 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		II. Public (Contd)				
		L. Communications (Contd)				
Bridges	493	Bridges on the road from Cuddalore to Salem frontier. South Arcot	20870	1993		Budget No 2 of 1858/59 No 532. Deferred
	494	Construction of a Bridge over the Coleroon on the Southern road between Chellumbrum and Shealy Rs 130,000 Deduct sanctioned from Pagoda Funds Rs 92,000 38,000 Supplemental Estimate for the above. Tanjore 25000	63000	60739	2261	Do No 533.
	495	Constructing a Bridge across Moodicondaur at Sheedakunnugalum. Tanjore	1750			Do No 534. Deferred
	496	Bridge across the Adupaur on the road from Negapatam to Point Calimere. Tanjore	18107	3375		Do No 536. Do
	497	Bridge across Nunnycarrnyaur. Tanjore	2242		2242	Do No 537.
	498	Bridge across the Nassonaur on the road between Tanjore and Puttocottah. Tanjore	3300	734	2566	Do No 538.
	499	Do Do between Puttocottah and Manargoody. Tanjore	4200	1696	2504	Do No 539.
	500	Do Do between Puttocottah and Mootoopettah. Tanjore	4800	2435	2365	Do No 540.
	501	Do Do between Manargoody & Adumpatam. Tanjore	7600	3042	4458	Do Do No 541.

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 31st April 1859	Amount required for expenditure in 1859/60	Remarks
		II. Public (Contd) **L. Communications (Contd)**				
Bridges.	562	Bridge across the Vettaur on the road between Codavassul & Coodachairy. Tanjore	10,900	5058	5842	Budget No. 2 of 1858/59 No. 543
	563	Bridge across Moodicondaur on the road from Nacharcovil to Nunnelum with several tunnels. Tanjore	10830		5830	Do No. 544.
	564	Bridge across the Vennaur on the road from Tanjore to Valengamon. Tanjore	19,500	"	9500	Do No. 545.
	565	Enlarging Munnyaur Bridge on the road from Shealy to Madras. Tanjore	2500		2500	Do No. 546.
	566	Constructing a Bridge of 7 arches over the Causeway across Moothalymootyvauree on the road from Tanjore to Trichinopoly. Tanjore	6400	"	3000	Do No. 547.
	567	Improving a Bridge across the Oodemboyy river on the road from Negapatam to Trichinopoly. Tanjore	1300			Do No. 549 [illegible]
	568	Reconstructing a Bridge of 3 arches across Devanathy river on the road from Negapatam to Tanjore. Tanjore	4500	"		Do No. 548. Do
	569	Do across the Vandyaur on the road from Tranquebar to Shealy. Tanjore	1470		1470	Do No. 550.
	570	Constructing masonry works on the road from Kotoor				

Nature of the Item	No.	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		II. Public (Contd) **L. Communications (Contd)**				
Bridges.		to Shungundy in the Manargoody and Tritrapoondy Talooks as follows: A Bridge of 3 arches across the Moolyaur — Rs 2400. Do Do across the Purmoocoondum — Rs 2820 Do of one arch across the Shaloovanaur — Rs 2250 Two Bridges across the Poodoopaundyaur & Vunganaur Solaclum &ca Channels — Rs 3360. One Bridge across the Palumpandy — Rs 1700. Sundry Tunnels and Small Bridges &ca Tanjore — Rs 2100.	14630		7000	Budget No. 2 of 1858/59 No. 551.
	571	Constructing a Bridge over the Vellaur on Trunk Road No. 8 Trichinopoly	37,263	"	18000	Do No. 552.
	572	Constructing a Bridge across Vuddoocurray Nattoovoikal on the road between Seerungum and the Upper Anicut. Trichinopoly.	2200	"		Do No. 553. deferred
		Reconstructing the Coodamoorty Bridge on the Coimbatore road. Trichinopoly	11450	"	11450	

Bridge

Nature of the Item	No	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		II. Public (Cont^d)				
		L. Communications (Cont^d)				
Bridges.	513	Bridge of 3 arches across the Goondaur on road No 8 Madura	7300			Budget No 2 of 1858/59 No 555 deferred
	514	D° over the Shunmooga nuddy on road No 2 Madura	15425	6244	9181	D° No 556
	515	D° of 25 arches across the Vygay river at Madura on the high road No 4 from Madras to Travancore Madura	42200			D° No 187 deferred
	516	Bridge across the supplying channel of Manaloor tank on road No 2 Tinnevelly	500			D° No 558 D°
	517	Constructing 7 Bridges on the road from Metoopolliem to Trichinopoly Coimbatore	11500			D° No 559
	518	D° of 8 Bridges on the road from Sattimungalum to Bennary Coimbatore	21600	5160		D° No 560 D°
	519	Bridge over the Ambravaty River Coimbatore	63830	13622		D° No 564
	520	Construction of a Bridge over the upper stream of the Surganoor Nullah Coimbatore	3000			D° No 563 D°
	521	Building a Truss Bridge across the Belliaul Stream on the Segoor Ghaut Coimbatore	2200	1000		D° No 564 D°
		Brot	179883	374612	136645	

Nature of the Item	No	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		II. Public. (Cont^d)				
		L. Communications (Cont^d)				
Bridges.	522	Constructing 2 Bridges on the road from Coimbatore to Metoopolliem, Coimbatore	6240	193	"	Budget No 2 of 1858/59 No 565 deferred
	523	D° Woodyapully Bridge, Salem	1332 1068 }	"	"	D° No 568 D°
	524	D° a Bridge on the Peryagraum nullah between Tripatore and Kistnagherry Salem	720	"	"	D° No 569 D°
	525	D° a Bridge over the supplying stream of the Luddanaddy tank on the Muddagherry and Bangalore road Salem	630	"	"	D° No 570 D°
	526	D° a Bridge over the Vellaur river at Tullavassel on the Salem and Cuddalore road Salem	8000	"	"	D° No 571 D°
	527	D° a Bridge over the jungle stream at Shashen's Choultry on the Salem & Cuddalore road Salem	1800	"	"	D° No 572 D°
	528	D° a Bridge over the Kullaur river near Hursoor on the Salem and Dharampoory road, Salem	3500	"	"	D° No 573 D°
	529	D° a Bridge over a Jungle Stream on the Oosoor and Bangalore road Salem	1400	"	"	D° No 574 D°
	530	D° a Bridge over the Vapabullor river near Vanenbuddy on Trunk road No 1, Salem	7040	"	"	D° No 576 D°
	531	Bridges on the new Guersappah Ghaut and road from its head to the junction with the Siddapoor & Talgoopah lines near Kodkury, Canara	25994	1320	"	D° No 577 D°
		Bridges [illegible]	[illegible]	[illegible]	[illegible]	

Nature of the Item.	No.	Description of work.	Estimated Cost.	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks.
		II. Public. (cont.)				
		L. Communications (cont.)				
Bridges.	532	Bridges on the Jalsoor and Cassergode road, Canara	2640	2544	96.	Budget No. 2 of 1858/59 No. 578.
	533	Constructing a Bridge across the Mungalpady Stream on the road from Mangalore to Cavoy, Canara	2250	〃	2250	Do. No. 579
		Completion of the Bridges on the Sirey & Seddapore road (distance 24 miles) Canara	6000	〃	6000.	
	534	Bridge over Vadakuncherry & Kanady Rivers, improving the road from Paulghaut to Trichoor and repairing and improving branch roads. Malabar	49061	8282	.	Do. No. 581 deferred
	535	Constructing 3 Bridges on the road from Ootacamund to Avalanche, Malabar	2190	.	〃	Do. No. 583 Do.
	536	Do. Culputty Bridge near Palghaut, Malabar	20000	〃	〃	Do. No. 584 Do.
	537	Completing the Poorapparamba Canal Bridge and Kernelloor Sluice in Malabar	19920	〃	〃	Do. No. 586 Do.
	538	Constructing a Bridge in lieu of the present one called Barber's Bridge across the Nullah at St. Thomé, Madras	4760	.	〃	Do. No. 587 Do.
		Total Bridges	1853628	386957	129292	

Nature of the Item.	No.	Description of work.	Estimated Cost.	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks.
		II. Public. (cont.)				
Bridges.		L. Communications (cont.)				

Nature of the Item	No	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		II. Public. (cont.)				
		L. Communication (cont.)				
Bridges.						

Nature of the Item	No	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		II. Public. (cont.)				
		L. Communications (cont.)				
Boat Bridges Ferries.	539	Forty seven crossing places on the Cocanada & Samulcottah Channels. Rajahmundry.	5520			Budget No 29 1856/57 No 589 Deferred
	540	Building 80 Ferry boats (40 large & 40 small) for the Kistna Channels. Guntoor.	14000	4100	"	Do No 590. Deferred
	541	Constructing 10 Cargo boats for conveying materials to the Delta works in the Kistna Dist. Guntoor.	10000	"	5000	Do No 591.
	542	Constructing 17 Ferry boats for the rivers on Trunk Road No 6. Nellore	5550	"	5550	
	543	Do Paddle Ferry boat for the Cheppelairoo. Nellore	160		160	
		Total Boat Briges & Ferries	35230	4100	10710	

Nature of the Item.	No	Description of work.	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks.
		II. Public. (Contd).				
		L. Communication (Contd).				
Navigable Canals.	544	Excavating a navigable canal from the Nowpada Salt pans to the port of Calingapatam Ganjam	18100	6	"	Budget No 2 of 1858/59 No 592. Deferred.
	545	Towing path to the Nagarum Aqueduct. Rajahmundry	23360	15197	"	Do No 593. Deferred.
	546	Junction Canal from Mogultore to Cocanada. Rajahmundry	122357		"	Do No 594. Deferred.
	547	Canal from Samulcottah to Cocanada. Rajahmundry	117339	98213	19126	Do No 595.
	548	Erecting a Lock and a Calingulah in the Cocanada Canal between Chintapilly and Madapaud Locks. Rajahmy	12430			Do No 596. Deferred
	549	Constructing a Lock in the Nagarum Canal — Rs 4010 Do Calingulah in Do — Rs 1670 Do an Aqueduct in the Nagarum Taloot at Kudalay — Rs 4720 ~~Do Do in Do~~ at Chintalapully Rajahmundry — Rs 3210	13610	"	"	Do No 597 Deferred
		Completing the Narsapore Lock Canal Rajahmundry	23500		"	Recommended Vide 9th Nov/58 No 52.
	550	Constructing a Lock and Calingulah at the head of Venkiah Channel 150 feet long & 20 feet broad. Masulipatam	13130	"	"	Budget No 2 of 1858/59 No 598. Deferred.
	551	Extending the projected Bezoarah and Masulipatam Channel from the basin at the latter place to the lower extremity of the Pettah Canal and for constructing a wharf opposite the Custom House Masulipatam	12300	"	"	Do No 600 Do

1.6 13416 19125

Nature of the Item.	No	Description of work.	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks.
		II. Public (Contd)				
		L. Communications (Contd)				
Navigable Canals.	552	Enlarging lock in the Inpedary channel near Ameenpoor and constructing a bridge over it — Masulipatam	3250	"	"	Budget No 2 of 1858/59 No 599 Deferred.
	553	Enlarging 3 Locks in the Nizampatam Channel and adding a bridge deck & making the bridges over the Calingulahs suited for wheeled carriages as well as for foot passengers — Guntoor	20040	"	"	Do No 601. Deferred.
	554	Improving water communication between Kistnapatam and Goodoor Nellore	14,000	"	"	Do No 602. Deferred
	555	Excavation of a Canal between Adyaur and Palaur Rivers. Chingleput	218873	191065	"	Do No 606. Do
	556	Improving the water communication between Madras and Ameen Covil. Chingleput	72800	12818	"	Do No 608. Do
	557	Extension of Canal from Doogoorauzpatam to Kistnapatam backwater Chingleput	139665	1847	"	Do No 607. Do
	558	Completing the excavation of the canal near the Palaur at Sadras. Chingleput	7800	1232	"	Do No 609. Do

Nature of the Item	No.	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for Expenditure in 1859/60	Remarks
		II. Public. (Contd.)				
		L. Communications (Contd.)				
River Improvements.	562	Improving the river and port of Masulipatam	14,520	"	"	Budget No. of 1858/59 No. 611 Deferred
	563	Restoring the banks of the Cooum river throughout the Madras limits, Madras	8,580	"	8,580	
		Total River improvements	23,100	"	8580	

Nature of the Item	No.	Description of work	Estimated Cost	Computed Expenditure up to 30th April 1859	Amount required for Expenditure in 1859/60	Remarks
		II. Public. (Contd.)				
		L. Communications (Contd.)				
Stage Bungalows.	564	Constructing 1st class Travellers' Bungalow with out offices at Chicacole & Nursunnapettah at Rs 1990 each. Ganjam	3980	"	"	Budget No. 9 1858/59 No. 613. Deferred.
	565	Do Do at Berhampore Ganjam	2180	"	"	Do No. 614. Deferred.
	566	Do 2d Class Do at Aska Ganjam	1520	"	"	Do No. 615. Deferred
	567	Do Do at Calingapatam Ganjam	1,350	"	"	Do No. 616. Deferred
	568	Constructing 2d class Travellers' Bungalow on the North bank of the Kistnah on the Coast road branching from the Northern Trunk Road, Masulipatam	2000	"	"	Do No. 618 — Do
	569	Constructing a 2d Class Traveller's Bungalow at Peelair. Cuddapah	2020	"	2020	Do No. 620.
	570	Building 5 Travellers' Bungalows on Trunk Road No. 9 between Vicravandy & Lower Coleroon Anicut. South Arcot	10,000	627	"	Do No. 622. Deferred
	571	Erecting a Travellers' Bungalow at Oolundoorpett, South Arcot	3000	"	3000	
	572	Repairing & improving the Travellers' Bungalows at Assanoor and Kydoor on Trunk Road No. 8, South Arcot	1096	"	1096	
	573	Constructing a Travellers' Bungalow at the Lower Anicut on Trunk Road No. 9. Tanjore	2250	201	"	Do No. 624. Deferred
	574	Constructing a Traveller's Bungalow at Ammapett Tanjore	1750	"	"	Do No. 625. Do

II. Public. (Contd)

L. Communications (Contd)

Nature of the Item	No.	Description of work.	Estimated Cost.	Computed Expenditure upto 30th April 1859.	Amount required for Expenditure in 1859/60	Remarks.
Staging Bungalows	575	Constructing a Travellers' Bungalow at Perugamunny on the Caroor Road along the South bank of Cauvery. Estd. Rs 2250 Deduct for available materials to be appropriated from the old Bungalow at Rungaverum Rs 200. Do value of land Trichinopoly Rs 252. 452	1798	„	1798	Budget No 2 of 1858/59 No 626.
	576	Constructing a Travellers' Bungalow at Lalapettah on the same road Estd. Rs 2250. Deduct for available materials to be appropriated from the old Bungalow at Oodiarpolliam Rs 200. Do value of land Trichinopoly Rs 252. 452	1798	„	1798	Do No 627.
	577	Constructing a Travellers' Bungalow at Voytillagoodelloor on the Salem road along the North bank of Cauvery, Trichinopoly	2250	„	2250	Do No 628.
	578	Do a Travellers' Bungalow at Padaloor on Trunk Road No 8. Trichinopoly. Rs 2250 Deduct value of land Rs 252	1998	„	1998	Do No 629.
	579	Constructing a Choultry at Toopoor for the use of Native Travellers. Salem	4000	„	4000	Do No 637
	580	Do at Ademancottah on Trunk Road No 5 for Native Travellers. Salem	1000	„	1000	Do No 638

II. Public. (Contd)

L. Communications (Contd)

Nature of the Item	No.	Description of work.	Estimated Cost.	Computed Expenditure upto 30th April 1859.	Amount required for Expenditure in 1859/60	Remarks.
Staging Bungalows	581	Six 2d Class Bungalows on the road from Hulleal and Sungawaree Ghaut at Rupees 704½ each. Canara	4225	„	„	Budget No 2 of 1858/59 No 639. Deferred
	582	Traveller's Bungalow at Sedashegur Canara	2090	„	„	Do No 640. Deferred.
	583	Constructing a Travellers' Bungalow at Guersappah. Canara	13170	„	„	Do No 641. Deferred.
	584	Erecting a Moosafferkhana at Nedabrinjal Rs 490 Do Cookroom to Travellers' Bungalow do. Malabar Rs 440	930	„	930	Do No 642
	585	Converting the old Hospital of the Malabar Police Corps at Malliapoorum into a Travellers' Bungalow Malabar	100	„	100	Do No 643
	586	Constructing a 1st Class Travellers' Bungalow at Vythry in Wynaad Malabar	4010	„	4010.	
		Total Staging Bungalows	68515	828	24000	
		Total Communications	5,283,456	1,576,615	597,013.	

Nature of the Item	No.	Description of work	Estimated Cost	Computed Expenditure up to 30th April/59	Amount required for expenditure in 1859/60	Remarks
		II. Public. (Contd)				
		L. Communication. (Contd)				
Staging Bungalows						

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for completion	Estimated Expenditure for 1859/60	Remarks
		II. Public. (Contd)				
		M. Railway	none.			
		N. Electric Telegraph.	none.			
		Total Public	9776674	3256745	924172	√
		Grand Total of State and Public	13011622	4642401	2151488	√

Nature of the Funds	Description of work	Estimated Cost	Expended ~~time for~~ Completion	~~Estimated~~ Expenditure for 1859/60	Remarks
	II Public (cont.) N. Electric Telegraph				

Abstract.

Class.	Section.	No. of works.	Estimated cost.	Completed expenditure up to 30th April 1859.	Estimated expenditure for 1859/60
I. State.	A. Military	41	28,11,055	12,37,305	10,80,795.
	B. Naval.	3	3,660	1,250	2,410.
	C. Judicial.	36	90,350	30,448	59,909
	D. Revenue	37	1,00,773	39,405.	35,128.
	E. Ecclestical	12	20,690	8,986	11,704.
	F. Educational	1	1,000	500.	500.
	G. General	39	2,47,420	67,769	31,870
	Total State	169	32,34,948	13,85,656	12,27,316.
II. Public	H. Municipal	2	25,030	1,913.	"
	I. Marine	11	96,672	41,021.	8,536.
	J. Industrial	•	"	"	"
	K. Agricultural	136	43,71,316	16,37,206	3,18,623.
	L. Communications	268	52,83,656	15,76,605	5,97,013.
	M. Railway	•	"	"	"
	N. Electric Telegraph	4	"	•	"
	Total Public	417	97,76,674	32,56,745	9,24,172
	Grand Total of State & Public.	586	1,30,11,622	46,42,401	21,51,488.

Repairs				Grand Totals			
Irrigation works	Communications	Buildings	Totals	Irrigation works	Communications	Buildings	Totals
14	15	16	17	18	19	20	21
32800	27234	7000	67034	36210	63465	17135	116810
10500	9785	3000	23285	10500	26489	5892	4288
180000	30684	4000	214684	213840	49810	12985	276635
140000	33992	14000	187992	223660	78162	24420	326242
60000	10000	4000	74000	107540	15000	6043	12858
180000	46910	5400	232310	193528	90920	6105	29055
55000	61185	5000	121185	66482	71070	10356	147906
100000	78735	9594	188329	119123	78735	59048	256906
29000	28732	3600	61332	29000	87898	12963	129861
60000	149377	13390	222767	101526	199719	26136	327381
50000	77955	11500	139455	62301	108218	20810	191324
85000	59225	3000	147225	87810	83185	22782	19377
263500	32293	4910	300703	270290	95851	6468	37266
114000	33626	7000	154626	131100	61626	19684	21241
62000	33472	1800	97272	62000	76340	6185	144525
78000	47100	6082	130182	82491	88744	13277	184512
40000	60970	9000	109970	54436	111361	27700	19347
4000	47421	1720	103141	54930	88721	7503	151154
"	72692	10300	82992	"	104106	34788	138894
800	29820	12910	43530	800	118587	42971	16235
1520	3020	39294	43834	3265	12006	48757	640
"		100000	100000		6411	346776	35318
"	24397	"	24397		24397		2439
		5000	5000			331090	3310
		4500	4500			120767	12076
	3050	3510	6560		3050	355620	35867
96120	1001675	288510	2886305	1910832	1734871	1586263	52319

General abstract of the proposed expenditure on New works and Repairs in the Madras Presidency within the Official year 1859/60-

	Districts	In Budget No 1				In Budget No 2				Total for new works			
		Irrigation works	Communications	Buildings	Total	Irrigation works	Communications	Buildings	Total	Irrigation works	Communications	Buildings	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Ganjam	"	"	"	"	3410	36231	10135	49776	3410	36231	10135	4977
2	Vizagapatam	"	"	"	"	"	16704	2892	19596	"	16704	2892	1959
3	Rajahmundry	"	"	"	"	33840	19126	8985	61951	33840	19126	8985	61951
4	Masulipatam	"	44470	"	44470	83660	"	10420	94080	83660	44470	10420	13825
5	Guntoor	"	"	"	"	47540	5000	2043	54583	47540	5000	2043	[illegible]
6	Nellore	"	"	"	"	13528	44010	705	58243	13528	44010	705	5824
7	Cuddapah	"	"	"	"	11482	9885	5356	26723	11482	9885	5356	2672
8	Bellary	"	"	"	"	19123	"	49454	68577	19123	"	49454	68577
9	Kurnool	"	"	"	"	"	59166	9363	68529	"	59166	9363	68529
10	Chingleput	"	48100	"	48100	44526	2242	12746	58514	44526	50342	12746	10461
11	North arcot	"	"	"	"	12301	30263	9310	51874	12301	30263	9310	51874
12	South arcot	"	"	"	"	2810	23960	19782	46552	2810	23960	19782	46652
13	Tanjore	"	"	"	"	6790	63558	1558	71906	6790	63558	1558	71906
14	Trichinopoly	"	"	"	"	17100	28000	12684	57784	17100	28000	12684	57784
15	Madura	"	24000	"	24000	"	18868	4385	23253	"	42868	4385	47253
16	Tinnevelly	"	"	"	"	4491	41644	8195	54330	4491	41644	8195	54330
17	Coimbatore	"	10136	"	10136	14436	40255	18700	73391	14436	50391	18700	83527
18	Salem	"	"	"	"	930	41300	5783	48013	930	41300	5783	48013
19	Canara	"	"	"	"	"	27444	24488	51902	"	27444	24488	51902
20	Malabar	"	30000	"	30000	"	58767	30061	88828	"	88767	30061	118828
21	Madras – Civil architect	"	"	"	"	1745	8986	9457	20188	1745	8986	9457	20188
	Madras – Garrison Engineer	"	"	"	"		6411	246776	253187		6411	246776	253187
	Madras – Municipal Commissioner	"	"	"	"			"		"			"
22	Mysore	"	"	"	"			326090	326090			326090	32609
23	Hyderabad S. F. Secunderabad	"	"	42767	42767			73500	73500			116267	116267
24	Jackatalla	"	"	"	"			352118	352118			352118	352118
	Total	"	156406	42767	199173	314712	581790	1254986	2151488	314712	738196	1297753	2350661

Budget Statement

No. 1.

of

1859/60.

Index for Budget No. I.

35

District	No. in the Budget	Work		Amount of the Estimated Cost	Amount required for the expenditure of 18 5/6.
Ganjam	32.	C. Bridges ~~on~~ Trunk Road No 6		47,220	"
Vizagapatam	29.	C. Road from Parvattipoor to Jeypoor		150,000	
Masulipatam	12.	I. Diverting the Mopedary channel to Masulipatam &c.	District Division	145,089	"
	14.	C. Portion of Trunk Road No 6		108,800	
	15.	Road from Ibrampatam to Nizam's frontier		44,170	44,170
	16.	Road from Masulipatam to Ibrampatam		140,000	
Guntoor	17.	C. Portion of Trunk No 6		132,800	
Cuddapah	35.	C. Road from Vencataramrazpett to Royacholy		41,300	
	38.	Road from Royacholy to Poonganoor		48,100	
Bellary	2.	B. Married Quarters for the European Infy at Bellary		116,700	"
Kurnool	33.	C. Bridges across the Yamalair river, Pullary Stream and Suggalair river		46,790	
Chingleput	34.	C. Bridge over the Causeway across the Palaur		47,780	
	36.	Canal from Sadras to Pondicherry		375,000	
	37.	Calingulahs on the banks of the Adyar & Palaur Canals		25,330	
	18.	Reinstating a portion of Road No 6		48,100	48,100
	19.	B. Central Prison at the Red Hills		163,200	
North Arcot	19.	C. Road from Chittoor to Goorattum		57,724	
	3.	B. Barracks &c. for European Infantry and Artillery		273,790	
		~~Anicut across the Ponnyaur~~		~~6,000~~	
[illegible]	20/1 & 20/2	C. Portion of Trunk Road No 9 with bridges		27,120	"

District	No in the Budget	Work	Amount of the Estimated Cost	Amount required for the expenditure of 1859/60
Tanjore	13.	I. Dam across the Cauvery &ca River	40,000	″
	35.	C. Bridges on road from Paupanasum to Cavittalum	41,880	″
Madura	21.	C. Road No. 16 from Madura to Camoothee	101,200	″
	22.	Road from Dindigul to the Ambravatty river	27,000	″
	23.	Repairing &c. high road No. 4	74,200	24,000
Tinnevelly	24.	C. Repairing &c. part of the main road No. 4	25,210	
Coimbatore	25.	C. Road &ca. between Coonoor & Ootacamund	32,000	10,186.
	26.	Metalling 76 miles of Trunk Road No. 5	32,570	″
Malabar Canara	27.	C. Road from Hulleal to Shedashegar	126,500	″
	28.	C. Completing the road from Calicut to Palghaut	88,830	80,000.
Madras	11.	B. General Post and Electric Telegraph Office with an Exchange Hall	187,000.	″
	1.	Repairs to the Fortifications of Fort St George	160,950	″
	7.	Additions &ca to the Gun Carriage Manufactory	98,100.	″
	8.	Range of Buildings for making Musket Bullets &c.	40,000.	″
		Improvements to the European Barracks in Fort Saint George	40,000.	40,000.
		Lines for the Madras Sapper Militia	242,600	242,600
		Lines for Native Regiment now stationed at Vepery	272,000	272,000.
Mysore	9.	B. Stables for the Dragoons & European Horse Artillery	156,240	
	4.	Improvements to the Foot Artillery Barracks	106,600	

District	No in the Budget	Work	Amount of the Estimated Cost	Amount required for the expenditure of 1859/60
Hyderabad	6.	B. Ten ranges of married men's quarters for the European Infantry Barracks at Secunderabad	189,300	″
	5.	School room &ca to the Trimulgherry Barracks	42,767	42,767.

Public works Budget for the Madras Presidency for the year 1859/60.

Part I. New works recommended for Sanction.

Nature of the Item	No	Description of work.	Estimated Cost	Estimated time for Completion	Estimated expenditure for 1859/60	Remarks.
		I State. A Military				
Fortifications	1	Repairs to the dilapidated portions of the Fortifications of Fort Saint George. 22 Estimates amounting to Rs. 14484/0 Deduct one Estimate for constructing a tunnel within the Fort sanctioned by His Govt. on Emergency Rs. 11,260 do Six Estimates sanctioned by the Supreme Government amounting to Rupees 276260 287520				
		Fifteen Estimates awaiting Sanction	1160950	„	„	Budget No 1 of 1858/9 Not Recommended to the Honorable Court of Directors Vide para 1 of Major Stuart's letter of 23rd Sept 1858 No 4606. The report required in Captain Yule's letter of 18th Jany 1858 No 24 has been called for from the Chief Engr
		Total Fortifications	1160950	„		
Accommodation for Troops.	2.	Constructing Married Quarters for the families of the European Infantry at Bellary	116700	„		
	3.	Constructing Barracks for 2½ Companies of European Infantry and Artillery with other Buildings at Vellore Rupees 153000 do 4 married Officers or Captains & Subalterns' Quarters &c at do „ 50300				

Nature of the Item.	No.	Description of work.	Estimated Cost.	Estimated time for completion	Estimated expenditure for 1859/60.	Remarks.
		I. State continued A. Military continued				
Accommodation for Troops. Continued		Constructing Out offices in the Fort of do — 13,000 do Skittle Alley at do — 490 do Hospital with Out offices at do — 57,000	243,790	"	"	
		Erecting Colonnades in the lower and upper Verandahs and a portion of the East side of the Western range in the Court Yard and along the entire Eastern and Southern faces of the Eastern and Southern exterior ranges of the European Barracks in Fort Saint George	40000	1 Year	40000	
		Erecting Native Commissioned, non Commissioned Officers and Sepoys lines at the North of Black Town and constructing the necessary new buildings at the Seven Godown near the Seven Wells, for the occupation of the Madras Sapper Militia 24000 Adding a wing to the Native Veteran Battalion Hospital for the Sapper Militia 2600	242600	1 Year	242600	
		Erecting Native Commissioned non Commissioned Officers and Sepoys Lines, Hospital &ca in the Landon's Garden on the Poonamallee Road for the occupation of the Native Regiment now stationed at Vepery, Madras	272,000	1 Year	272,000	

Nature of the Item.	No.	Description of work.	Estimated Cost.	Estimated time for completion	Estimated expenditure for 1859/60.	Remarks.
		I. State continued A. Military continued				
Accommodation for Troops continued	4	Improvements to the Foot Artillery Barracks at Bangalore	106,600	1½ year	"	
	5	Constructing a School Room with School Masters Quarters and out offices attached to the Trimulgherry Barracks near Secunderabad — * 38,067. Do an Armourer's Workshop in connection with the same Barracks 4700	42767	1 year	42,767.	* The Estimate of Rs. 38067 was submitted to the Government of India with letter dated 29th September 1858 No 2020 and early sanction solicited to that Estimate as well as to the other of Rs 4700.
	6.	Constructing 10 Ranges of married men's quarters in connection with the European Infantry Barracks at Secunderabad.	180,300	2 Years	"	
		Total Accommodation for troops	770,157	"	42,767.	
Ordnance	7	Additions and improvements to the Buildings of the Gun Carriage Manufactory at Madras to provide accommodation for working the Steam Machinery received from England	98,100	1 Year.	"	Budget Estimate of 1858/59 Note of the observations of the Govt of India in para 6 of Major Strachey's letter of 23d Sept 1858 No 4... are under the consideration of Govt in the Military Dept. Pending a decision no expenditure is proposed for 1859/60.
	8.	Erecting a range of Buildings on the Site of the old House of Correction in one of the Bastions of the Black Town Fortification as a Factory for making Minie Bullets, Friction Tubes, Lead &c Rupees — 27,000. Construction of a loop holed wall with Banquette in front of the entrance to the Minie Bullet Factory and the clearance of a considerable space inside by the removal of certain buildings — 13,000	40,000	2 Years	"	Do Do do Do Do Do
		Total Ordnance	138,100	"	"	

Nature of the Item	No	Description of work	Estimated Cost	Estimated time for completion	Estimated expenditure for 1859/60	Remarks
		I State continued				
		A. Military continued				
Stud	9.	Constructing Stables for the Dragoons and European Horse Artillery at Bangalore	1,56,240	"		Budget Rot of 1858/59 No 5. The observations of the Govt of India in para 6 of Major Strachey's letter of 23d Sept 1858 No 4106 are under the consideration of Govt in the Military Dept
		Total Stud	1,56,240	"	"	
		Total Military	21,75,447	"	42,767	
		B. Naval.	None.			
		C. Judicial.				
Jails	10.	Constructing Central Prison at the Red Hills Madras.	1,63,200	2 Years	"	Submitted to Govt of India with letter dated 4th May 1858 No 223 but sanction deferred by that Government vide para 8 of Major Strachey's letter dated 23d Sept 1858 No 4106.
		Total Judicial.	1,63,200	"	"	
		D. Revenue	None.			
		E. Ecclesiastical	None.			
		F. Educational	None.			
		G. General				
Government	11.	Constructing a new General Post and Electric Telegraph Office with an Exchange Hall at Abercrombie's Battery on the North beach Madras.	1,87,000	2 Years.	"	Budget Rot of 1858/59 No 8. The originally proposed site of Abercrombie's Battery is not now available. A special report on this project will be submitted hereafter. No assignment was allotted for 1858/59 for the reasons explained in the Report.
		Total Government	1,87,000	"	"	
		Total General	1,87,000	"	"	
		Total State	25,25,647	"	42,767	
		II. Public				
		H. Municipal				
Town Buildings	—	Exchange Hall at Abercrombie's Battery } See Item No 11 of this list				
		I. Marine	None			
		J. Industrial	None.			
		K. Agricultural				
Irrigation Canals.	12	Diverting the Nopedavy channel to the town of Masulipatam and constructing a branch to Wandapollem on a navigable arm of the Kistnah, Masulipatam	1,45,089	3 Years.	"	
		Constructing an Anicut across the Ponnyaur in the limits of Innavadoo for the supply of the Ragaren, Mullatoor, Musadoor &ca channels South Arcot	61,000	"	"	Budget Rot of 1858/59 No 10. Not sanctioned by the Govt of India vide para 7 of Major Strachey's letter of 23d September 1858 No 4106
		Constructing a regulating Dam across the Cauvery and Veerasholen river at the head of the latter river Tanjore	40,000	2 Years	"	
		Total Irrigation Canals	1,85,089	"	"	
		Total Agricultural	1,85,089	"	"	
		L. Communications				
Metalled Roads	14	Constructing a portion of Trunk Road No 6 from Bezowah to Dendaloe, a distance of 40 miles metalled	1,04,800	3 Years		Budget Rot of 1858/59 No 13. Ordered by the Govt of India to await more favorable times vide para 7 of Major Strachey's Letter of 23d Sept 1858 No 4106.

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for completion	Estimated Expenditure for 1859/60	Remarks
		II Public continued				
		I. Communications continued				
Metalled Roads Continued	15.	Road from Ibrahimpatam to Nizam's Frontier Revised Estimate Rupees - Masulipatam 100,002 Original do sanctioned Item No 47 of Budget No 2 of 1856/57 Rupees 55,832 Requiring sanction	44,170	1 Year	44,170	Budget No 1 of 1858/59 No 13 do do Early sanction is solicited to this and the following items Vide the Dept report on the Project
	16.	Constructing the road from Masulipatam to Ibrahimpatam on one of the embankments of the Canal from Masulipatam to Bezoarah and on the river Dykes above the latter place, Masulipatam	14,000	"	"	
	17.	Constructing portion of Trunk Road No 6 from Guntoor to Inkole, a distance of 42 Miles, Guntoor	132,800	"	"	Budget No 1 of 1858/59 No 14 Ordered by the Govt of India to lie over for more favorable times Vide para 7 of Major Strachey's letter of 23d Sept 1858 No 4606.
	18.	Remetalling a portion of Trunk Road No 6. Chingleput	48,100	1 Year	48,100	
	19.	Road from Chittoor to Goorialhum North Arcot	57,734	5 Years	"	Budget No 1 of 1858/59 No 15 Ordered by the Govt of India to await more favorable times Vide para 7 of Major Strachey's letter of 23d Sept 1858 No 4606.
	~~20~~ 1	Metalling and gravelling 16 miles of Trunk Road No 9 between Panpoompet and the Coleroon, South Arcot	24,900	2 Years	"	Do Do No 17 Do Do Do The remaining portion is entered under Budget No below Item No
	21.	Formation of road No 16 from Madura to Cumuthee Madura	101,200	3 Years	"	Do Do No 19 Do Do Do Do
	22.	Improving Road No 2 from Dindigul to the Ambravutty river Madura	27,000	2½ Years	"	Do Do No 20 Do Do Do

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for completion	Estimated Expenditure for 1859/60	Remarks
		II. Public continued				12
		I. Communications continued				
Metalled Roads Continued	23.	Repairing and improving high road No 4 from the Northern to the Southern boundary of the District, Madura	74,200	3 Years	24,000	
	24.	Repairing and improving part of the main road No 4 from Madras to Travancore, Tinnevelly	25,310	2 Years	"	Budget No 1 of 1858/59 No 21 Ordered by the Govt of India to await more favorable times Vide para 7 of Major Strachey's letter of 23d Sept 1858 No 4606.
	25.	Metalling the road and constructing parapet walls to it between Coonoor, Jackatallah and Ootacamund, Coimbatore	32,000	2 Years	10,136	Budget No 1 of 1858/59 No 22 Ordered by Govt of India to await more favorable times Vide para 7 of Major Strachey's letter of 23d Sept 1858 No 4606. Application made in letter of 2d Dec 1858 No 2593 for an outlay of Rs 10,136.
	26.	Metalling 76 miles of Trunk Road No 5 from Walliar to Bowany, Coimbatore	32,500	2 Years	"	Do Do No 23. Ordered by the Govt of India to await more favorable times Vide para 7 of Major Strachey's letter of 23d Sept 1858 No 4606.
	27.	Completing the road from Hullical to Shedashegur via the Sengaurarec Ghaut, Canara	126,400			
	28.	Completing and bridging the road from Calicut to Paulghaut via Moondoor Malabar	88,830	3 Years	30,000	
		Total Metalled Roads	1,061,944		156,406	

II Public continued

I. Communications continued

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks.
Unmetalled Roads.	29	Construction of a Cart road from Parvattipoor to Jeypoor 64 1/2 Miles Vizagapatam	150,000	"	"	
	30.	Road from Vencataramraugpett to Royachoty Cuddapah	41,300	2 Years	"	Budget No 1 of 1858/59 No 26 – Ordered by Govt of India to remain in abeyance – Vide para 8 of Major Strachey's letter of 23d. Sept 1858 No 4606.
	31.	Constructing a 2d Class road from Royachoty to Poonganoor. Cuddapah	48,100	4 Years	"	Do Do No 27
		Total Unmetalled Roads	239,400	"	"	Do Do Do.
Bridges	32	Constructing Bridges on Trunk Road No 5 from Chicacole to Soonthoshaporum Rupees — 23,790 Do — Do — Do from Sunthoshaporum to Dendagedda near Itchapoor Ganjam Rupees — 23,430	47,220	3 Years	"	Budget No 1 of 1858/59 No 28 – Ordered by Govt of India to remain in abeyance vide para 8 of Major Strachey's letter of 23d Sept. 1858 No 4606.
	33.	Constructing a Bridge of 9 Arches across the Yamalair river on the Northern line of road Rupees — 30,000 Constructing a bridge over the Pilly Vangoo on the Northern line of road near Cumbum Rupees — 1,640 Constructing a bridge over the Suggalairoo river at Giddalore on the Northern line of road between Cumbum and Nundy Cannamalla Rupees 8,350				

II Public continued

I. Communications continued

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks.
Bridges Continued		Constructing a bridge across the Pullavangoo stream between Ongole and Hellary Cuddapah Rupees — 6,800	46,790	3 Years	"	Budget No 1 of 1858/59 No 29 – Ordered by Govt of India to remain in abeyance – Vide para 8 of Major Strachey's letter of 23d Sept 1858 No 4606.
	34	Constructing a bridge of 58 Arches over the Causeway across the Palaur near Chinglepet on Trunk Road No 8. Chinglepet	47,780	4 Years	"	Budget No 1 of 1858/59 No 30 – Ordered by Govt of India to remain in abeyance Vide para 8 of Major Strachey's letter of 23d Sept 1858 No 4606.
	29/2	Constructing a bridge across Peria Chengal Oday — 1,380 do — China — do do — 840	2,220	2 Years	"	Budget No 1 of 1858/59 No 31 – Ordered by the Govt of India to await more favorable times – Vide para 7 of Major Strachey's letter of 23d Sept 1858 No 4606.
	35.	Completion of the road from Paupanassum to Cavitalum Bridge across the Cauvery Rs. 14,500 do across the Arasalaur — 7,150 do — Trimalroyen — 5,570 do — Codamoorty — 14,660	41,880	4 Years		Budget No 1 of 1858/59 No 32 – Ordered by Govt of India to remain in abeyance Vide para 8 of Major Strachey's letter dated 23d Sept 1858 No 4606.
		Total Bridges	185,890	"	"	
Navigable Canals	36.	Excavation of a first class tidal Canal from Sadras to Pondicherry	375,000	2 Years	"	Do Do No 33. Not sanctioned by Govt of India Vide para 8 of Major Strachey's letter of 23d Sept 1858 No 4606. No work was proposed for 1858/59 for the reasons explained in the Report
	37.	Constructing Calingulahs on the banks of the Adyar and Palaur Canals and improving the Canal and its towing path — 1,670.				

Nature of the Item	No.	Description of work	Estimated Cost	Estimated time for completion	Estimated Expenditure for 1859/60	Remarks
		II Public continued L. Communications continued				
Navigable Canals continued		Cutting small feeders to the above Canal across the Backwater 8760	25,330	2 Years	"	Budget No 1 of 1858/59 No 34. Not sanctioned by Govt of India vide para 8 of Major Strachey's letter of 23d Septr 1858 No 2606.
		Total Navigable Canals	400330	"	"	
		Total Communications	1887,564	"	156,406	
		M. Railway	None.			
		N. Electric Telegraph.				
Electric Telegraph	—	Electric Telegraph office at Abercrombie's Battery on the north beach. See Item No 11 of this list.				
		Total Public	2072,653	"	156,406	
		Grand Total of State & Public	4598300	"	199,173	
		Amount allowed for isolated works to be sanctioned during the year 1859/60 under Rules IV and V. Communicated by the Government of India in their Proceedings of the 31st March 1856 No 1584			100,000	

Abstract.

Class	Section	No. of works	Estimated Cost	Estimated expenditure for 1859/60
I. State.	A. Military	9	21,75,447	42,767
	B. Naval.	"	"	"
	C. Judicial	1.	1,63,200	"
	D. Revenue	"	"	"
	E. Ecclesiastical	"	"	"
	F. Educational	"	"	"
	G. General	1.	1,87,000	"
	Total State	11	25,25,647	42,767
II. Public.	H. Municipal	"	"	"
	I. Marine	"	"	"
	J. Industrial	"	"	"
	K. Agricultural	2	1,85,089	"
	L. Communications	24	18,87,564	1,56,406
	M. Railway	"	"	"
	N. Electric Telegraph	"	"	"
	Total Public	26	2072,653	1,56,406
	Grand Total of State & Public	37	4,598,300	199,173

Budget Statements
No 1 & 2 with their
Indices for
1859/60

Statement of the amount applied for by the several District Engine allowance proposed for the same Statement for 1859/60 shewing the

Districts	Applied for by the District Engineer for 1858/59.—				Entered in the Budget for 1858/59				Nunjah Beriz collected in each District during the last Fusly						
	Irrigation Works	Communications	Buildings	Total	Irrigation Works	Communications	Buildings	Total							
Ganjam	40,000	28,000	2,000	70,000	32,800	24,834	2,000	59,634	3,21,67	32,800	27,834	7,000	67,634	Irrigation Works	Owing to scarcity of labor, climate, and many other difficulties it is not possible to execute as much work as could be wished. There have been many new works lately constructed which have had a beneficial effect on the Irrigation. Thinks that the sum granted for 1858/59 Vizt. Rupees 32800 is sufficient which is equal 10 per cent. in the Nunjah Beriz.
														Communications	Recommends Rupees 1,560 to be added to this head. —
														Buildings	Recommends Rupees 5,000 to be added to the sum entered in the last Budget on account of repairs to Salt works and Platforms as the manufacture of Salt and demand for it is increasing very much —
Vizagapatam	10,000	7,810	2,000	19,810	8,400	8,785	2,000	19,185	1,11,081	10,500	8,785	3,000	22,285	Irrigation Works	The sum proposed is nearly the average of the amount required for the last 2 Years. The works are of themselves trifling and the annual Expenditure on them bears a nearly constant ratio to the Nunjah collection being from 8 to 9 per Cent.
														Communications	The sum proposed is the same as last years.
														Buildings	The amount recommended is approximately the sum which appears annually necessary for the ordinary repairs.

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Godavery Division	Rajahmundry	1,83,000	27,000	12,300	2,22,300	2,04,000	36,348	10,300	2,50,648		1,80,000	30,000	4,000	2,14,000
	Masulipatam	60,000	20,000	1,200	81,200	25,900	25,000	"	50,900		60,000	20,000	4,000	84,000
Kistnah Division	Masulipatam	1,00,000	7,750	8,850	1,16,600	60,500	9,742	10,050	80,292	"	80,000	12,000	10,000	1,02,000
	Guntoor	80,000	10,000	4,200	94,200	45,100	10,000	4,200	59,300	2,42,746	60,000	10,000	4,000	74,000

These amounts are recommended for the following reasons

1st That the experience of former Years has shewn them to be necessary.

2nd That if compared with the total capital on the works they will be found to be moderate.

3rd That the rate is calculated at 3 . 8 annas per acre about 6 p. Cent. on the intrinsic value of the works both in the Delta and Upper Talooks. the value of the Irrigation works in the latter being assumed to be such as to yield only 20 p. Cent on their prime cost.
Points out the error committed in drawing a comparison between the amount charged for repairs and the revenue said to be derived from Irrigated lands by the Revenue Authorities, with reference to the remarks made by Government.—

These amounts are found by making an average of the expenditure on repairs during the past 3 Years with an allowance for a disastrous monsoon similar to that of 1857. Some allowance has also been made for minor new works which can be sanctioned by the local professional Officers. Explains why in Masulipatam and Guntoor the percentage of the Nunjah Berz expended on the repairs is so much in excess of that of Tanjore.—

Vellore	76,423	33,649	2,000	1,12,072	77,400	29,851	2,000	1,09,251	6,69,053	1,80,000	42,137	5,400	2,27,537	Irrigation Works	Of the amount entered, Rupees 80,000 is for ordinary repairs and the remainder for the reparation of damage caused by floods and storms, which will not be required after the tanks have once been put into proper order.
														Communications	Owing to the extraordinary floods of the last 2 or 3 Years, it is hardly possible to make a new Estimate in consequence of the difficulty of deciding what repairs will ordinarily be required and what will be necessary after adverse seasons. Rupees 12,286 are however added to the sum shewn in the last Budget (of which Rupees 4,286 can be admitted provided the corresponding amount is deducted from the allowance made for the road in Chingleput. The remaining amount requires the sanction of Government.—
														Buildings	The amount proposed has been founded on the known requirements of the various descriptions of buildings.—
Cuddapah	60,000	48,928	3,432	1,12,360	26,800	41,427	3,432	71,659	9,70,112	55,000	61,186	5,000	1,21,186	Irrigation Works	The sum entered is the result of a very careful calculation and it may be relied on as representing as nearly as is possible the probable requirements of the District. It bears 5. 7 ⅌ Cent on the Nunjah Beriz of the District.—
														Communications	Maintenance allowances for four roads to the extent of Rupees 18,150 and an increase in the Discretionary allowance of Rupees 7,500 have been added to the amount entered in the last Budget.
														Buildings.	Considers the sum proposed to be very necessary for the repairs of buildings in the District.—

Bellary	78,680	53,525	4,376	136,581	72,200	73,235	5,686	157,121	870,205	78,980	55,925	9,594	144,499	Irrigation Works
														Communications
Kurnool	20,000	13,000	2,000	35,000	3,000	13,440	2,000	18,440	64,926	29,000	26,732	3,600	59,332	Irrigation Works
														Communications

Bellary, Irrigation Works: Recommend 1 Lac being entered in the Budget though it is less than the amount estimated for ordinary Estimates but is probably the amount that can be worked out in one year. Proposes reducing the sanction for the Toongabuddra Channels to Rupees 10,000. —

Bellary, Communications: Proposes increasing the amount sanctioned for the Heeriall &ca. roads to Rupees 20,000 so as to embrace the repairs required for the Ghauts above Ramandroog, and because the traffic now is over two Carts a day, proposes increasing the discretionary allowance to Rupees 25,000 and reimbursing Government by a tax on bandies —

Kurnool, Irrigation Works: About 10 p.r Cent of the revenue derived from Irrigation Works is charged for the maintenance of those works in Kurnool. Thinks that if 10 p.r Cent of the revenue derived from tanks be steadily and at the proper season spent on account of their repairs they might generally speaking be improved, and their bunds strengthened each year; and that the money spent on emergent repairs is money wasted. Proposes that 2 months before the rainy season, the Tahsildars should report to the Collector what works in his Talook require repair, and the precise nature of the repairs required that being done by the D.P.W. all further work for the year should be exacted from the ryots concerned in the preparation of the tank and should not be paid for. —

Kurnool, Communications: 100 Rupees per Mile is allowed for the maintenance of Government roads, and a discretionary allowance is included and 7 Nurseries have to be kept up. —

Chingleput	47,262	1,03,082	1,186	1,51,530	39,800	1,04,226	1,186	1,45,212	9,22,161	60,000	1,36,606	13,390	1,96,852		An extra sum of Rupees 13,000 has been added as a provision for minor works under the recent orders of the Government of India. The extra sums entered for Roads and Buildings are those applied for by the District Engineer. —
North Arcot	40,000	52,662	4,600	97,262	42,900	70,955	8,800	1,22,655	14,94,724	50,000	70,955	11,500	1,32,455	Irrigation Works	The sum proposed will be necessarily required for expenditure in consequence of the greater number of works remaining to be finished and Estimates under preparation. —
														Communications	As per List of 1858/59. —
														Buildings	Similar remarks as made opposite to Irrigation works. —

South Arcot ___	76,250	55,657	667	1,32,634	71,800	56,005	3,000	1,30,805	14,32,871	85,000	56,000	3,000	1,44,000

Irrigation Works

The amount proposed will not be at all too large a sum to sanction for this District, and it will not be more than 5 ⅌ Cent on the present years revenue. The amount entered in the Budget of 1858/59 is just 5 ⅌ Cent on the Nunjah Beriz of the past year. A few years hence this amount may be reduced.—

Communications

The roads of this District have been devided into main roads and District Roads. The latter are made and repaired out of the Local fund. For the former, maintinance allowance have been sanctioned. The amount of the Estimates is Rupees 52,780 and the difference between that and the sum entered in the Budget of this year is a proper margin for Contingences

Buildings

The sum entered under this head appears sufficient

Tanjore	208416	31573	31263	245902	163500	32293	3340	199153	3843258	263500	42572	4910	310982	The increased allowance for 1859/60 is necessary in consequence of the high rates of materials and labor prevailing in the District, and to place the river banks which are now of a small Section and inefficient in thorough repair. A portion to be done each year. — [illegible]
Trichinopoly	96688	39908	4979	141575	114000	33626	5000	152626	746141	114000	33626	5000	152626	Thinks that the sums entered in the Budget of 1858/59 are by no means too much, but promises to practise the greatest economy in keeping down the expenditure as far as is consistent with the maintenance of works. Encloses a Statement shewing the expenditure on Irrigation Works during the past six years. —

Madura	31,065	2,937	1,800	35,802	29,700	13,497	1,800	44,997	4,24,222	62,000	32,882	1,800	96,622

Irrigation Works

The works of the District generally are in bad order in consequence principally of a totally inadequate expenditure on ordinary annual maintenance repairs. The tanks will not hole a proper supply of water and are frequently breached. Many afford only sufficient water to irrigate 1/3rd or less of the Ayacut area of Nunjah dependent on them. Some are almost and a few quite useless although a small outlay would restore them to efficiency. The River feed channels are much choked with accumulated sand and are frequently breached &c. On the above grounds recommends a more liberal expenditure of the maintenance of Irrigation Works.

Communications

Under the present system roads may be seriously injured by the May rains and remain in an impassable state till December next. This is now actually the case with many miles of road in the District. Recommends therefore that the District Engineer and the Collector should have the power of sanctioning maintenance repairs and has entered the probable cost of such repairs at Rupees 29,475.

Tinnevelly	71,299	3,322	7,175	81,796	58,400	11,280	3,000	72,680	163,979	78,000	47,100	5,082	130,812

Irrigation Works

Has on a former occasion pointed out the absurdity of calculating the amount required for repairs of Irrigation Works from the average of the three preceding Years; for by the method of calculation each years expenditure would become less, while year by year more new works are being constructed or ruined tanks restored, which in their return require to be maintained. Considers that 4½ ℘ Cent on the Ayacut is not by any means a high per Centage to be devoted to repair.

Communications

Proposes Rupees 47100 for repairs under this head. Rupees 42,100 is the amount of the Estimate forwarded which is considered to be the minimum required to preserve the main Roads in the District in an efficient state, and Rupees 5,000 is the amount of the Discretionary allowance.

Buildings

Rupees 1,082 is the average expenditure of the last 3 Years to which it is proposed to add Rupees 1,500 for repairs to Military &ca buildings, and Rupees 2,500 for repairs to Public Buildings at Quilon.—

Coimbatore	30,000	46626	8,620	85,246	21,400	49,492	8,500	79,392	654,243	40,000	60,000	9,000	109,000

Irrigation Works

These works are, with very few exceptions, very old, - they have been patched and repaired from time to time but never thoroughly. The tanks and channels of this District are more subject to silting up than those of other Districts as the Mountains and Hills in which the streams rise are comparatively near these works. When the works were in the Executive charge of the Collectors Department, the sum of 20,000 Rupees was allowed for these works. A much larger sum would now be required not only on account of the increasing instability of the works, but also that the price of labor has risen and that every thing done must be paid for, whereas the Collectors Department got a great deal done for nothing. The sum proposed is a fraction over 6 ⅌ Cent on the amount of Nunjah Burg collected.

Communications

Rupees 10,500 is the amount in excess of the allowance for 1858/59 which is fully required to meet the cost of putting in proper repair the roads communicating with the Railway Stations. Mentions that double this amount would be insufficient to put the roads in proper order, and that it is needless to ask now for a sum sufficient to put them into that state

Buildings

A small sum is added under this head as Public Buildings are to be ventilated and otherwise improved. —

Fig 1267

Salem	38460	14229	1265	53945	33500	14221	1265	48986	4,62,894	54,000	38,220	1,723	93,943

Irrigation Works

The average expenditure of 1856/57 and 1857/58 under this head is Rupees 42,716, and during the current year, the expenditure will probably be about 45,000 Rupees from which the average 43,500 Rupees nearly may be taken for 1859/60. Rupees 10,500 have been added to this sum on account of the repairs to Cauvery Channels which raises the amount to Rupees 54,000.

Communications

In addition to the sum entered in the last budget proposes maintenance allowance for 4 pieces of roads at a cost of Rupees 14,000 and for emergent repairs of other lines Rupees 10,000 as the Discretionary allowance and Local funds are quite insufficient for keeping in repair 700 miles of District Roads.

Buildings

There will not be so much expenditure required for the coming year as during the Current Year. therefore the average expenditure during 1856/57 and 1857/58 is taken..

Canara	„	77,607	8,770	86,377		50,492	8,770	59,262	-	97,988	10,300	108,288	Communications	Under this head Rupees 34,996 have been set down as an annual sanction on account of the 3 Road Circuits. This amount has been entered in List No. 3 of the Budget for 1859/60 for reasons explained.
													Buildings	Rupees 1,530 have also been entered in excess of the amount sanctioned in the Budget of 1858/59 in consequence of the high price of materials.
Malabar	1,000	24,500	6,910	32,410	800	29,820	6,910	37,530	800	29,820	12,910	43,500	Irrigation Works	The amount entered will be sufficient to repair the few surplus dams in use in this District.
													Communications	The sum proposed should not be reduced on the grounds shewn in the District Engineer's letter dated 23rd August 1858 No. 190.
													Buildings	Recommends an increase of Rupees 6,000 for reasons stated in letter dated 7th July 1858 No. 143.

Madras	Civil Architect	1464	„	43194	44658	1464	800	43194	45458	.	1520	3020	39294	43834		Based on the average expenditure for the last 3 Years.
	Garrison Engineer	„	„	66089	66089	„	„	66089	66089	„	„	„	100000	100000		Hitherto the average expenditure on repairs for the three preceding Years was inserted in the Budget; but it is found that that amount is totally inadequate to meet the large number of expensive works authorized to be undertaken on emergency, and which are yearly increasing in magnitude - Rupees 100000 is therefore entered which includes the Quarterly repairs to the fortifications of the Fort. -
Bangalore		„	„	3000	3000	.	3925	3000	6925	„	.	6000	5000	11000	Communications	The amount entered is that sanctioned by Government for the repair of Cantonment Roads. -
															Buildings	The sum entered in the last Budget not being sufficient Rupees 5000 is recommended. -

rs and that entered in the Budget Statement c No. 3 of 1858/59 and the ds on which it has been prepared.

Recommended for the Budget of 1859/60			
Irrigation Works	Communications	Buildings	Total

1858 / Department

No.
Enclosure in a letter
From
The Officiating Chief Engi
To The Secretary
to Government D. P. W.

Dated 30th November 185
Received

No. 5888

No. 2909/58

Precis of the replies fro
by District Engineers to the Circ
calling for explanation as to the
disproportion between the amou
allowed for irrigation repair i
the Kunjah Berry of the sever
Districts. —

6 Jany 59
3/12

Central Office of P. W.
Fort Saint George
30th November 1858

No. 5888

From
The Officiating Chief Engineer
To
The Secretary
to Government D. P. W.

Public

Copies 12
Sett.

Lists No. 1
" 2
" 3
Annual Statement
[illegible]
List of works [illegible]
[illegible] Budget of 1858/59
[illegible] from [illegible]
1859/60
[illegible]
[illegible] 1858
[illegible] correspondence
[illegible] enclosure
[illegible]

Sir,

I have the honor to submit for the consideration of the Right Honorable the Governor in Council, the Budget of Public Works proposed for execution in the ensuing year 1859/60 in the three usual Lists Nos. 1, 2, and 3. In accordance with the orders conveyed in para 59 of Extract Minutes of Consultation 18th January 1858, No. 93, a List of works not brought forward from the Budget of 1858/59 is also submitted, the reason of the omission being fairly explained in the column of remarks. To account for other possible omissions in the Lists themselves, it may be observed that they were closed in the Central Office on the 25th November, and that Estimates submitted, or orders of Government received, after that date, have not been included therein.

Vide Extract Minutes of Consultation 23rd November 1857 No. 2156.

2. With reference to the orders of the Government of India, noted in the margin, directing a new classification of works, the course laid down in para

included

para 57 of the Extract Minutes of Consultation 18th January 1858, No. 93, has been observed, i.e. the usual Geographical order of Districts, and the ordinary classification into Irrigation Works, communications, and Buildings has been retained; but to enable your Office to recast the Budget, and prepare the Synopsis required in para 4 of Colonel Baker's letter of the 30th May 1856, the necessary assistance will be afforded as in past years, after the Lists shall have undergone the usual scrutiny, and the works proposed for execution in the next year, shall have been finally determined upon by Government.

Extract Minutes of Consultation 26th June 1856 No. 1055

3. I regret to have to report that as in last year, the Secunderabad Budget has not been received up to this date. No provision has therefore been made for the Military Works in that Cantonment. For the other territories subject to this Presidency the following amounts have been provided for expenditure in the ensuing year, Viz:

New works,	No. 1	7,26,870
	No. 2	21,04,341
Repairs	No. 3	29,30,944

making

making a total of Rupees 57,62,155: exclusive of the one lac to be provided for isolated works agreeably to Colonel Baker's letter of the 11th July 1856, No. 3173 para 40.

Vide Extract Minutes of Consultation 23rd November 1857 No. 2149 para 2.

\#exclusive of works in list no. 1

4. In apportioning the expenditure among the works of most pressing importance in List No. 2, it has been assumed that the amount available for the next year would be 50 lacs, or thereabouts;# and with this limitation in view, the works considered most urgently necessary have been distinguished (by the Superintending Engineers) from those which may be deferred, by the amounts proposed to be expended on the former being entered in column 10, while the amounts of the other works have been transferred to column 11; but should the Government consider any of the latter class of works of greater importance than those selected by the Superintending Engineers, it will be necessary to make a corresponding transfer of the amounts to their proper columns in the Lists to be prepared in your Office. A letter written by the Acting Superintending Engineer of the Northern Circle regarding the works within his range, is herewith submitted for the information of Government.

6th November 1858 No. 16.

5. It will be observed that the amount allowed

included

allowed for repairs in the present Budget is larger than that proposed in the last. This is owing partly to the great demand for irrigation repairs made in the current year, and partly to meet the outlay on petty new works under the rules sanctioned in Extract Minutes of Consultation dated 6th July 1858, No. 1294. for which no other place is so well adapted in the Budget as Statement No. 3.

6 With reference to paras 52 and 53 of Extract Minutes of Consultation 18th January 1858, No. 93, I beg to report that the District Engineers were called upon, by Circular, to explain the cause of the great disproportions between the sums allowed for irrigation repairs, and the Nunjah Beriz, of the different Districts. A precis of the replies forwarded by them is herewith submitted for the information of Government, but it will be seen that while the local Officers have in most cases given satisfactory reasons for the sums applied for by them (which has induced me to adopt their recommendations to the full extent) they are generally silent as to the question asked by Government, with the exception of the District Engineers of the Kistnah and Godavery Divisions, the former of whom ascribes the disproportion to the under-aſseſsment of the Nunjah lands in his Division — to the Zemindary estates not being taxed in proportion

to

to the benefits derived by them from the better supply of water afforded them — to the higher cost of labor — to the fact that the greater portion of the repairs have hitherto embraced improvements, small irrigating channels, and generally all minor and petty works neceſsary to the development of the new system of agriculture introduced by the Anicut — to the earth works being new, and thus requiring much more repair and attention for the first few years after their execution, than old consolidated banks and bunds — and lastly to the fact that in Tanjore, where the disproportion is the least, the repairs have attained their average standard, while in the Kistnah Division they are in the earlier stages of their progreſs, and consequently require a larger outlay.

7 The above arguments are applicable to the Godavery Division also, where the land is alleged to be equally under-aſseſsed, but Captain Rundall states that the circumstances of the Division are such that the expenditure on Communications and Irrigation Works should be considered together, and that instead of comparing the amount of repairs with the Nunjah revenue, it should be compared with the capital laid out on Construction. No advantage however, appears likely to accrue from a discuſsion of these principles.

8 I may nevertheleſs observe that there

exists

included

exists great difficulty in fixing any correct standard that shall answer for every year with reference to the peculiar circumstances of a District, the occurrence of a good monsoon, or the failure of it alone will create a great disparity in the amount to be expended, and with regard to average years, the amount will depend on the degree of repair executed in each case, for it will be obvious that unless a work is restored to complete efficiency every time it is repaired, it must gradually deteriorate, and after a few years, require a much greater outlay than the sums previously spent. Thus, from the very nature of things, a fluctuation in the yearly outlay seems inevitable. —

9 I would also mention with respect to the ratio between the amount expended and the revenue realized that there are circumstances here also which tend to create a disparity. In a District like Tanjore where the fall of the Country is gentle, and the embankments low, and where the irrigation is carried on principally by means of river-channels, the outlay on repairs must necessarily be small in comparison with the Revenue; but in a Country like Bellary which has a great fall, and which is irrigated chiefly by means of artificial reservoirs, the outlay on the

the repair of the bunds must be proportionately larger. So also where the rivers, though numerous, are of small size and under control, the expenditure would be less, but where it is intersected by large rivers, as Trichinopoly and Rajahmundry are, requiring frequent repairs of banks, the expenditure would be greater.

10 An inspection of the Statement forming appendix V to the Public Works Commissioners first report, will shew at a glance how variable and fluctuating were the amounts spent on Irrigation Works during the years 1816/17 to 1850/51; and how futile, therefore, it must be to attempt to fix them by an invariable standard. The District of Bellary to which it is well known much attention was paid by the late Mr. Robertson, exhibits the following variations. Page 88

			Rupees
Average of	1816	1821	69,049
	1821	1826	1,00,151
	1826	1831	1,78,340
	1831	1836	77,199
	1836	1841	59,404
	1841	1846	54,419
	1846	1851	52,695

The amount spent in

1855/56,	being	56,098
1856/57,		54,430
1857/58,		80146

The

included

11. The disparity in the last three years is not such as to call for any special explanation with reference to the fluctuations observable in by-gone years, but it may be remarked generally that there are causes at work now tending to increase the expenditure on Repairs, as on all other descriptions of work, Vizt higher wages for labour caused by the decrease of assessment, and increase of foreign trade — emigration — the absence of compulsory labour, or optional prices for materials — and perhaps greater attention to the permanent repair of irrigation works.

12. The object of Government in wishing to lay down a standard is perhaps to fix a limit which shall not be exceeded in ordinary years, and within which all necessary repairs shall be completed, but I would respectfully submit that the best means of securing this end appears to be to select none but proper works for repair in each year, which can only be done by carefulness and attention on the part of the local Officers aided by the advice and opinion of the Revenue Authorities; and I need not here observe how highly beneficial the supervision of the Superintending Engineers would be for this purpose, if exerted on the spot and the works themselves be frequently inspected by them.

13 To account for the great disparity in the amounts allowed for the repair of Communications

not

not provided with special grants in List No. 3, it is necessary to state that several of the District Engineers asked for maintenance allowances for certain roads without applying previously for the sanction of Government for the same. As the amounts could not under these circumstances be entered in the Budget, they have been brought forward under the general head above mentioned in order that funds may be allotted to meet those demands when they are duly authorized by Government. Unless this be done, I fear that the same difficulty and dissatisfaction will be experienced in the ensuing year, as were felt in the present, on account of the insufficiency of the sum provided for Irrigation Works and Communications. Five of the District Engineers not having applied for any allowance under the above head, a margin of 10 ⅌ Cent. has been added in the Central Office to the sum previously sanctioned by Government. —

14 In conclusion, I have to repeat my opinion that the present strength of the Department will not be equal to the prosecution of any extensive operations during the ensuing year, should such be sanctioned by the Government of India. I however take it for granted that in proportion to the expenditure, which may be authorized, the executive staff will be

augmented

included

augmented within the full strength allowed so as to be able to meet the requirements of the public Service. –

Central Office of P.W.
Fort Saint George
30th November 1858.

I have the honor to be,
Sir,
Your most obedient Servant

E Lawford Lieutenant Colonel
Officiating Chief Engineer

Cons: 24th Novr/57 No 131-132
" 1st July/58 " 17-18
" 24th Novr/57 " 119.
" 6th July/58 " 47-48.
" 12th Augt/56 " 87-88.
From the Chief Engr. Dd 30th Novr/58 C No 3010 inls.

P. Works 1858 Department
Do to Cons 4th January/59.
No 2909.

From
The Officiating Chief Engineer

To, The Secretary
to Government D.P.W.
Para 6 & 12

Dated 30th }
Received 30th } November 1858
No 5888

Enclosures 12
From Chief Engr 18th Jany 1859 C No 139. Cons: 8 Feb.

1 Submits for the consideration and orders of Government the Budget of Public Works proposed for Execution in the ensuing Official Year 1859/60. +

No 1.

C 23d Decr R 3d Jany

Public Works Department

No—1.

Extract from the Minutes of Consultation
Under date the 3d ~~December~~ January 1859

Read the following letters from the Officiating Chief Engineer.

(Here enter 30 Nov. and 10 Decr 1858 Nos 5888 and 6197)

4 Only one

1 With the two communications above recorded the Officiating Chief Engineer submits the Budgets of Public Works proposed for execution in 1859/60 in this Presidency and in the Hyderabad Territory respectively and the Govt. are gratified to observe that these documents have been placed before them with promptitude. They will now in pursuance of Nos 1 and 3 of the Modified Budget rules communicated with Colonel Baker's letter of the 31st March 1856+ No 1583, take a review of the Projects included

+ Cir. C. 30 May 1856 No 828.
Page 304 of Grants C.O Book

included in Statements No 1 and 2.

2 The expenditure proposed by the Officiating Chief Engineer in the Budgets is Rupees 30,48,503 for new works and Rupees 29,42,444 for repairs or together Rupees 59,90,947 as shewn below

	Estimated Cost Rs	Proposed expenditure Rs
New Works		
No 1	63,70,723	8,16,870
No 2	1,34,22,765	22,31,633
Total for new works	1,97,93,488	30,48,503
Repairs		
No 3		29,42,444
Total for new works & Repairs	1,97,93,488	59,90,947

But as the Government of India have in passing orders* on the Budget of 1858/59 taken exception in strong terms to the expenditure of Rupees 71,77,575 therein proposed as being immoderate under existing financial difficulties and sanctioned an outlay of* but Rupees 14,59,256 on new works this Government deem it expedient to propose in the Budget of 1859/60 only such an amount of outlay as is absolutely and in a measure unavoidably necessary, and therefore resolve to pass the following orders:

* Major Strachey's letter d/ 23rd Septr 1858 No 4606
Commun. with Secy 21st Octr 1858 No 2214

New works { Statt No 1 - 8,92,820
do - 2 - 41,66,494 — 50,59,314
Repairs - 21,18,261
Total 71,77,575

		Rs
* Statt	No 1.	5,33,660
do	No 2.	9,25,596
	Total	14,59,256.

3. For unsanctioned works brought forward to the present statement from the corresponding one of 1858/59, no expenditure will be proposed; and an intimation will be made to the Govt. of India in the Budget Report, that if they deem proper to sanction any of these works estimated to cost in each case under a lac of Rs, the assignment for the year proposed for such works in the Budget of 1858/59 will be made applicable for

Statement No 1 of new Projects exceeding in cost in each case Rs 25,000 for 1859/60. An expenditure will however be entered for the road from Ibrahimpatam to the Nizam's Frontier, in Masulipatam, the necessity for the line on Military grounds having been affirmed* in strong terms; as also for the road between Coonoor, Lackatallah and Ootacamund in Coimbatore with reference to the letter to the Govt of India d/ 2d Decr 1858 No. 2593.

* Vide C.M.C. 24 Novr 1858 No. 2505.

4 The undermentioned four Projects which appeared in Statement No. 1 of the Budget for 1858/59 will be excluded from the present Statement, and the causes of the omission explained in the Report.

No. 11	Embanking the Mahanuddy river in Ganjam	Estimate	Rs 64,840
31	Two Bridges over the Malataur on Trunk Road No. 8 in South Arcot	do	" 42,670
35	Improving the navigation of the Upper Godavery at the Sinteral barrier	do	" 8,35,600
√ 36	Constructing a branch line of Railway to the Salt Cotaurs at Madras	do	" 78,000

5. Of the Projects newly approved for entry in the Budget Statement No. 1 of 1859/60, for the sanction of the Higher Authorities, the Governor in Council resolves on financial grounds to postpone for the Budget of 1860/61 the undermentioned four, and to finally authorize the entry of the rest in the Statement.

Dates of approval	Work	Amount Rs.
	Guntoor	
19 Nov. 1857 No. 2128 18 Jany 1858 No. 93/17.	Draining the Country to the westward of the Commamoor Channel by diverting the Nuckavagoo into the Nullah Medda embanking the latter and constructing tunnels under the Commamoor Channel	38,100
12 March /57 No. 461 18 Jany /58 No. 93/17.	Converting a Bandy track from Guntoor to the Cuddapah Frontier into a second Class road	56,450
	Nellore	
28 Octr /57 No. 2621 18 Jany /58 No. 93/17.	Completing the road from the top of the Rampoor Ghaut at the boundary of the Cuddapah and Nellore Districts to Goodoor	74,000
	Cuddapah	
do do do	Completing the Road from Venkataramraypet to the Rampoor Ghaut at the boundary of the Nellore District	73,900

6. The remaining Projects to be entered in the present Statement are 11; of these it is observed four are for the accommodation of European troops, six are for roads, 5 required chiefly on Military and Political grounds and one for the transit of the mails, and the other Project alone is for the improvement of the revenue but its execution is to be postponed to more favorable times. In respect to these Projects no expenditure will be proposed for such as are estimated to cost more than a lac of Rupees, as they will require to be referred to the Home authorities. This course it is observed was approved[×] by the Govt. of India on a former occasion. The

Accommodation of Troops.	
Barracks and Hospital for two Companies of Eur.n Infy and Artillery at Vellore. N. Arct.	Rs 2,73,790
Married Quarters for the Eur.n Infy at Bellary —	" 1,16,700
Improvements &c. to the Foot Arty Barracks at Bangalore. Mysore Divn	1,06,600
Married Quarters for the Eur.n Infy at Secunderabad. Hyderabad	1,80,300
Roads required chiefly on Military and Political grounds.	
From Parvattipoor to Jeypoor. Vizagapatam	1,50,000
From Masulipatam to Ibrahimpatam. Masulipatam	1,46,000
High road No 4 in Madura.	74,200
From Hulliall to Sedashegur in Canara	1,26,400
Bridging &c. the road from Calicut to Paulghaut. Malabar	88,830
Road required for the transit of the Mails.	
Remetalling a portion of Trunk Road No 6 in Chingleput	48,100
For the improvement of the Revenue.	
Diverting the Mopedavy Channel &c. in Masulipatam	1,45,089

[×] Para 4 of Col Baker's Despatch of 11: July 56 No 3173 Page 129 of Selections No XXXIII

7. The project of a School-room with Subsidiary buildings, and Armourer's work shop, in connection with the Trimulgherry Barracks at Secunderabad estimated at Rs 42,767 and submitted to the Government of India on the 29th September 1858[×] not having been then sanctioned by that Govt., will be included in the present Statement.

Statement No 2.

8. The prosecution of works entered under "State", in the similar statements for 1858/59, was authorized by the Govt.[×] of India, and orders to that effect have been issued on the 2d December[×] 1858; but the Officiating Chief Engineer has in consequence of his not having been

been

[×] Letter No. 2026

[×] Major Strachey's letter of 23d Septr 1858 No 2606 in Encl 21st Octr 1858 No 2214

[×] E. M. C. No. 2594

been in possession of the Ex Minister of the latter date, when he closed the Budget, made no provision for the execution of several of these works during the remaining five months of the current year; the Govt. therefore resolve to enter either a moiety of the estimate, or of the available balance, as the case may be, for these works generally, as the probable computed outlay within the current year, and set down the remainder as the required expenditure during the next year. This course will be followed in respect to even minor new works, estimated to cost in each case below 500 Rupees, in the absence of positive information that they will be completed within the current year. Works on which no expenditure was proposed in Statement No. 2 of the Budget of 1858/59, will be left in the present Statement in the same state in which the Chief Engineer has entered them. For sanctioned Projects brought forward from Statement No. 1 of the Budget of 1858/59 and on which no expenditure has been proposed by the Officiating Chief Engineer, the assignment sanctioned for the current year will generally be set down as the computed outlay to the end of 1858-59, and the residue proposed to be spent in 1859/60. No expenditure will be proposed for the Project of enclosing the Mint estimated at Rs. 60,000 X pending the decision of the question for removing ~~the~~ that Establishment from its present site.

9 The Government resolve, on financial considerations, to defer the execution of several of the old Projects, as will be noted in the Budget Statement, and no entry will be made in the Column of proposed expenditure in 1859/60. Their retention in that document is however considered necessary in order that they may not be lost sight of in future years.

10 Of the works conditionally sanctioned for entry in the Budget of 1859/60, the Government resolve to defer the twelve specified

below for the reasons stated opposite to each and to direct that they be included in the Budget of 1860/61. The remainder are now finally sanctioned for entry in the present Statement.

	Dates of Sanction	Work	Amount of Estimate Rs	Remarks
		Ganjam -		
1	21st July 1858 No. 420	Constructing a Reservoir at Poorree in Goomsoor	7,500	The information required as to the probable cost of the channels not furnished.
2	19th Novr 1857 No. 2128 18th Jany 1858 No. 93 p: 17.	Excavating a navigable canal from the Chilka lake to the Ganjam river	21,780	Deferred on financial grounds.
		Vizagapatam.		
3	15th Octr 1858 No. 2169	Constructing four second class Travellers Bungalows at Rs 1632 each on Trunk Road No 6 one at Soontum between Soobaram and Chittivulsa and the other three at Kopperla, Pusling and Poodoomain on that portion of the road between Chittivulsa and Chicacole proposed to run inland	6,528	Deferred on financial grounds and because the proposed change of line inland has not yet been carried out.
		Rajahmundry -		
4	19th Novr 1857 No. 2128 18th Jany 1858 No. 93 p: 17	Constructing an Embankment &c to the Godavery from Rajahmundry to Seetanagrum	21,080	Deferred on financial grounds.
5	4th Novr 1858 No. 2322	Making a drainage cut from the Cowsella into the river near Moonjairam	4,490	Do Do Do

Masulipatam

	Dates of Sanction	Work	Amount of Estimate Rs	Remarks
		Masulipatam -		
6	12th May 1858 No. 919.	Constructing a Post Office	2,500	Both the Director General of the Post Office in India and the Chief Engineer recommended that this work should be commenced only after the removal of the existing restrictions on expenditure.
		Nellore -		
7	23d July 1857 No. 1409 18th Jany 1858 No. 93 p: 17	Bridging Trunk Road No 6 across Moosanoor Valley	21,155	Deferred on financial grounds.
		Bellary -		
8	28th Octr 1857 No. 2021 18th Jany 1858 No. 93 p: 17	Constructing a second class road from Kumply to Hospett	23,000	Do Do Do
		Chingleput.		
9	11th Novr 1858 No. 2366	Building a new wall to the old burial ground at Pulicat	1,230	Do Do Do
		Coimbatore -		
10	23d April 1858 No. 759	Constructing a Chuttrum for native Travellers at Ootacamund	8,000	Do Do Do
		Canara		
11	10th March 1858 No. 422	Adapting the buildings of the old Jail at Honore to the purposes of a Civil Dispensary	1,440	Do Do Do
		Madras -		
12	30th June 1858 No. 1228	Forming a road within the Compound of the General Police Office at Royapettah between the Meersaibpettah and Triplicane Gates	363	Do Do Do

11 The roads intended as feeders to the Railway should be completed without loss of time. Resolved therefore that either the full amount of the Estimates, or the entire available balance, as the case may be be entered in each case for expenditure in 1859/60.

12 The Government of India have declined[*] to sanction any further expenditure on the new Dragoon Barracks at Bangalore, until furnished with certain papers relating to the Project, but the expenditure of Rupees 200,000 proposed by the Officiating Chief Engineer will be retained, to admit of funds being available in the event of the work being ordered to be proceeded with, an application to that effect having been subd on the 24th Decr 1858 No - 2818 -

There

[*] Letter of 23d September 1858 No 4606 p: 11.

Statement No 3 Containing repairs.

13 There is nothing in this statement calling for special notice, except that the outlay proposed by the Officiating Chief Engineer for repairs[+] is large. The necessity for such an amount is explained to be owing "to the great demand "for irrigation repairs made "in the current year," and adverting to the fact of the serious and extensive damages caused by the recent heavy rains, to tanks and roads in the Southern Districts, the Govt are of opinion that the amount will barely suffice for duly attending to the repairs rendered necessary by these accidents. There

appear

[+] Rs 29,42,444 including Hyderabad.

Unnecessarily so I think H

appears therefore to be no alternative but to admit the amount, less the sums which are found on examination of the statement, to have been improperly included therein. The Govt. would however impress on the Chief Engineer the necessity that exists for limiting the outlay on this as on other classes of Public Works, and they Recommend to his earnest ~~consider~~ attention ~~ation~~ the observations made by the Govt. of India in their restrictive orders of the 3rd July 1857* in the following words - "There will be some repairs "which, though generally "advisable, may without "risk, be deferred for the "present, and it will be "understood that a strict "watch is to be maintain "upon this branch of the "Public Works expenditur "with a view to its being "kept down to the lowest "possible amount which "is consistent with the "security of the works "or buildings in charge "of the Pub Works Offic "Where any repair can "be deferred, it must be "put off as long as possi"ble, having due regard "to the real security and "stability of each separat "class of structure."

14 One other point in the Statement requiring notice is the frequent ~~entigan~~ entry made by the Officiating

* Comⁿ with Ex Mun Cons of 17 July /57 No 1372.

Officiating Chief Engineer
of sums ranging from
Rs. 704 to Rs. 37,355 for
the "repair of roads not
"provided with special
"grants," in all the Dis-
-tricts except Tanjore.
In support of these en-
-tries, he makes the
following Statement.
"Several of the District
"Engineers asked for main-
"tenance allowances for
"certain roads, without
"applying previously
"for the sanction of Govt.
"for the same. As the
"amounts could not
"under these circumstan-
-ces be entered in the
"Budget, they have been
"brought forward under
"the general head above-
"mentioned, in order that
"funds may be allotted
"to meet those demands
"when they are duly au-
"thorized by Government."
Under this explanation,
the Govt. will admit
the entries, but on the
understanding that
advances shall be drawn
from those funds only
after the special au-
thority of Govt. has been
obtained in regard to
each of those roads for
the maintenance of
which no grants have
hitherto been sanctioned.
The Chief Engineer will
issue instructions ac-
cordingly.

15 "The Govt. observe
that it has not been
practicable on the pre-
sent occasion to attend
to

to the request made in para 14 of Major Strachey's letter of the 23rd September 1858 No 4606 for the subdivision of the expenditure on repairs on the same system as that on the new works, but they direct that the Chief Engineer will obtain the requisite particulars from the District Engineers in time, in view to the desired subdivision being shewn on the next and all future occasions of presenting a Budget of Public Works.

16 The total expenditure proposed by the Offg. Chief Engineer for 1859/60 is, as stated in para 2 of this Resolution, Rs 59,99,947, but the Govt. have by the orders above given reduced the

+ Comd. with Ex. Munl. Comy. of 21 Octo/58 No 2214.

	Rs
+ Expenditure proposed for 1858/59	71,77,575
do for 1859/60	52,36,966
Difference	Rs 19,40,609

* **New Works.**

	Rs
Amount sanctioned in Major Strachey's letter of 23 Sep/58 No 4606 in Statement No 1	5,33,660
do in Statt. " 2	9,25,596
	14,59,256
Repairs	
do proposed in the Budget	21,56,615
do subsequently sanctioned	4,87,621
	41,03,492
Proposed for 1859/60	52,36,966
Difference	Rs 11,33,474

the amount to Rs 52,36,966. This latter sum falls short of the expenditure proposed for 1858/59 by Rs 19,40,609,+ but it exceeds the total sum authorized by the Govt. of India for that year by Rs 11,33,474.* Further reduction seems, after much consideration, to be impracticable. The Govt. will therefore represent to the Govt. of India the actual wants of this Presidency, and leave it to them to sanction the whole or such portion only of the proposed outlay as they may deem proper.

17 The Govt. having thus closed their review of the Budget of 1859/60, resolved that in addition

to the expenditure proposed therein, a sum of four lacs be provided + for the year to cover the cost of emergent and isolated works and of those expected to be completed by the 30 April next but which may remain unfinished at that period as also to admit of the extra outlay likely to be involved by supplemental Estimates. This sum, which will be proportionately distributed among the Districts and Military stations of this Presidency, added to the expenditure proposed on the works in Statements Nos. 1 and 2 and on repairs, raises the total estimated expenditure of 1859/60 to Rupees 56,36,966.

	Rs
+ For isolated works ———	1,00,000
For the other classes of work	3,00,000
Total	4,00,000

The

18. The Governor in Council sanctions the sums specified below for the several Districts and Military stations of this Presidency, and directs the Accountant General to instruct the several Collectors and Paymasters to make advances within the amount as may be required from time to time in each District. The Chief Engineer will be good enough to signify to the Officers of the Engineer Department the sums ordered to be placed at their disposal, which however it should be understood

will be inclusive of the Cash balances that may remain in their hands on 1st May 1859-

Districts	For new works and repairs as per statement No 3	Amount to cover supplemental & Emergent Estimates, and isolated works &ca	Total
	Rs.	Rs.	Rs.
Ganjam	116810	16000	132810
Vizagapatam	42881	17000	59881
Rajahmundry	276635	17500	294135
Masulipatam	326242	14000	340242
Guntoor	128583	15000	143583
Nellore	290553	18700	309253
Cuddapah	147908	28000	175908
Bellary	256906	24000	280906
Kurnool	129861	10000	139861
Chingleput	327381	12800	340181
North Arcot	191329	21000	212329
South Arcot	193777	18500	212277
Tanjore	372609	22000	394609
Trichinopoly	212410	13000	225410
Madura	144525	30000	174525
Tinnevelly	184512	23000	207512
Coimbatore	193497	20000	213497
Salem	151154	19000	170154
Canara	134894	20000	154894
Malabar	162358	19500	181858
Madras - Civil Architect	64022	5500	69522
Madras - Garrison Engineer	353187	5500	358687
Madras - Municipal Commrs.	24397	..	24397
Mysore	331090	2000	333090
Hyderabad	120767	2000	122767
Jackatallah	358678	6000	364678
Total	5236966	400000	5636966

19. The sums above specified will however be drawn under the restrictions and in the manner indicated in para 64 of Extract Mins Cons dated 18 January 1858 No 93-

20. Ordered that Copies of this Resolution be forwarded to the Government of India with the Budget for 1859/60 as required by No 3+ of the Rules laid down in Colonel Baker's letter of the 31st March 1856 No 1583, also to the several Departments of the Secretariat, and Chief Engineer-

+ Page 304 of Grants C O Book

To the Chief Engineer Copy 7

" the Accountant General "

" the Board of Revenue "

" Pub. Fin Dept "

" Mily Dept "

W H B

23d Decr 1858

Public Works 1859 Deptt.
Do. to Cons: 4th January

No. 1.

Extract Minis of Cons:
Dy 3d January/59.

No. 1 at 3.

Reviewing the Budget report for the Official year 1859-60.

23d Decr.

Public Works Dept.
No. 2.

To
Major R. Strachey,
Offg. Secretary Govt of India,

4 Copies
Despd. 6 pr Steamer "Simla".

Sir,

I am directed by the Right Hon'ble the Govr. in Council to lay before the Govt. of India, the Budget of Publ Works proposed to be undertak during the official year 1859/ comprising the usual Statements Nos. 1, 2 and 3, and other papers forming annexures to that Document.

In submitting this Budget, I am instructed to ~~state~~ that the Madras Govt are not un mindful of the observations of the Govt of India conveyed in your letter of the 23d Sept 1858, No. 4606, on the Statement of works proposed for 1858/59. These ~~observations partook of the charac~~

This is quite true
but [illegible]

~~e of strictness in their severity d the Govt feel, and they state h with deference, that they were hardly deserved.~~ On the present ccasion as on the last, the rinciple upon which this Govt have prepared their Budget s to represent the urgent wants of this Presidency, while not unmindful ~~I venture however o that preparation by the consciousness~~ of the necessity for close economy; and then to leave it entirely with the Supreme Govt ~~of~~, with their better knowledge of the finances of India, to decide what can be sanctioned ~~what to sanction~~ for present execution, and what ~~to~~ must be defer~~r~~ed until ~~happier~~ circumstances will admit of a freer expenditure on Public Works; ~~and for acting on this principle, this Govt trust that they will not be deemed obnoxious to censure.~~

On no other principle can this Govt do justice to the ~~above~~ Presidency under their charge.

It will be understood ~~thus~~ therefore, that many ~~been that all~~ Projects of general importance, though they may have ~~on having~~ for their object the welfare or improvement of the country or its people

have been excluded from present consideration; ~~thereby giving~~ in order to give place to those works whose urgency of character, whether as connected with the requirements of the State, or the comfort &c ~~convenience of its European Troops, does~~ of the increased Military Force of European Soldiers does not appear to admit of their being delayed. Even in respect to these, it will be found that no expenditure is proposed on such of them newly brought forward on the present occasion, as exceed a lac of rupees each in estimated cost; and ~~the~~ in respect to others, it will be remarked that no expenditure is proposed on works presented ~~completed~~ in previous Budgets but refused by the Govt of India, ~~but sanction for which has been withheld by the Govt of India,~~ except in two instances, the circumstances of which will be explained in the course of this report; at the same time it has been considered ~~while all find place in~~ ~~and~~ desirable that all should be entered in the Budget, in order that projects well considered and weighed in their merits, may not be lost sight of, by exclusion from that Document.

Having thus briefly explained the principle on which this Govt. have prepared their Budget, viz a representation of what in their opinion, even at a time of pressure, are the actual wants of the Madras Presidency, I am now to beg attention to Statements No. 1 and 2 of the several projects of Public Works proposed to be undertaken or continued in the official year 1859/60.

Statement No. 1 as usual comprizes projects estimated to cost upwards of 25,000 Rs each. It includes 13 fresh projects, & brings forward 24 from previous Budgets, making 37 in all, involving an aggregate estimated expenditure of 45,98,300 Rs; of which however, it is proposed to lay out, as far as this Govt have felt at liberty to propose, only 1,99,173 Rs in the next Official year; and of this latter sum, nearly all is asked for on ~~for~~ Military grounds, ~~purposes~~, ~~at~~ 34,136 Rs only being for purposes other than those connected with the State.

Statement No. 2 brings forward works above the estimated cost of 25,000 Rs each, which have been already approved and sanctioned, but continue unexecuted; and exhibits ~~besides~~ all those works, besides, which, being under the estimated limit of 25,000 Rs each, have been sanctioned by this Govt. It contains altogether 586 projects of the aggregate estimated cost of 130,11,622 Rs, of which however the computed expenditure to the close of the current official year is 46,42,401 Rs. The outlay proposed for the ensuing year is calculated at only 21,51,488 Rs. For 224 works no expenditure is proposed in 1859/60, as these works, it is thought, may be held in abeyance under the continued financial pressure.

Combining the two Statements, the total estimated cost of all the projects proposed to be executed in part, or wholly, in 1859/60 amounts, it will be seen, to 176,09,922 Rupees. Of this estimated total, it is computed 46,42,401 Rs will have been laid out ~~[illegible]~~ up to 30th April 1859; 23,50,661 Rs it is proposed ~~to lay~~ expend ~~out~~ in the ensuing Official year, so that a balance of 106,16,860 Rs is left to be worked out in future years, as shewn below.

	Amount of Estimate	Actual Expenditure to Octr 1858, & probable to 30th April 1859	Amount required for expenditure in 1859/60	Remaining amount available for completion.
Statement, No 1..	45,98,300	"	1,99,173.	43,99,127.
Statement, No 2	130,11,622	46,42,401	21,57,488.	62,17,733.
Total.	176,09,922	46,42,401	23,50,661.	106,16,860

These particulars will be gathered at once from the Abstracts prepared under the grand heads enumerated in the new classification, and appended to Statements Nos 1 and 2.

Statement No 3 shews ~~in a condensed form~~, the proposed expenditure under Statements Nos 1 and 2 in a condensed form, and the probable outlay on Repairs in each District, classified under the three grand divisions of works. The following table is abstracted from it; and it will be seen that the total outlay proposed in 1859/60 in this Presidency under all heads inclusive of repairs is only Rs. 52,36,966.

	Irrigation Works.	Communications.	Buildings	Total.
Statement, No 1.	"	1,56,406.	42,767	1,99,173.
Statement, No 2.	3,14,712.	5,81,790.	12,54,986.	21,57,488.
Total	3,14,712.	7,38,196	12,97,753	23,50,661
Repairs........	15,96,120.	10,01,675.	2,88,570.	28,86,305.
Grand Total	19,10,832	17,39,871	15,86,263	52,36,966

Statement No. 3 is prepared as usual according to Districts; but for greater convenience a brief abstract is subjoined in this place, shewing at one view the proposed outlay divided according to the classification prescribed by the Govt of India.

Abstract.

	Estimated Expenditure for 1859/60 in Statement No. 1	Estimated Expenditure for 1859/60 in Statement No. 2	Total.
State			
Military	42,767.	10,80,795.	11,23,562
Naval	"	2,410.	2,410
Judicial	"	59,909.	59,909
Revenue	"	35,128	35,128.
Ecclesiastical	"	11,704.	11,704.
Educational	"	500.	500
General	"	36,870	36,870
Total State	42,767.	12,27,316.	12,70,083.
Public			
Municipal	"		
Marine	"	"	"
Industrial	"	8,536.	8,536
Agricultural	"	"	"
Communications	"	3,18,623.	3,18,623
Railway	1,56,406.	5,97,013.	7,53,419
Electric Telegraph	"	"	"
	"	"	"
Total Public	1,56,406.	9,24,172	10,80,578
Total of State & Public	1,99,173	21,51,488.	23,50,661
		Total Repairs	28,86,305.
		Grand Total	52,36,966

Before proceeding to notice the new projects brought forward in the present Budget, I am directed to refer to the several points raised in your letter of the 23d Sept/58, No. 4606, in connection with the works proposed for 1858/59; and for the sake of convenience and ready comparison, they will be referred to seriatim, in the order in which they are presented in your letter. ~~just quoted~~. In para 4, the Govt of India point out in strong terms the necessity of making all possible reductions for the time being in the item of Establishment which they observe amounts by the last returns to upwards of 30 per cent on the estimated outlay (under restrictions) on the several works. From the Progress Report however of Public Works for 1857/58 recently submitted by the Offg Chief Engr, the charge for supervision appeared to be in a still higher ratio to work performed in that year, viz above 40 per cent. The earnest and immediate consideration of the Central Office ~~has~~ was therefore ~~been~~ ~~called~~ directed to be given to the subject, and a report ~~has been~~ was called for as to the measures that ~~can~~ could be adopted for giving effect to the wishes of the Govt of India. ~~and the~~ The Offg Chief Engr's reply has just been ~~[illegible]~~ received, ~~and is [illegible] under consideration, in as much as it should have~~ ~~[illegible]~~ it will ~~therefore~~ form the ~~been received and considered by~~ subject of a separate report. It will be ~~thus~~

→ sufficient here to observe that this Government agree with Col. Lawford that the present reduced Establishment cannot be brought to a lower scale. The original Establishment was arranged with reference to the works which it was then proposed to execute, & the present Establishment is not more than sufficient for the execution of really necessary ~~works~~. ~~[illegible]~~ I am to point out that a reduction in the expenditure ~~of the Establishment~~ does not necessarily induce a reduction to the same proportion in the expense of the Establishment, inasmuch as it has been necessary to keep up ~~a~~ in the Reduced Estt. a larger proportion of highly salaried Officers, whose services must be retained, in preference to retaining a large proportion of Subordinates, & few Superior Officers & span of area to be superintended ~~[illegible]~~ is not diminished by any decrease of expenditure on Establishment.

The observations in paras 5 and 6, of your letter of 23d Sept 1858 in respect to the three projects specified in the margin, have been referred to the Military Dept. ~~and~~ It has been left to that Dept to consider the propriety of directing the Chief Engr to issue orders for the suspension of all work in connection with the Bullet Factory. The Govt of India will be duly informed of the proceedings that may have taken or may take place, in pursuance of this reference.

~~Statement~~ No 1 of Budget of 1858/59

No 4. Alterations &c to Gun Carriage Manufactory at Madras. 98,100 Rs.
5. Buildings for the manufacture of Minie Bullets, with loop holed wall &c, at Madras. 40,000 Rs.
6. Stabling the Dragoon & Artillery horses at Bangalore. 1,56,240 Rs.

No 8. Post & Electric Telegraph Office at Madras. 1,87,000 Rs.
33. Extension of Canal from Sadras to Pondicherry. 3,75,000 Rs.

[illegible]

Adverting to the remark that no assignment for the year was asked for the projects noted in the margin, it is to be observed that it is not usual to enter in the Budget any expenditure for new works exceeding a lac of rupees, which ~~consequently require~~ must to be referred to the Home Govt. This course has received approval in para 4 of Col Baker's Despatch dated 11th July 1856, No 3173. I am to add in this place, that no assignments for the next year's expenditure are ~~[illegible]~~ entered in the present Budget, ~~in the case of all~~ for those works, (with the two exceptions to be presently noticed,) ~~[illegible]~~ from which the Govt of India have lately withheld their sanction; but that, should the Govt of India, during the said year deem proper to order any of those works for execution in the ensuing official year, the assignments entered in the ~~last~~ Budget of 1858/59 will be considered applicable in each case; ~~to that~~ ~~in the orders of the Supreme Govt~~

~~being communicated to any such effect,~~ and the amounts to indicated will be placed by this Govt at the disposal of the Executive Dept. The two exceptional cases referred to above, in which assignments ptg 6 & for the year's expenditure have been entered in the present Budget for works ~~already~~ formerly submitted ~~last year~~ but not sanctioned, are the undermentioned.

		Rs.
13.	Difference between Original & Revised Estimate for the Masulipatam Road from Ibrahimpatam to the Nizam's Frontier	44,170.
22.	Metalling, and constructing parapet walls to, Road between Coonoor, Jackatalla, & Ootacamund	32,000.

In the former case the whole amount requiring sanction, viz 44,170 Rs, is asked to be expended in 1859/60 on military grounds, under circumstances explained in para 26 of this Report, in treating of the remaining portion of the grand project of restoring the road from Masulipatam to the Nizam's Frontier, viz between Ibrahimpatam & Masulipatam, under an estimate of 1,46,000 Rs. The second case has been already specially reported on in my letter dated 2nd Dec 1858, No. 2,593. I there said that the ~~condition~~ position of the road from Coonoor to Ootacamund on the face of steep hills with precipices below rendered it unsafe; that ~~his Lordship~~ the Rt Hon'ble the Govr had satisfied himself of this fact from personal inspection; and that if the whole estimate could not be sanctioned, this Govt would ask for that portion of it at least, as was sufficient to provide for parapet walls, which it was always intended to construct at the dangerous parts of the road. This amount is 10,136 Rs; and it is the assignment now entered in the Budget.

In respect to the project of embanking the Mahanuddee in Ganjam under an estimate of 64,840 Rs, the Govt of India were informed in Mr. Pycroft's letter of the 13th Sept/58, No. 1880, that after reviewing the further reports of their professional officers, and carefully considering their various and conflicting opinions, this Govt agreed with the majority of their officers in the propriety of abandoning the idea of a complete system of embankments, and that with that view, dismissed the projects entered in the last Budget for embanking the Mahanuddee and its affluent the Loherkundy, subject however to the ultimate decision of the Govt of India. It was further stated that this Govt were induced by the representation of the District Engr, supported as it was by the concurrence of Col F. C. Cotton, to sanction from a balance of 9.780 Rs available out of the advance of 30000 Rs authorized for the Mahanuddee project, an estimate of 6,326 Rs for detached embankments and sluices, stated to be all that was required to provide against the ordinary floods of the river. The Govt of India were pleased to signify their approval of these Proceedings in your letter dated 17th Novr 1858, No. 5732. I am now to add that it ~~was~~ has been since represented that the estimate of 6,326 Rs provided for detached embankments and sluices for the upper part of the Mahanuddee, or above Aska, and that similar works were required for the lower portion, or between Aska and the sea; and that this Govt were induced ~~to~~ in consequence of this representation, to grant authority for the remaining× portion also of the balance ~~also~~ being expended in constructing the further works stated to be necessary.

× Balance - 9,780
Deduct estimate. 6,326
Remaining balance Rs. 3,454.

In sanctioning the construction of a road from the Railway Station at Companypett to Conjeveram,(a) the reformation and metalling of the Trichinopoly and Coimbatore road,(b) and the metalling and gravelling of Trunk road No. 4 from the Mysore frontier to Cannanore including the Perumbady Ghaut,(c) the Govt of India suggested the establishment of tolls upon

(a) No. 16. Rs. 29,100.

(b). No. 18. Rs. 30,000.

(c) No. 24. Rs. 61,000.

their roads when they shall have been completed & opened for traffic, in order to raise a fund to provide for their after repair. The Offg Chief Engr has been called upon to report upon this suggestion.

The Govt of India declined to pass orders on the Railway Project No 36, for a branch line from the Salt Cotaurs at Madras to the main line of Railway, until it was placed before them in a more mature shape. I am to state however that the project has been since removed from the Budget, as this Govt have approved of the offer of the Madras Railway Company to undertake the entire construction of this branch line themselves. The Railway Company make the offer, rather than that the narrow gauge recommended by Col Pears and authorized by this Govt should be adopted; and they proposed that land near the Salt cotaurs should be taken for the establishment of an auxiliary Goods' Station, not only on the ground

of its proximity to the large bazaars of Pereacudday and Pereamootoo, and of the means which it would thus afford of having waggons loaded both ways, but also of its relieving the Royapooram Station of traffic. The Railway Officers, it was further stated, will be prepared to receive small as well as large consignments of Salt delivered at the Cotaurs, by which the interests of all traders, poor or wealthy, will be served alike; and as this, with the establishment of an auxiliary Goods' Station near the Cotaurs, is considered to meet the objections raised by Col. Pears to the adoption of the broad gauge on the branch line, this Govt approved and sanctioned the arrangements finally advocated by the Agent and the Traffic Manager, ~~which had the~~ and recommended by the Officiating Consulting Engineer. The full particulars of this proceeding will be found in the correspondence recorded at pages 155 to 164 of the printed Proceedings of Govt in the Financial Railway Dept for the third quarter of 1858.

In para 11 of your letter under notice, the Govt of India granted authority for the expenditure of the entire sum of Rs. 11,25,596 entered in Statement No 2 of the Budget of 1858/59, for works required in the several Depts for State purposes, less Rupees 2,00,000 the amount proposed to be spent in that year on the new Dragoon Barracks at Bangalore. In respect to this project, they desired to be furnished with an immediate ~~and~~ report, with a plan of the station shewing certain particulars to enable them to judge of the position of the new Barracks and of all the Military Buildings, defensive works, magazines, &c, in regard to one another and to the rest of the Cantonment. The Offg Chief Engr has accordingly ~~been~~ directed to obtain & forward the required documents without delay, and in the meantime to issue orders for the suspension of all work in connection with the Barracks. ~~This letter accompany~~ By a separate letter dated 24th Decr 1858 No 2818 the Govt of India will have been informed ~~to explain that the assignment~~ that ~~of 2,00,000 Rs will be found~~ the Offg Chief Engr reported the issue of ~~included in the present Budget~~ such orders by him, but that he at the same time ~~also objects to the project but~~ represented the very serious loss and ~~that it is a serious inconvenience~~ inconvenience which must be entailed by ~~entirely only to be made on it~~ the stoppage of the work in its present ~~when finished unless it be~~ stage. Referring to the reasons assigned ~~been assumed from the first~~ in my separate letter above referred to, & ~~India in the submission of~~ to the earnest request of this Govt for permission to prosecute the work, I am to explain ~~the refusal and plan to be for~~ ~~noticed by the Offg Chief Engr~~ that an assignment of 2,00,000 Rs has been entered in the present Budget for expenditure on the Dragoon Barracks at Bangalore in 1859/60.

In para 12, the Govt of India requested that none of the works of improvement proposed under Statement ~~included~~ No 2 of the Budget of 1858/59 be proceeded with unless urgently required, or unless the works were in such a state of progress that they could not be delayed without serious detriment; in which case, a report ons to be made to them in every instance of departure from the general restriction on expenditure therein laid down. I am instructed to state in respect to this point, that it will be somewhat inconvenient to report by separate letters each case of exceptions as occurs. So that this Govt propose under approval, to report all cases in which they see grounds to remove the projects referred to from the general restriction, in monthly returns commencing from the last month in 1858, with a full explanation however of the grounds of exemption in each case.

The last point to be referred to in your letter under notice, is the desire of the Govt of India to have a subdivision of the expenditure on Repairs, on the same system as that on the New works, in order that the papers may be still more complete. I am desired however to explain that this expression of the wishes of the Supreme Govt reached too late to be complied with in the Statements of this Budget, as they had been already closed in the Central Office, and time did not admit of the obtaining of the necessary materials from the District Offices. Instructions however have been issued on this point to the Central Office ~~however~~, and it is hoped that the desired subdivision will be practicable on the next and on all future occasions of presenting a Budget of Works.

11. Having thus disposed of the points raised in your letter of the 23d Septr 1858, I am next to report a few other circumstances for the information of the Govt of India.

Budget Statement No 1.

of 1858/59 contained an item, No. 31, amounting in the aggregate to 42,670 Rs for two bridges, one of 22 and the other of 6 arches, over the Mullataur, to be connected together ~~[illegible]~~ by a raised causeway. This project has been removed from the Budget under the following circumstances. The present District Engr, Capt Foord, after careful observation and enquiry found that the proposed double bridge gave an unnecessary length of water way owing to the great spread of sand caused by the Mullataur breaking into the old Channel of the Ponyaur. Capt Foord therefore considers that a total length of water way of 225 feet will be found ample at the site of the proposed bridge, as the section of the river at a point five miles lower down where the banks are well defined is not more than that; and for this bridge he proposes a structure of five Elliptic arches of forty five feet span having a rise of one quarter the span. For the new work an estimate of 16,300 Rs was proposed in supercession of the one of 42,670 Rs entered in the Budget of 1858/59; but the Govt have cancelled the latter, and directed the resubmission of the revised estimate of 16,300 Rs when the present restriction on expenditure has been removed.

Item No. 35 of Budget Statement No. 1 of 1858/59 provided for sundry works for the improvements of the Upper Godavery at the Sinteral barrier, at an estimated cost of 8,35,600 Rs. This item has been omitted from the present Budget, ~~because~~ in consequence of the late Court of Directors having in their dispatch dated 29th June 1858, No 8, desired that none of the works connected with the great scheme of opening up the navigation of the Godavery river ~~would~~ should be undertaken until ~~Lieut~~ Capt. Haig, at present in England, shall have returned to India and reconsidered the whole of his plans.

With Mr. Pycroft's letter of the 29th Sept/58, No 2020, an estimate of 38,067 Rs was laid before the Govt of India, for constructing a School Room with School Master's Quarters and Out-Offices for the Trimulgherry Barracks near Secunderabad, with the reasons for so large an outlay being necessary, while according to the standard plan only 25,000 Rs ought to be the cost. The reasons for the larger outlay were, 1st that the rates at Secunderabad were higher than those contemplated by the Govt of India; 2dly, the improvements provided for according to the spirit of the instructions contained in Col Baker's Circular, No 3630 of the 17th July 1857, in order to secure the health and comfort of the Troops;

3dly, the provision of the necessary outhouses which were entirely omitted from the Standard Plan; and 4thly, the great width of the room requiring that the timber for the roof should be procured from Rangoon. It was reported at the same time that an advance of 20,000 Rs was sanctioned by this Govt in anticipation of the authority of the Govt of India; but their early sanction was solicited for the full amount of the estimate, viz 38,067 Rs, and for another estimate of 4,700 Rs for constructing an Armourer's Workshop in connection with the same Barracks, which had been submitted by the Acting Deputy Secretary to Govt in the Military Dept, with his letter of the 12th Oct 1857 No 3554. In respect to the abovementioned advance of 20,000 Rs, this Govt were informed by certain correspondence from the Resident at Hydrabad, that he ~~had~~ sanctioned the advance in question ~~according to~~ under the provisions of the Bengal Public Works Code. The correspondence referred to and the reply of this Govt will be found recorded in Cons: 30th Novr/58, Nos 3 & 4, at pages 691 and 692 of the Printed Proceedings of this Govt in the P.W.D. for 1858. In your letter of the 26th Octr/58, No 5293, you requested that the Plans of the School Room & School Master's Quarters and Armourer's Workshop might be forwarded for inspection. The Plan of the former work was not sent up, because it was ~~the~~ in accordance with the Standard Plan transmitted with Col Baker's letter of the 17th July, 1857, No 3630; but the copy received ~~with~~ from the Chief Engr of Hydrabad is herewith forwarded, together with the Plan for the Armourer's Workshop. These two works form item No 5 of Statement No 1 of the present Budget.

I now proceed to report upon the eleven projects newly ~~brought~~ presented in the accompanying Budget.

Of these eleven works, four are purely Military, being for the accommodation of European Troops; five are roads required chiefly on Military and Political grounds; one is the restoration of a part of a trunk line urgently required to facilitate the transit of the mails, and the remaining Project* alone is for the improvement of the Revenue; but tho' it is included in the present Budget, it will be observed ~~that~~ sanction for its prosecution is asked for,

*diverting the Mopadévo channel to Masulipatam only when the circumstances of the Empire will admit of its being undertaken. These works will be treated of in the order in which they are entered in the Budget.

Construction

8-

Construction of Married Men's Quarters for the European Infantry Regiment at Bellary. 1,16,700 Rs.

The original intention was to convert the old European Hospital in the Cantonment of Bellary into Quarters for the married men of the European Regiment stationed there; and with that view, an estimate of only 10,820 Rs was laid before Govt, to adapt the Hospital to the purpose ~~proposed~~ required. The plan was a simple partitioning of the building by walls, and inexpensive additions to the structure as it stood; but the Chief Engr reported at the same time, that no increase of the height of any portion of it could be made without entirely changing the character of the proposed operations, which did not contemplate the removal of the roof, a necessary preliminary to the main walls being raised. His Excellency the Commander in Chief accepted at first the Quarters as proposed, rather than that they should not be provided at all; altho' he was of opinion that the want of height was a most material objection, involving as it did a sanitary question; but he subsequently caused a new plan and an estimate of 1,16,700 Rs to be laid before Govt, with his recommendation that the altered project should receive sanction. Govt ~~eventually~~ then enquired whether the new plan and estimate were intended for adoption in substitution of the former scheme, and whether such substitution at so great an outlay, was absolutely necessary. Sir Patrick Grant said in reply that the old hospital at Bellary could not afford accommodation

for even one third of the authorized number of families of a Regiment of European Infantry; neither was the accommodation therein, as far as it went, of a suitable description. The new Quarters for the married families, His Excellency added, were quite indispensable on the established plan, in substitution of the accommodation previously proposed, which was of a temporary character.

14. The Quarters are to consist of six ranges, each to contain sixteen quarters; so ~~that~~ accommodation is to be provided for ninety six married men in all. These buildings are to be raised on a basement of 3 feet above the foundations, which are to be sunk 4 feet. The principal walls are to be 18 feet, the wall of the back verandah rooms 10'. 6", and

the pillars of the front verandah 9' 3" in height. Each range of building is to contain thirty six rooms, viz ~~16~~ sixteen main rooms, 16 × 14; ~~2~~ two end rooms, 14 × 10; ~~16~~ sixteen back verandah rooms, 14½ × 10; and two end back verandah rooms, 10 × 10¾; with a front open verandah to be 282 feet long by 10 feet in the clear. The out buildings are to be raised on a basement one & a half feet above the foundations. The middle walls are to be thirteen feet, and the side ones seven and a half feet in height. They consist of Cookrooms, wash-houses, and necessaries; but for further particulars in detail, the Govt would refer to the Engrs Report on the estimate which accompanies. From the plan of the disposition of the buildings, it would appear that each range has a piece of ground and garden before it. The project has been examined in the Central Office, and it is reported that the estimate is correct, and the plan the standard one. Col Sawford has made a change in the disposition of the blocks, as will be seen on an examination of the two little sketches which accompany. This Govt support the Commander in Chief's recommendation of the project.

racks, Officers' Quarters, and Hospital for the Garrison proposed for the Fort of Vellore. Rs. 2,73,790.

The project here brought forward has been prepared at the suggestion and strong recommendation of His Excellency the Commr in Chief. Sir Patrick Grant visited Vellore in the course of his tour, and recorded a minute in which he states that ~~the Fort of Vellore~~ it is a place of very considerable strength and importance, situated in the midst of a numerous population of Mahomedans; that it contains an Arsenal, ~~and~~ Magazine with large supply of ammunition, and the stand of eight or ten heavy guns on works; that a great prestige attaches to the possession of this Fort, and that it should therefore be maintained, and always provided with a suitable European Garrison. With this view, His Excellency has proposed a garrison of two companies of Infantry to be detached from the European Regiment at Trichinopoly, and half-a company of Artillery to be detailed from the European Veterans and Pensioners, until the augmentation of the Artillery corps enables the substitution of effectives. As the present Barracks are not habitable, it becomes necessary to provide fresh and suitable accommodation for the garrison proposed; and hence the present project. It may be mentioned that the proposal of garrisoning Vellore and erecting Barracks &c. was communicated to the late Court of Directors, and obtained their entire approval.

10. The estimates accompanying are five in number, totalling 2,73,790* Rs, and provide for a set of Barracks with necessary offices, Officers' Quarters with outoffices complete, a skittle alley for the men, and a Hospital with subsidiary buildings for the sick. The range of barracks are two storied, to accommodate two companies of Infantry and a detail of ~~Infantry~~ Artillery. From the plans it will be observed that the lower floor will be occupied by Store Rooms, a School Room, Reading Rooms, and a few quarters for married privates and non-commissioned Officers; while the men are chiefly to be provided for in the upper story. This the Offg Chief Engr explains is necessary, because the site of the Barracks is within the Fort, and it is desirable in order to ~~ensure~~ ensure thorough and complete ventilation, to provide accommodation for the majority of the men in an upper story. The space too allowed for the men is comparatively large, viz 1400 cubic feet per man, an allowance however, which Colonel Lawford says is by no means excessive, considering the climate of Vellore. Besides the accommodation mentioned above, provision is also made for two guard rooms, two canteens, a Library, a Gunshed, and three sets of solitary cells, besides the usual cookrooms, and privies both for men and women. The Officers' quarters consist also of an upper and lower story. There is to be accommodation for eight married officers,

*Estimate for Barracks —	1,53,000.
— do. Officers Quarters.	50,300.
— do. Outoffices. do — —	13,000
— do. Skittle Alley — —	490
— do. Hospital &c. —	57,000
	Rs 2,73,790.

four above and four below; and for six subalterns, all above, while the lower portion will be taken up with a mess room, a billiard room, and a reading room and library. The outoffices consist of Cookrooms, Store rooms, servants' rooms, Stables and coach houses for the married officers, and stables for the unmarried subalterns.

The skittle alley has been added on a standard design approved by his Excellency the Comr. in Chief, and is intended for the men both of the Infantry & Artillery.

The Hospital is a necessary addendum to the accommodation of the garrison. It also is a two storied building and provides for sixty three cots in the sick wards, forty being for male, and twenty three for female patients including the Lying in Wards. The ground floor is taken up with the Dispensary, Surgery, Store and Dissecting Rooms, Medical Apprentices' Room, and Hospital Sergeants Quarters; and the upper floor accommodates the sick patients and the Apothecary and nurse. The necessary outoffices are also provided for. In the hospital also, ample provision is made for thorough ventilation both in the upper and lower story as will be observed on reference to the accompanying plans. In all these cases, the estimates have undergone careful revision in the Central Office; indeed they have been all newly prepared there, as those submitted by the District Engr did not meet with the approval of the Offg. Chief Engr. The rates allowed are those current in the District; and proportionate allowance has been made to ~~and~~ cover the extra expense of ~~the cost of [illegible]~~ construct-ing upper storied buildings. Provision is also made to meet the cost of laying out and constructing the necessary road, ~~and~~ with efficient drainage, ~~other~~ adjoining the several buildings. The Barrack arrangements are considered by his Excellency to be "most admirable in every respect;" and Govt strongly support his recommendation for early sanction to erect these buildings.

WHB

11.

Alteration and Improvement of the Foot Artillery Barracks at Bangalore. Rs. 1,06,600.

This estimate of Rs 1,06,600 for alterations and improvements to the Foot Artillery Barracks at Bangalore, has been urgently called for on the requisition of Lieut General Beresford, commanding the Mysore Division of the Army, supported by His Excellency the Commander in Chief. Having completed his inspection of the Foot Artillery Barracks in the beginning of last this year, General Beresford reported the inadequacy of accommodation; the building having been originally erected for the occupation of a Company of the Madras Foot Artillery, composed of but 83 Non-Com^{d} Rank & File; whereas the strength of the Company of Royal Foot Artillery ~~now~~ then quartered in Bangalore in lieu of it, would eventually amount to no less than 187 Non-Commissioned, Rank & File. Of this Company, 150 had already arrived at Bangalore at the date of the General's letter (23d Feb/58); & the way in which he contrived to accommodate them, was to send 40 to the Fort, and quarter a few in part of the Horse Artillery Barracks. "Under future contemplated arrangements" however, added the General, "the detachment at the Fort will not be a requisite detail, and it is needless to observe that it is a very undesirable arrangement to have to send away to the Barracks of another corps, any part of this company." The Genl described the existing building to be the only one for European Troops in the Cantonment of Bangalore, which remained with the old faulty construction, low roof, no ridge ventilation, and with a single open verandah. Subsequently, while the matter was in the hands of the Engineer Dept for the preparation of plans & estimates, Genl Beresford came up with a further representation, to the effect that the change of the force to Horsed Batteries required also all the various appendages for that Arm, which were not previously requisite. There were no harness rooms, he said; no shops for the usual Artificers; the Barracks blocks were low and far inferior to those of the Horse Artillery; while the Hospital was quite insufficient for its probable exigencies. The Royal Artillery however appeared now to have given place to a Company of Madras Artillery; but this force, with the addition of a Horse Battery, is much larger than the strength formerly maintained at Bangalore, being made up of a complement of 150 men; whereas, as above stated, the old company consisted of no more than 83. The necessity for enlarging the Foot Artillery Barracks therefore continues to be the same, while some additions are necessary to suit the altered character of the force to a Horse Battery.

13. The Offg Chief Engr has accordingly submitted the accompanying estimate, prepared by Capt Mayne the Executive Engr at Bangalore. It provides for the following work.

Knocking down old Buildings	100
Altering and Enlarging the present Block of Barracks	22,500
Building new Block	25,900
Hospital	15,000
Medical Subordinate's Quarters	2,600
Married Quarters	12,750
Cookroom and Privy	3,200
School room	7,600
Saddler's workshop	720
Wheelwright — do	720
Solitary Cell	1,520
Cook room	3,400
Washhouse	1,470
Privy	4,240
Skittle Alley	1,080
Compound Wall of Brick in Chunam	2,400
— do — do — Stone in Chunam	1,200
Well	200
	Rs 1,06,600

The Building is to be raised on a basement of stone in chunam of one foot average depth, and on a foundation of rough stone in sand three feet deep in a gravelly soil. The walls are to be of brick and chunam, the floors will be flagged with granite, the roofs terraced; the building ventilated, with ground floor ~~[illegible]~~ sliding ventilators to open or shut at convenience, with ~~[illegible]~~ swing windows above. ~~[illegible]~~ Doors, windows, and all wood work will be of teak. The Compound wall will be 8½ feet high, loop holed here and there. The average space allowed for each man, exclusive of outer verandahs, is 62½ square feet, the cubical contents being 1271/8 cubic feet. The Serjeant's Quarter consists of two rooms with a bath room, adapted for a married man, or two single individuals. The Married Quarters are according to the Standard Plan, each quarter having its back yard with cook room and privy. The Hospital also is according to the Standard Plan, only reduced in size. These arrangements have been made in accordance with the wishes of Lieut General Beresford, who in countersigning the estimate remarked, "I fully agreed in his (the Executive Officer's) view of their necessity, & that all the buildings he has entered are quite necessary, to secure permanent convenience and comfort, and sufficient accommodation for the occupying force". The project has been considered and approved by the Govt in the Military Dept, and it is now recommended for the sanction of the Govt of India. It may be added that the Executive Officer has reported that on the requisition of the General Commanding the Division, he has provided for an emergency independently of the above estimate, the following outbuildings in order to secure the health of the men and horses, using in the work the materials of the old Horse Artillery Barracks. Horse Lines, Grain Boiling Shed, Grain Drying Platform, Two Line Sheds, Sick Lines for 10 horses with small Surgery, Shoeing Shed of four stalls with farriers Shed. A gun Shed for 6 guns & 6 waggons, with Store Room and Magazines, had been already built.

W. H. B.

13.

Constructing Married Men's Quarters for the European Regiment of Infantry at Secundrabad. 1,80,300 Rs.

Govt having authorized the pulling down of the old parcherry attached to the Infantry Barracks at Secundrabad, at the instance of His Excellency the Com: in Chief, on the strong recommendation of several Medical Officers on sanitary grounds, the Quarter Master Genl represented that it became necessary in consequence to provide for the residence of the married men of the 1st Royals, now garrisoning Secundrabad; and that the Commander in Chief wished to know the intentions of Govt in this respect, as the Dragoon Regiment (H. M. 12th Lancers) occupied the new Barracks at Trimulgherry, which had been originally intended for the European Infantry, adding that the old Barracks, altho' condemned and intended at first to be vacated, must now continue to be occupied, without any fear however, as the Barracks had not of late shewed any symptoms of their former unhealthiness, so that the question was whether new quarters for married men were to be built, or the old Parcherry system continued. Govt decided on giving up the Parcherry system, and building quarters for the married men of the Infantry Regt. instead, - and accordingly called for Plans and estimates for the desired structures. In pursuance of this call, the Offg Chief Engr submitted the present project prepared by Col Henderson of Hydrabad, informing this Govt at the same time that the case had become an emergent one, as the Major General Commanding the Subsidiary Force had completely destroyed the buildings of the Parcherry, so that there would be no accommodation whatever for the families of the Royals, on their arrival. Col Henderson recommended an emergent grant of 50,000 Rs as an advance to collect timber, other materials, and plant, in anticipation of sanction to the estimate, but the Govt simply directed the entry of the project in the present Budget. The project does not require ~~does not~~ much by way of description, as it is reported that the plan of the Quarters is in accordance with that, on which similar buildings have been already constructed for the Trimulgherry Barracks. From the accompanying plan, it will be seen that the Quarters consist of well-ventilated buildings in ten ranges, each range providing for thirteen families including Non-Commissioned Officers, or one hundred and thirty families in all. The quarters are as usual to be provided with cookrooms, bathrooms, and necessaries. Owing to some difference between the Military and Engineer Authorities, the site of the Quarters has not apparently been yet fixed upon, but as the accommodation is provided in separate blocks for each company, with ample streets and gardens between each range, it is believed that so convenient a disposition of the buildings will admit of their erection on the site which may be eventually chosen. The project being entirely for the Comfort and Convenience of Her Majesty's Troops, this Govt have no hesitation in strongly recommending it for early sanction. The families of the Royals have not yet arrived, but the interval cannot be better employed than in erecting buildings for their accommodation.

Diverting the Mopedany Channel to Masulipatam, and constructing a branch to Wandapollem, on a navigable arm of the Kistnah. Rs. 1,45,089.

The ~~estimate submitted with the above letter~~ project now to be noticed provides for a change in the ~~point of termination~~ terminus, and for a further improvement to a Canal, the estimate for which was originally sanctioned by Government in April 1854, and was entered in Statement No. 2 of the Budget of 1856/57*. The project proposed to be so modified, was the excavation at a cost of about a lac and a half of Rupees, of a Canal designed both ~~for~~ irrigation and navigation, branching from

*No. 44 for Rs. 1,49,797.

from the Poolairoo at a point not far from the little town of Weyoor, and running along the eastern or left bank of the Kistnah until it reached tide water at the Village of Mopedavy, being a distance altogether of 23 miles. From the Sketch accompanying the fresh project it would appear that much of this Canal remains still unexecuted, ~~with~~ the work ~~having~~ being shewn to have progressed only ~~exception of a small portion up~~ to a point nearly opposite Madoor, probably about 3 or 4 miles in extent.

It is now proposed

proposed to abandon Mopedavy as a terminal point, by arresting the originally projected Canal at the Village of Nadacoodroo, (it is not stated how many miles, but probably about 5 or 6, above Mopedavy), and to continue the channel in a fresh direction to the town of Masulipatam. This is the main object; the further improvement is to construct a branch from the new Canal at a point a little to the north west of Pedda Yadra, and to terminate it in an arm of the Kistnah near Wandapolliem, not far from Divy on the Coast. The main channel, that is, taking it from the Village of Nadacoodroo to its termination at Masulipatam, will it is said be nearly 19 1/2 miles in extent, while the branch to Wandapolliem will be about 5 1/4 miles making in all nearly 25 miles of Canal, the cost of constructing which is estimated at 166,000 Rupees, or a rate of 6640 Rupees per mile of Canal.

21 The project has been brought forward by Lieutenant Beatty, Executive Engineer in the Kistnah Division,

and

and the advantages, as pointed out by him, are these. The Village of Mopedavy is far from the mouth of the river, the course of which, from the Village to the point of disemboguement, is very circuitous, thus presenting an obstacle to easy navigation; whereas no such difficulty will be experienced, by turning the Canal in the direction proposed, to tide water at Masulipatam. The principal advantage of the Canal will be one of navigation; but it is also stated that the main and branch channels will run thro' the talooks of Sullapully and Bunder, containing about 30,000 acres of fertile land; but very little of which is used for wet cultivation, partly owing to the total neglect of the Zemindar for a long time past to irrigation repairs, and partly to the impossibility hitherto of storing water for supply. The Chief Engineer states that the revenue expected from the irrigation of these lands is 90,000 Rupees, or upwards of 54 percent on the outlay. As to commercial advantages, the main channel, it is said, will open an outlet for the produce of a

large

large portion of the District to the market and shipping of Masulipatam, the only existing means of communication being a mere cart track intersected by streams, which flood it for miles, and render it impassable for half the year. The branch channel on the other hand, will develope a trade in timber, firewood, grain and other articles, for the ready and facile transport of which there do not exist present means.

22. The country thro' which the Canals are to be taken is

composed chiefly of black cotton soil. The main channel is calculated to yield during an average season a supply of 30,000 cubic yards of water an hour or sufficient for 30,000 acres. Three streams, it is said, cross the course of this channel, vizt the Mungalamandookodoo, the Bheenacanuddy channel, and the Soolthanugguin or Mungulairoo channel. The first receives the drainage of the Moonastatum and Sullapully talooks; the second; the drainage of the large Caruya tank and western part of the Bunder talook; and

the

i Section map

the third, the drainage of the Eastern part of the Bunder, and par of the Goodewadah talook. For each of thes, a double under drainag tunnel is provided; and in addition, two Calingulahs 60 feet long are to be built. Lieutt Beatty points out that three locks, 150 × 20 feet with bridges and calingulahs will be required, but that two only are provided for in this estimate, as the sum allowed for the lock at Mopedavy in the estimate for that project will be available for the third, inasmuch as the lock will not

be necessary at Mopedavy, in the event of the present alteration being sanctioned. Thus the sum of 1,66,000 Rupees does not represent the whole cost of the present project, as a further sum of about 28,000* Rupees for the third lock and calingulah, proposed to be taken from the Weyoor and Mopedavy estimate, is to be added, which will raise the actual estimated amount to about one lac and ninety four thousand Rupees. But on the other hand, the District Engineer reports that there will be a net saving in the
original

* At the rates allowed in present estimate, thus

Lock	19,246
Calingulah	8541
	27,787
Amount of estimate	1,66,000
	1,93,787
Deduct saving in original estimate in excavation	48,698
	1,45,089

original estimate of 48,698 Rupees in excavation, by arresting the Canal at Nadacoodoo, a point some miles short of Mopedavy, up to which the work was provided for in that estimate, so that this saving being set off against the expense of the third lock and Calingulah, the actual estimated cost of the new project will be reduced to 1,45,089 Rupees.

36. The Collector objected to the project on the ground that the proposed channel would reach but three Government Villages bearing small assessments, and in one of which only there was a
little

little wet cultivation; that the area of these land in these Villages altho' large consisted of a salt swamp overflowed by the tide, so that whether fresh water would benefit it or not would be a doubtful experiment; and that altho' very great benefit would accrue to the Zemindar's estate, he would be very unlikely to pay the tax of 3 Rupees an acre, upon which a return of 90,000 Rupees was calculated by the Engineers. Colonel Faber met this by explaining that the swamp, on the edge of which the three Government Villages referred to are situated,

was

was once the extensive swamp thro' which the Masulipatam river flowed in a deep and navigable channel; that the swamp and the river have however in the course of time become so filled up by the deposition of alluvium derived from the Kistnah freshes, as scarcely to leave a trace of the ~~latter~~ river, while the ~~former~~ swamp if ever covered by salt water, is so to such a slight extent as to render its thorough reclamation easy, and that so well do the people understand this, and the capabilities of the land if supplied with fresh water, that they are most anxious for a channel, having even recently petitioned the District Engineer for it. As to the Collector's impression of the unwillingness of the Zemindar to pay the tax of 3 Rupees per acre, Colonel Faber points to the fact of the rate of 4 Rupees per acre fixed by Mr Newill for Guntoor being gladly paid by the cultivators there, who are fortunate enough to obtain water from the Kistnah

Kistnah Anicut Channels, and argues that it is unreasonable to suppose that on the Masulipatam side of the same river, the Zemindar would not for his own benefit take advantage of such fair terms as 3 Rupees per acre. On carefully considering the objections of the Collector and the arguments of the Chief Engineer in reply, the Government are not disposed to attach much weight to the former. They accept Colonel Faber's explanation that ~~the~~ reclamation of the low land is easy, that the people, who are probably the best judges of the chance of a good return for their labor, are most anxious for the work, and that it is very unlikely that the Zemindars will refuse to benefit themselves by using the water so cheaply supplied; and of course they must pay, if they use it. The Govt. have accordingly admitted this very promising undertaking into the present budget, and would strongly recommend it for sanction, in view to its being undertaken as soon as circumstances will admit.

WHB

Construction of Road from Masulipatam to Ibrahimpatam. Rs. 1,46,000.

24. The history of the project for reconstructing the great Military road between Masulipatam and the Nizam's Frontier was given in paras 73 and 74 of the Public Works Budget Report of this Presidency for 1856/57, and was again adverted to in paras 14 and 15 of the Report for the following year (1857/58). To recapitulate for the sake of convenience, it is only necessary to note a few points. The project was divided into two portions, viz (I) between Masulipatam and Ibrahimpatam, 49 miles in length; and (II) between Ibrahimpatam and the Nizam's Frontier, 64 miles in length. For the latter portion, an estimate of 55,832 Rs was sanctioned by the late Court of Directors, (vide Mr. Secretary Allen's letter of the 23rd June 1854;) and on its being subsequently ascertained that the estimate had been framed on

Can we urge this now. that we have forwarded the completion of the Navigation Canal from Ellore & the use of water from Cocanada?

I think both are necessary.

H

Yes they certainly are. This a direct one by land that a circuitous one by water wh. obviates the necessity of disembarking at Bundar insufficient data, a supplemental amount of 44,170 Rs was asked for in the Budget* of 1857/58, making a total of 1,00,002 Rs under a revised estimate to that amount. For the former portion, or between Masulipatam and Ibrahimpatam, it was thought at first that water carriage could be made available, by taking advantage of the projected Canal from the Weyairoo to Masulipatam; but subsequently agreeing with the Colr in the opinion expressed by him in his Road Report for 1854, that the Canal would not wholly supply the place of a road, this Govt adopted the view of restoring the road in this portion also. Adverting however to the instructions of the late Court of Directors, issued on the proposal to make the canal subserve the purpose of a road, to the effect that for the time at least no considerable expense shd be incurred for a road on this part of the line, this Govt directed the reduction of the former estimate to ~~a second class~~ one for a second class road, by omitting metalling; and on their wishes being attended to, they placed before the Govt of India the reduced estimate of 43,250 Rs entered in the Budget of 1856/57. It was explained that provision was made only for so much earthwork, as was absolutely necessary for filling breaches and other irregularities, and for a coating of gravel, Potter's earth, or sand, whichever material might be most readily procurable. In sanctioning this estimate however, the Govt of India in para 29 of Col. Baker's letter dated 11th July 1856, No 3173, expressed a doubt as to the efficiency of sand and Potter's earth for road metalling, and added that as this and two other roads were represented to be "important and therefore subject to heavy traffic, the additional cost of proper metal might perhaps wisely be incurred."

25. The above is a statement of facts already within the knowledge of the Govt of India; it remains now to submit the after circumstances more immediately connected with the present report.

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* Paras 14 and 15 of the Report.

On the remark of the Govt of India just adverted to being communicated to the Chief Engr with a request for his opinion on the question of substituting proper metalling, that officer forwarded in reply a letter from Capt Orr, the Engr of the Kistnah Division, stating that gravel was not procurable any where in that part of the country, except in the neighbourhood of Ibrahimpatam and Bezwarah, and that the excessive cost of cartage precluded its use except in the vicinity of those places. "Broken brick which," he added, "would make a tolerable substitute cannot be prepared in sufficient quantity from want of fuel; and we must therefore either fall back upon pottery earth or sand, or other equally inefficient substance, or delay the repair of the road till the completion of the channel to Masulipatam (nearly parallel with the road most of the way) gives the means of transporting good material at a reasonable rate." On these grounds, Capt Orr suggested in the following terms

the propriety of postponing the road, and eventually constructing it on one of the embankments of the ~~channel~~ ~~Canal~~ channel. "Indeed looking at the inefficiency of the only material procurable for metalling the surface, and the consequent great difficulty of maintaining the road in order, I would recommend that its repair on the proposed scale be deferred till the channel is sanctioned, and that the road be then formed simultaneously with the channel on one of its embankments, which might be enlarged for the purpose and covered with gravel at a moderate cost." This Govt then took the opinion of Mr. Fraser, the Acting Colr of Masulipatam, and found that this Officer entirely concurred with Capt Orr in his proposal to abandon the present route, and construct the road on the bank of the Masulipatam Channel; a view in which the Chief Engr also expressed his concurrence. Govt having called for a fresh estimate to provide for the work according to its altered condition, the Chief Engr laid before them the present estimate of 1,46,000 Rs, which is intended to supersede the one for Rs 43,250 sanctioned by the Govt of India on the 11th July 1856, being an exceſs of 1,02,750 Rs. As the item for gravel alone is set down at 88,997 Rs, while no leſs than 44,995 Rs is for earth work, although it is a part of the plan that the road should be made on the channel bank, full explanation was demanded of the Chief Engr as to the neceſsity for so large an outlay, before granting authority for the entry of the project in the Budget. Col Faber then explained that the former estimate merely provided for laying over the old line of unraised road a coating of such inferior material as might be procurable in its vicinity; whereas the present estimate contemplates the construction of a road of the most perfect description, and metalled with material procurable only about Bezoarah; and that the laying on of a similar thickneſs of good material on the old line would involve an expenditure for cart hire alone of between three and a half and four lacs of rupees. Considering the character of the work therefore, he thinks that the present estimate, tho' large, is comparatively moderate. As regards the large amount for earthwork, Col Faber explained that the dykes have at present a width of only from 3 to 5 yards, and that it is neceſsary to enlarge them to obtain a sufficient width for the road. He therefore does not think that the estimated charge, about 900 Rs per mile, is exceſsive, considering that the dykes are raised on an average of 2⅔ yards above the level of the country. As it appeared from this to be the intention of the District Engr to form the new road between Masulipatam and Ibrahimpatam on the level of the present canal embankments, which as just stated are 7½ feet above the level of the soil, and it occurred to Govt that every inch that a road is raised higher than may be necessary is an evil, serving only to increase the difficulty of keeping it in repair, they enquired why the estimate for earthwork might not be greatly and advantageously diminished by reducing the height of the dykes and providing, from the material thus gained, for the desired increase to the width of the road. Col Faber however has reported that it is not intended to raise the proposed new road every where 2½ yards on the river and channel dykes, but that where the water stands in the channel below the surface of the country, the spoil bank will be merely spread out & levelled, & only where the canal is within embankments will the road necessarily be taken on a high level. "Thus near Bezoarah," he adds, "and for short distances below each of the locks, the cuttings being heavy, the water will not stand over the berms of the canal, and the spoil banks affording more than enough earth will merely require levelling down to a proper section; while as the respective locks are approached the earth required to form the channel being all required to make up the embankments, their height is regulated

by the level of the surface of the water, and cannot be lowered to make up the width for the roadway, as supposed by Govt. The height of many miles of the embankments near the locks, and where the channel crosses hollows, being 3, and 3½ yards, the mean elevation of the proposed road is roughly stated at 2½ yards; and the average earth work required to be performed, to widen the embankment sufficiently to carry it, or to level down the spoil banks, is correctly given in the estimate and cannot be reduced."

This explanation being perfectly satisfactory, this Govt would support the strong recommendation of the Chief Engr, that the present estimate of 1,46,000 Rs for the portion of the Masulipatam and Hydrabad Road lying between the former place and Ibrahimpatam, may be sanctioned as early as possible, as a military work of vital necessity for the preservation of the valuable stores and costly equipments now unceasingly moving westward from Masulipatam.. The particulars of the estimate are as follow.—

Earthwork	44,955. 57
Gravelling	88,997.
17 Masonry Tunnels of 1 vent and 3 feet	1,662.
Revetments & Parapet walls to Sluices & Tunnels in channel Bank	3,400
Sundries & Contingencies	6,986
	Rs 1,46,000

The lengths of the portion of road under notice on the new track is reported to be nearly sixty miles. The top surface of the road is to be 8 yards in width, of which 6 yards are to be covered with 9 inches of hard gravel. The side slopes of the embankments are to have generally a slope of 2 to 1. There are no bridges.

26. I am directed to take this opportunity of soliciting that the supplemental estimate of 44,170 Rs, for completing the remaining portion of the road to Hyderabad, laid before the Govt of India in the Budget of 1857/58, may be exempted from the consideration which has induced the Supreme Govt to withhold their sanction to it, in common with other works proposed by this Govt, and that early

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sanction may be accordingly granted to this and to the foregoing estimate of 1,46,000 Rs on military grounds of urgent necessity; the Commander in Chief having communicated his opinion that it is of great and pressing importance that this road "should be at once, and without delay, put into a perfect state of repair, so as to render communication with Secunderabad from the East Coast readily practicable at all ~~times~~ seasons." ~~while~~ the Commissary General has also brought to notice the impracticable state of the road, as recently experienced in the transit of a party of European troops, and has urged the necessity of having the road thoroughly repaired and metalled.

W H B

21.

Re-metalling a portion of the Trunk Line from Madras to the Bengal Frontier, within the Chingleput District.

Rs. 48,100.

The portion of road for the re-metalling of which the above estimate provides, is part of the great Trunk Line from Madras to Calcutta, and lies within the Chingleput District. It has been so destroyed by the floods of last year, that its restoration to a state of efficiency is not practicable out of the annual maintenance allowance, which averages about 200 Rs per mile. The Offg Chief Engr reports that the wear and tear of the road in consequence of the heavy traffic is considerable, and that it is not possible to keep the road even in a passable state from the maintenance allowance, and free from complaint of inconvenience and detention to mails. As its importance, in

-dependently of the heavy traffic to which it is subject, consists in the fact of its being a ~~post~~ Post line, the expediency of its early restoration to a practicable condition hardly ~~therefore~~ admits of question. The Post Master Genl addreſsed the Govt on the subject of this road, laying before them a representation from the mail contractors of the detention to the mails, the damage to their carts, and the injury to their horses from over work, ~~adding that many of the horses had become entirely uſeleſs, while a few had died.~~ In an earlier letter to the Post Master General, Meſsrs Taylor and Co of Madras, the contractors, described the state of the road in the following terms. "The places which we would bring more prominently to your notice are the following. Between the fourth and fifth mile stone the road is washed away, and very dangerous for our mail carts to paſs over. At the 11th mile stone, a bridge is under repair, and will not be finished for some time yet. At the 19th milestone, the road is under repair for about a quarter of a mile, at which place our carts are forced to go at the side and below the road which is much cut up. Between the 32d and 34th mile stone, there is a salt water inlet, the sand of which is very deep; and a mile beyond, the road is in a very bad state, and two hours detention takes place everyday at that place." The rest of the description refers ~~refers~~ to further portions of the road, for which however the present estimate does not provide. In laying Meſsrs Taylor & Co's letter before the Offg Chief Engr, the Post Master General declared that if the road in question was kept in the state described by the contractors, the Postal

Dept could not be held responsible for the speed of the mails. The District Engr in forwarding the estimate, considered it an emergent one, inasmuch as the road had been so much injured in consequence of the flood which passed over it in October 1857, as to have lost almost all the metalling that had been left on it. In your Circular Letter of the 30th June 1858, No 3242, you conveyed the information that the orders for the reduction of expenditure on Public Works were not intended to interfere with the execution of repairs such as were really necessary to prevent the deterioration of Public Works, that all Imperial lines of road which at the time of the issue of those orders were maintained at the public cost, should still be kept in as thorough repair as usual; and that these remarks applied more especially

Re-metalling

to the great lines of Post road. Under ordinary circumstances, the Govt would have felt justified in sanctioning the above estimate as an emergent repair of the ~~repair~~ road, but considering the present state of affairs and the fact of a maintenance ~~being~~ allowance being already in operation, they have thought it best to submit the estimate for the sanction of the Govt of India. They have issued orders however for the immediate execution out of the maintenance allowance of such necessary work as would facilitate the transit of mails; but the present estimate provides for such work as cannot be performed from the maintenance allowance. The portion of Trunk road here proposed to be re-metalled being between the 5th and 37th mile stones from Madras.

is thirty two miles in length; so that the estimate of 48,100 Rs gives the rate of re-metalling at 1503 Rs per mile. From the accompanying Traffic Return, it will be seen that the average traffic as taken in the months of May and June 1858, was 704 ~~bandies~~ carts per day between the 5th and 16th mile stone, and 449 carts per day ~~bandies~~ between the 16th and 37th milestones.

WHB

Repair and Improvement of High Road No. 4 from the Northern to the Southern Boundary of the Madura District.

Rs. 74,200

The project of repairing and improving the High Road (No. 4) running ~~from the~~ north ~~to the~~ and south ~~of~~ through the District of Madura, was at first submitted to Govt with immediate reference to your Circular letter dated 30th June 1858, No. 3242, to the effect that all Imperial lines of road heretofore maintained at the public cost, should still be kept in as thorough repair as usual. The estimate was originally prepared and submitted to the Central Office ~~Lawson~~ in July 1857, by Lieut Scott who was at the time Engr of the Madura District, but was not placed before Govt in consequence of the restriction on Public Expenditure. Adverting however to the heavy and increasing traffic on this great trunk line which is a continuation of the Trunk Road from Madras to Trichinopoly, and to the obstruction caused to the traffic by the present very bad condi-

-tion of the road, the Offg Chief Engr reported that he felt he would not be justified in withholding his recommendation for the immediate prosecution of the necessary repairs and improvements; and that he therefore left it to the Govt, either to sanction the estimate for immediate execution, or for entry in the Budget. In doing so, he added 6,800 Rs, ~~to~~ or about 10 per cent, to the original amount of the estimate to cover wear and tear, more than a year having elapsed since the framing of the estimate. Govt adopted the latter alternative. Subsequently Col Sanford submitted a correspondence with the Quarter Master Genl's Dept, from which the following facts appeared. Lieut Cooke of the 21st Regt N.I. having proceeded in command of a detachment from Trichino-poly to Madura, and met with serious difficulty on his march, submitted a representation of the bad condition of the road to the Major Genl Commanding the Southern Division of the Army. He wrote thus. "Being aware that the 2nd Extra Reg N.I. will be shortly marching to Palamcotta, I have the honor to report the very bad state of the roads between Trichinopoly and this Station (Madura). They are very deep in close mud, very much destroyed by rains; in a great many places with great gaps half across; in other places so bad, that the bandies had to go off the roads. Should a few days heavy rain set in, I feel convinced they will be impassable for carts. About the worst ~~past~~ place is situated between Cottapolliem and Meylore: to get over the ~~two~~ first two miles from Cottapolliem, it took the carts with the detachment upwards of three hours, and this with the assistance of the men of the detachment together with twenty four coolies. Near the first mile stone from Cottapollium, there is a gap across the road of some fifteen or twenty feet beside; but whether a bridge, or only the road which is above the level of the place, has been carried away, I cannot say. If the former, not a vestige is left of it. The bridge near the second mile stone from the same place is half destroyed. The road there had such holes or pits in it, that I was obliged to employ some of the men of the detachment with pickaxes and mamooties to get earth, others to cut and bring tied bundles of brushwood, branches of trees, and large stones, to fill them up, so as to allow the carts to pass. I also had to fasten ropes at the end of the cart poles, at which eight or ten

men pulled, with five or six men at the sides of a bandy and three or four at the back, to assist the bullocks to get the bandy through the mud which was kneedeep in some places. After the first six miles had been passed over, the cattle were so fatigued and the men so worked, that I was obliged to ~~add~~ order a halt there. I never saw roads in such a state as the roads between Trichinopoly and Madura, & I should certainly say judging from their state that nothing had been done even in the way of common repairs for a very long time. Six hours and a quarter it took to get the detachment and the few carts with it, to their sixth mile from Cottapollium to Maylore. The only bit of good road is near Madura. This representation having been forwarded by Genl Budd to the Quarter Master Genl's Dept at

Madras, the Offg Chief Engr received a requisition from that Dept to cause early steps to be taken to have the road between Trichinopoly and Madura made paſsable as soon as poſsible, as another corps was about to march on it immediately. Col Lawford appears to have instructed the District Engr of Madura accordingly; but that Officer reported his inability to repair the road in time to facilitate the march of the troops. He wrote thus. "The 2nd Extra Regiment, which I believe is the corps alluded to by the Quarter Master Genl as ~~the~~ about to march over the Southern Trunk road, arrived in Madura yesterday morning and will march out to the Southward tomorrow, so that the repair of the road cannot be executed in time to facilitate their march. Nevertheleſs I am now taking steps to carry out your instructions; the road in its present state being a disgrace to the Dept concerned in its maintenance. The part marched over by Mr. Cooke's detachment, whose report elicited General Budd's letter to the Qr Master Genl, is by no means the worst part in the Madura limits. To the Southward, there are nine miles of this great Trunk Road, to get bandies acroſs which requires after rain four days hard work for the bandymen and bullocks; and for sixteen or eighteen miles, the road is similarly impaſsable, only in a leſs degree. As we have had four days of fine dry weather, with a drying wind blowing, I trust that the bandies of the Regiment will be got acroſs this part of the road before more rain falls. It will however be exceſsively difficult and dangerous; and probably several bandies will be broken; and certainly the bandymen & their bullocks will have to suffer much. The difficulties experienced by Lieut Cooke's detachment will, I trust, bring to mind that the large bandy traffic from the Southern Districts, in one continuous string of four hundred bandies per diem, has to contend day after day and month after month with the same difficulties; causing much loss by injury to produce and goods, besides the otherwise unnecessary enhancement of cost of carriage by delay, broken bandies, and worn out bullocks". In submitting these papers, Col Lawford remarked that from the District Engr's letter it would be observed that the road in its present state ~~is~~ was an obstacle to all traffic as well as travellers, to say nothing of the inconvenience to Govt in the delay & discomfort of troops, and extra expense in the transmission of stores; added to this, the fact that every day made the case still worse at this season of the year; and that if the thorough repair of the road were delayed until the Budget was sanctioned, the estimate of 1857 would be far from sufficient, notwithstanding even that ten per cent had been added to cover the supposed "wear and tear of one year." "It must be borne in mind, added Col Sawford, "that since that estimate was framed the road has had to stand two monsoons, and a storm, and heavy floods in April last. I therefore beg strongly to recommend that Govt will take into their consideration the urgent necessity for carrying out the necessary repairs to this line, exposed to a traffic of four hundred carts daily, and grant sanction for its thorough repair on the estimate prepared by Lieut Scott amounting to Rupees 74,200, as far it will go, in anticipation of the sanction of the Budget for 1859/60." Notwithstanding this urgent representation, Govt felt that they could not authorize the ~~completion~~ prosecution of the work without the previous sanction of the Govt of India. They observed that the estimate contains a large amount for items intended for the completion and improvement of the road, such as the building of bridges, tunnels, road-dams, gravelling &c; and that one item alone under the last mentioned head amounts to 44,495 Rs, or nearly two-thirds of the entire estimate; so that the work could not be treated as one of mere repair, while the amount of the estimate precluded this Govt from meeting the application of the Offg Chief Engr. All that the Govt could do, was to authorize the appropriation from the funds for repairs at the disposal of the District Engr, of such sums as might be necessary to remedy present inconveniences and keep the road open for traffic.

The length of the road for ~~the~~ thorough repair of which the above estimate provides, is nearly 24 miles from the northern boundary of Madura at Poleethepatty, to its Southern boundary at Nullama-Naickenpatty. The estimate provides for the following items.

Earth work	8,599.
Stone & hard gravel	2,125
Soft gravel & small stone	146.
Gravel	44,495.
Turfing	3,858.
Levelling &ca	2,058.
Blasting rock & removing stones	31.
2 Bridges of 1 arch of 6 × 3 span	240.

6 Tunnels varying in size	291.
13 Platform Tunnels - do.	694
37 Road Dams of various lengths.	620.
1 Sluice	50.
1 Sluice and Tunnel	80
(a) Converting 13 Pavements into side dams varying in length	388
(b) Lengthening a side dam	25
(c) — do - a Tunnel	30
Repairing 82 Tunnels	164.
Repairing a side dam	1
Repairing 47 bridges	557
Repairing a Mile Post	2
Tools, Contingencies, Carriages &c.	2,947.
Wear and tear, about 10 per cent.	6,800.
	Rs 74,200.

The ~~upper~~ surface of the road is to be eight yards in width, of which six are to be gravelled nine inches in thickness. No large bridges are to be built, as all the streams of importance have been already bridged with the exception of the Vigay, for which an estimate of 42,200 Rs entered in the Budget* of 1856/57, and providing for a structure of twenty five arches, was sanctioned by the Govt of India, but in consequence of the restriction in expenditure is still inoperative. The line passes thro' a populous & well cultivated country, the principal towns bordering on it being Cottampatty, Meylore, Madura and Tiroomungalum. Govt strongly recommend the estimate for sanction.

DHD

* No 43, Statement No 1.

Second Class Road from Sedashegur to Hulleal, via the Lingawarree Ghaut, in North Canara. Rs. 1,28,400.

The project of opening a road from the Port of Sedashegur to Hulleal on the northwestern frontier of North Canara, via the Lingawarree Ghaut, was first brought before Govt in 1853 when Mr T. N. Maltby, then Magistrate and Collr of the District, wrote as follows to the Civil Engr of the Division. "I brought the work to the notice of Govt in consequence of the disturbances in Goa, which rendered it necessary again to place a detachment at Jugglepett. When I state that the whole of the country comprised in your sketch map is a dense jungle with nothing but narrow tortuous paths, where a stranger is entirely dependent on a guide, and that this country is constantly infested by bands of robbers from the Goa and Mahratta Country, it seems unnecessary as Magistrate of the District to say more on the subject. I think it may safely be said that wherever a military force is necessary, a road is also necessary; and you will observe the route which a detachment would have to take from Yellapoor to support that at Jugglepett; and Yellapoor is still 25 miles from Sircy with an imperfect road. The line from Yellapoor to Mullial has just been made, but from that line westward is one large jungle. Without therefore giving undue importance to the disturbances of Goa, I consider that where troops have once been required to ensure the peace of the country, roads should be made. But I might have hesitated to recommend this outlay, if it had only a temporary importance arising from the present state of the country. The work will be of the greatest permanent utility; a road and a ghaut are alone necessary to convert this tract into the scene of a busy trade. The road will shorten the land carriage of goods from Dharwar by 20 miles, the terminus being at Mullapoor, the head of the finest river in Canara for inland navigation.

Cultivation will spread through this fertile track; and the habits of a people accustomed to look for subsistence to the contraband trade and other unlawful resources, will be effectually changed by this opening out of a source of honest livelihood. The abolition of a Tobacco monopoly, the establishment of an efficient cutcherry at Sedashegur, the regulation of the timber trade, and the opening out of this road, will all combine towards the improvement of a country naturally fertile and rich in wild products, and there which in spite of all impediments a very valuable trade already forces its way to Goa, though not to Sedashegur." On this occasion however Govt were only asked to sanction an estimate of 9,850 Rs for opening out this road of 56 miles, including the formation of the Singaurree Ghaut, but the actual expenditure has been altogether 13,681 Rs, of which the sum of 3,685 Rs was granted by the Colr from the discretionary funds at his disposal. Notwithstanding this small outlay however, and some mistakes arising from the inexperience of the officer and overseer employed in the operations, much good work has been turned out. ~~[illegible]~~ No less than 50 out of the 56 miles of the line have been traced and opened to widths varying from 1 1/2 to 4 yards; but however satisfactory this may be, compared with the outlay ~~by~~ with which it has been effected, the work done does not at all meet the requirements of the case. It is accordingly proposed to ~~make~~ complete the road and make it a second class dry weather communication, fit for wheeled traffic throughout from Hullial to Sedashegur, at an estimated cost of 1,26,400 Rs inclusive of superintendence, as follows.

Earthwork, Gravelling &c.	57,400
8 Bridges of different dimensions	35,330
28 Tunnels of different sizes	22,860
Superintendence for two years, being the salary of 2 Assist & 2 Sub Overseers, & 10 Jemadars	10,800
	Rs 1,26,400

The item for superintendence was

5

added in an enquiry from this Office, as to whether competent supervision was available for the work, the Govt being anxious to secure such; and the Offg Chief Engr has reported that with the exception of an officer of experience and local knowledge for the general charge of the operations, the existing establishment of the District cannot supply the requisite superintendence; so that the item of 10,800 Rs has been inserted in the estimate to provide for the subordinate agency for two years, which appears to be the shortest period within which the road can be completed through a difficult and thinly populated country.

31. If in 1853, Mr. Maltby had such cogent reasons to urge as he did in advocating the opening of the Sedashegur and Hullial and Sungumurree ghaut road, &c. events have shewn that there is still greater necessity to open up the ghaut country of Upper

Canara at the present day with good practicable communications. Disturbances broke out very lately in the Northern Talooks of this District, the insurgents finding their way in from the Goa frontier; and the peace of the country cannot be said to be quite restored, ~~as yet, as~~ altho' the insurgents have surrendered & the large military force assembled there to overawe them ~~insurgents has not been still~~ is about being withdrawn. From the proceedings of this Govt in the Judicial Dept, laid before the Govt of India in the usual course, it will have been learnt that the standard of revolt was set up in Canara by a Mahratta chief named Hunamuntha Savantha, one of the sons of Ponda Savanthu who in 1845 took an active part in the Kolapoor and Savanthwaree insurrection. On the outbreak of the Bengal mutiny, the Savantha brothers resumed their former reckless and predatory habits, and recently fell under the suspicion of the Portuguese Authorities as implicated in

several extensive robberies. With the view of securing the principal members of the family, the Portuguese Govt invited them to Goa, but evading the invitation, they converted their moveables into money, entered this Presidency, and set fire to the Custom house and adjacent huts belonging to Govt servants, and subsequently extended their attacks to the Belgaum neighbourhood, making occasional forays on the villages and capturing the stragglers they met. Their acts of aggression were principally directed against the Govt and its adherents, and they found sympathy and reception among the people of this part of the country, several of the most influential Dessayes in the neighbourhood being reported to have been gravely compromised in the affair. In consequence of these disturbances, the talooks of Soopah, Soondaty and Yellapoor have been brought under the operation of Act XXVIII of 1857, and the population are accordingly being disarmed.

These matters however are merely adverted to here, to shew the state of the country, and the necessity there is for having good roads there to transport troops to the scene of disturbance on the likelihood of any future occurrence of this nature. Indeed the District Engr says that had the proposed road which forms the subject of this report been properly opened two years ago, it is not possible that Hanamuntha Sawantha would not have given Govt the trouble, nor put them to the expense they have undergone. Besides this great political necessity, commercially also the road is a desideratum. Not only will the timber trade benefit by it, but the proposed formation of a harbour of refuge at Sedashegur now renders the construction of roads into the interior, towards the great cotton growing districts of Dharwar and Bellary, an object essentially necessary to the success of the projected port. The subject has also been pressed upon the attention of the Home Authorities by an Association formed for the purpose of promoting measures for facilitating the transport of cotton to that port; and the Govt have called upon the Chief Engr to submit plans and estimates for the requisite harbour works. ~~[illegible]~~ ~~Govt~~ Under these circumstances the Govt would strongly recommend the road for sanction.

MAB

Bridging and completing Calicut and Paulghautcherry Road in Malabar. 88,830 Rs.

This estimate is for the completion of the Road from Calicut by Beypore, Condetty, Mallaporam, Angadyporam, to Mundoor on the Trunk Road to Palghautcherry, and provides chiefly for bridges and a few tunnels. In the Budget of 1855/56, an estimate of 52,083 Rs (item No. 15 of Statement No. 1) was included, which provided for rendering practicable for carts the very imperfect tracks which connected the different places along the line between Calicut & Palghaut; and it was added that even thus improved, the road would still be very imperfect. Under the above estimate of 52,083 Rs, it was recently ascertained that the expenditure up to the 30th Novr 1857 was Rs 27,678, leaving a balance of 24,405 Rs. This work in common with others fell under the operation of the restrictive orders, but on the urgent representation of the local officers and the Central Office, D.P.W, the unexpended balance of the old estimate has been since set free, and the work ordered to be proceeded with. Owing to unfortunate mismanagement of the road, which led to the dismissal of Mr. Hobbs the Executive Officer, some of the expenditure it is to be feared has not been properly laid out; for in his report dated 9th May /57, the Supt. Engr of the Southern Circle reported the actual condition of the road at that date to be as follows. Beginning at Mundoor about 11½ miles, or nearly one-sixth, had been completed; about 25½ miles, or one third, had been finished without drains; of about 17½ miles, or one fourth, the earth work was in progress; and 18 miles, or one fourth, was not commenced; and of this unfinished part, 13½ ~~to~~ miles lay between Mallapooram and Calicut, or on the communication of the District capital with the former Military Station. In a Memorandum dated 12th March 1858, Mr. Robinson the Colr reports that when the order to stop ~~work~~ all expenditure on Public works arrived, it found the District Officers fully aware of their previous errors, and on the point of setting with energy to retrieve them; but the stoppage overtook the works in such a condition that at no point of the line, it might be stated with safety, could two or three miles of continuous road be pointed out, which was available for wheel carriages and the ready passage of troops; while that portion of the line, which in a Military point of view, was of the first importance and wholly indispensable, viz the point between Calicut and Mallapooram, had unaccountably remained almost untouched. He added that the communication between Calicut and Mallapooram was nearly as difficult at that time as ten years ago, and that it was still necessary to send the troops round by Parperangaddy and Trioorangaddy, by a road impracticable for wheel carriages, and so close and difficult, that were the Country in a disturbed state, troops could only move by very slow ~~stages~~ marches. In another paper however, Mr. Robinson said that there were five fragments of this road scattered over a considerable portion of the line, which could be strung together and rendered continuous and practicable for wheel carriages.

In his Minute of the 11th March 1858, on the Military defences of the various Cantonments of this Presidency, His Excellency the Commander in Chief adverted to the grave expediency of completing the Calicut and Paulghautcherry road. "Above all", said His Excellency, "the road between Calicut and Malliapooram should be at once completed on emergency; the distance is thirty miles. The

estimate for this road was passed long since Mr. Robinson informs me; and some thirty miles of it at the further end from Palghaut were finished, when a stop was put to all Public Works. I however consider the completing of this road between the two posts, (which at present are wholly incapable of affording ready support to one another), to be of such grave Military importance as to induce me to press in the most urgent terms, that it may be instantly sanctioned and proceeded with. Malliapooram is in the heart of the most excitable and bigoted portion of the Moplah population, and might at any moment stand in need of being strengthened from Calicut. Were the road completed, this could be effected in a night, and any rising or disturbance crushed on the instant; whereas at present, communication between the posts is a work of days, besides being attended with numerous great difficulties, and very considerable expense, all Stores, Commissariat, and Baggage, being conveyed on Coolies, the track being impassible by wheeled carriages of any description." On his part, the Colr of Malabar submitted that the object of this road was to form a great trunk line through the troublesome and inaccessible Moplah Talooks of Walloowanaad, Ernaad, and Shernaad, and to bring the cantonment of Mallapooram into direct and easy communication with Calicut and the Military Head Quarters of the Province, that the line was well devised in every respect, and when completed with a few branches, would give a thorough command of the country, and that a few hours would then suffice to bring a formidable body of Europeans from Mallapooram to bear upon any point at which the peace of the country might be menaced. On another occasion he said—"To the long continued want of roads and thoroughfares throughout these Talooks, must be attributed in part, the continuance of a dark and savage spirit which has from time to time manifested itself among their ignorant and fanatical Moplah population, while very serious difficulties have been experienced in bringing up troops for their suppression on each occasion of these outbreaks. Suffice it to say that in the interior of Malabar, we have an ignorant and notoriously troublesome & highly excitable population, and that the country is perhaps the most inaccessible in India wherever there are no "made" roads still at this moment; over an area of at least 1000 square miles, there are not 5 miles of continuous road on which wheel carriage can be or is employed. The relief of a Military detachment at Mallapooram, or the transport of

Commissariat &ca ~~Stores~~ supplies, is now almost as difficult and uncertain as it was ~~10~~ ten years ago. Even coolies with Commissariat supplies take considerably more than the regulated time to pass over the distance. As the District has been in a peaceful state for the last two years, this condition may be called inconvenient only. As a Magistrate however, I always feel that it is a very unsafe and critical one: one which I know has caused the Officer Commanding the Province no small anxiety. The effectual opening up of these wild Talooks by thoroughly practicable thoroughfares, is clearly the first step towards bringing about that change in the spirit of their enterprizing Moplah population, which would convert these fine but wild Talooks into the most productive and populous of the Country."

3[illegible] In his report of the 9th

30.

May 1857, already adverted to, the Supt. Engr of the Southern Circle had reported that the want of bridges left the Calicut and Palghaut line very imperfect; indeed within two miles of the Military station at Mallapooram, runs a rapid river eighty yards wide and twenty five feet deep, quite cutting off the communication with Palghaut; & other minor streams are equally unprovided for. The Govt having on these various representations called for an estimate to bridge and complete this road, the present estimate of 88,831 Rs has been laid before them. It is really in amount 113,235 Rs; but deducting the balance, Rs 24,405, of the original estimate recently set free, the amount is reduced to 88,830 Rs. As previously remarked the estimate is chiefly for bridges and a few tunnels. Of the former, there are no less than 79 to be built; but only three appear to be of any magnitude, viz. the bridge for the Thopanaud river estimated at 11,250 Rs; that for the Coondy river, Rs 14,440; and the third for the Cotelangaddy river, Rs. 20,255. The rest are minor constructions. As already remarked the original estimate provided for an imperfect work, which altho' a vast improvement on the old and almost impassable tracks, was still a confessedly imperfect work. The completion of the road has been urged on military grounds of grave importance as above set forth; and this Govt cannot therefore but support His Excellency the Commander in Chief and the local authorities, in strongly recommending the present estimate for early sanction.

WAB

(9)
64-72

Cart Road from Parvatiporum to Jeypore.

Rs. 1,50,000

The important project here brought forwards is for opening out a good cart road from Parvatiporum in the Vizagapatam District, to Jeypore the chief town of the Jeypore Zemindary, chiefly along the existing track which forms part of a principal route of traffic from the coast to the distant mart of Nagpore. The estimate herewith submitted is not quite perfect, having been framed by Lieut Vertue the Acting District Engr of Vizagapatam, after a preliminary survey which occupied two weeks in all, whereas a more elaborate estimate could not have been framed without a regular survey of two months duration. But the levels have been taken with the aneroid, & altho' the work is roughly estimated by Lieut Vertue at 1,31,000 Rs, this

[illegible] the [illegible] bridge [illegible] written with certainty [illegible] suggested [illegible] a matured plan [illegible]

&c is thought by that officer to represent very nearly its true cost. Considering the scarcity of labor however, the unhealthiness of the country and the difficulties of the ghauts to be crossed, the Officiating Chief Engineer would put the final cost at a lac and a half of rupees, which for a hill road of 64 1/2 miles in length, he says, cannot be considered excessive, and this is the amount this Government have entered in the Budget as the cost of the project, and which they recommend for sanction. This subject comes before the Government of India with papers descriptive of the country, its products, capabilities &c, and is illustrated by a sketch shewing the relative positions of the different places in the Jeypore country. The desirability of opening the passes from the Jeypore country to the coast, has long formed the subject of correspondence. It is one of the chief measures for the improvement of that little known and misgoverned country which have been at various times before Government. Not to go further back than the 9th June* 1856, this Government on that date addressed the Government of India, in reference to a communication from them, giving cover to a representation from the Assistant in charge of the Office of Agent in the Hill Tracts of Orissa, on the unhappy state of the Jeypore country. On that occasion this Government showed how the measures which they had proposed, and had even initiated, for undertaking the Revenue and Police administration of the Zemindary had failed to meet with the approbation of the Governor General, and had in consequence been abandoned; the grounds of rejection being that the evidence advanced had not substantiated the supposition of human sacrifices and Suttee by the Hindoos in Jeypore, and that the assumption

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* Political Letter to Govt. of India 9th June 1856 No. 169.

of

of the Zemindary might involve a protracted Jungle and hill war; while the country was considered to be in a sanitary point of view prejudicial to the health, and even life, of Europeans. It had now, the Madras Government remarked, been proved from Lieutenant McNeill's report, transmitted by the Supreme Government, that the practice of sacrificing human victims did exist in Jeypore; that the Rajah was helpless to prevent it; that, altho' Suttee had not been recently practised within the Assistant's knowledge, gang robberies and dacoitees were of constant occurrence; and that murders were commonly perpetrated and paſsed without notice on the part of the Rajah and his people. In respect to the insalubrity of the place, it was explained that the belt of hills between Vizagapatam and Jeypore, varying in breadth from thirty to fifty miles, was indeed in many places very feverish and dangerous, but that the unhealthy portion could with proper arrangements be croſsed in one day, when there would be no fear of fever; that the upper portion of Jeypore was for the most part open and perfectly salubrious, and Europeans could live

there

there all the year round with entire safety; while the Zemindary was also perfectly acceſsible from the Nagpore Territory. It was at the same time particularly noticed, that the clearing of the roads and opening of the paſses from Jeypore to the low country, were among the most eſsential measures for the improvement of the Zemindary. Previous to this, a Dispatch had been received from the Honorable the Court of Directors,* directing enquiries to be made in the matter of complaints preferred by certain Salt merchants of Nagpore, of exactions practised on them by the Zemindar's

Servants

*Rev. Dis. 19th Septr/55, No.15, p.17.

servants, in their passage thro' the Jeypore country. The Commissioner in the Northern Circars was called upon to furnish the information required; and in so doing,° he alluded to the importance of opening the passes leading into Jeypore, as likely to have a powerful effect in counteracting the lawless habits of people, whom from the hilly and unhealthy character of the Country, it was at present almost impossible to reach. Orders were then issued to the Chief Engineer in the Public Works Department,* to report upon the suggestions of the Commissioner. The receipt of the

above

°From Commr. N.C. 15th April /56 No. 41
in Judl. C.M.C. 9th June /56 No. 61

*C.M.C. 14th June /56 No. 967

above Dispatch from the Honorable Court, and the orders issued by the Government thereon, were reported to the Supreme Govt. in the letter already adverted to, as bearing on measures, all essential for terminating the state of anarchy and crime prevailing in the Jeypore Zemindary, and for the establishment and maintenance of tranquillity and good order in that estate.

Pol. 9th June /56 No. 169.

6. The Government of India some time after× intimated that they considered it inexpedient in a Political point of view, to interfere in the management of the Jeypore Zemindary. The consideration of the subject as far as it

belonged

×From Govt of India 9th Jany 1857
No 64

belonged to the Public Works Department proceeded however under the orders of the Government; and in Extract Minutes Consultation 2d December 1856, No. 2242, of two routes proposed to them, Vizt. by Madagole in the South, and Parvatipoor in the North of the Vizagapatam District, the Govt. expressed themselves strongly in favor of the improvement of the road by the latter route, both for the purposes of trade and for the peace of the Country. They accordingly directed that an early opportunity as should be taken to inspect the line by Parvatipoor, and report what would be the expense of improving

that

that route, so as to make it a good cart road. Under date the 5th June 1857, the Government of India forwarded extract from a report by the Deputy Commissioner of Raepore on the opening up of passes from his division to the Coast. Lieut. Elliot observed that there were at present three routes by which articles, Salt, and tobacco, were brought to his District, and other articles, Cotton, and grain, exported from it, and that all these three routes met at Raepore. After specifying these routes, he recommended the selection of a line which should not greatly exceed the shortest of them (350 miles), and which would proceed through the Thasildaree station of Dhunterry the Kakeir Zemindary; the chief town (Jugdulpore) in Bustar, and unite with the road in course of formation from the coast at Parvatipoor.

The adoption of this line, he added, "while it would fully serve all commercial purposes, would tend effectually to secure both socially and politically a much required intercourse with a part of the province whose people are comparatively far behind the rest in civilization, and which, though deserving of much attention, has as yet from its distance, extent,

and

and inaccessibility, receives but little notice, and is considerably removed from efficient supervision."

This Government in commenting upon the above, (Extract Minutes Consultation 15th July 1857, No 1364) observed that, although the information therein furnished was not so complete as could be wished, or very clear, as to the extent to which the routes mentioned passed thro' the native states before they reached the Company's territory there was sufficient to shew the necessity for improving all the avenues of traffic; and with that view, they instructed the Chief Engineer to give his consideration to the subject generally, and report the measures which he would suggest to be carried out, so far as the Country under the range of this Presidency was concerned, leaving their extension beyond those limits to be undertaken hereafter in communication with the Commissioner of Nagpore when more information respecting the country had been obtained.

3/. In his very interesting description of the country between Parvatipooram and the town of Jeypore, now laid before the Govt of India, Lieut. Vertue divides the tract into four portions Viz. I. from Parvatipoorum

to

to the commencement of the Jungle; II, the Jungle; III, twenty six and a half miles of country forming an elevated plateau; and IV, the immediate vicinity of Jeypore. The first portion is about four miles, falling short of the foot of the ghaut by a mile and a quarter. The country here, is said to be well cultivated, and the soil light and red, well adapted for road making. The second, or the Jungle portion, is thirty seven and a half miles in extent to the foot of the reverse slope of the Bijiya ghaut. It includes four villages of any note, viz Alumundah, Katoolapatt, Bundagum, and Narrainapatam, the last named containing a population of about a thousand persons. The jungle which is dense is said to be well cleared in the neighbourhood of these villages, and dry grain is cultivated to a large extent. The vicinity of the Chicacole river furnishes a constant supply of water; but notwithstanding these advantages this tract of the Country is declared to be the most feverish and dangerous on the road, and such as to render desirable as short a stay in it as possible. Lieut. Vertue however still thinks that were a good road made, and the hard

surface

surface soil he says is admirably suited to road making, a vast improvement would be effected in the state of the Country; for the traffic, now conveyed by different and longer routes to the neighbourhood of Jeypore en route to Nagpore, would be attracted to this line, and would naturally be attended by increase in the size and population of the villages; advance in the clearing of the jungle, and consequent improvement in the sanitary condition of the Country. Various kinds of rock are found on the Ghaut, but principally soft sand stone and soapstone occur, and iron is to be traced, in richness at the top, gradually diminishing in quality and quantity with the descent. The third portion begins at the foot of the reverse slope of the ghaut, and extending twenty six and a half miles, forms an elevated plateau about 2000 feet above the level of the sea. It consists of a complete succession of uplands and valleys, with a soil of red earth mixed with gravel, peculiarly adapted to road making; and notwithstanding the undulating nature of the country, it is said that a level road might be very easily

easily

easily obtained by taking the greatest advantage of the undulation. The Country as from the foot of the ghaut for fifteen miles is described to be bare of wood, and strongly impregnated with iron, equal in outturn to the clay ironstones of Great Britain; while it is abundantly supplied with water, the centre of each valley being crossed by a nullah often wide and deep. The uplands are cultivated with dry grain, but every square foot of soil in the valleys and tank beds is said to be taken up with paddy & wheat; and altho' this part of the country is generally bare of trees the soil is considered to be peculiarly adapted to the growth of the Mango and Jack. The climate in this elevated tract is dry and entirely free from Malaria; the thermometer in the morning about the beginning of April is as low as 60°, and the maximum temperature is 90°, even after it has been raised by the hot winds which blow from four to five hours during the day. The character of the country is considered to be well suited for the residence of Europeans, and that of the Soil well as adapted for the growth

of

of wheat and potatoes, and other European vegetables. Lieutenant Vertue is quite convinced that, altho' the country is perfectly healthy, and a change to it from the low Country would be most beneficial to European constitutions, the difficulties to be encountered are too great to tempt any one, not obliged to do so, to visit the country unless a good road is made and the difficulty of procuring supplies thereby diminished. The fourth and last portion is the neighbourhood of Jeypore, being separated from that town by a ~~lofty and very~~ steep ghaut, 1700 feet in height. It is said to be very productive, as having the advantage of a rich black soil and showers of rain from May to October. Paddy and vegetables are raised in the vicinity of the town, where also there are large & thriving groves of Mango and Jack trees. The town is entirely surrounded by low Jungle, in which the Dammer grows luxuriantly, tho' not in size above that of a large shrub. Of its value, whether for timber or pitch, the people seem to be very ignorant. Jeypore itself, with a population of 7000 inhabitants, is described

as

as a most wretched place, with scarcely six tiled houses in it, and these of very inferior description. It is said to be very hot, the thermometer standing in April at 108° under a tent, while the heat in May is understood to be terrific. Contrary to what is stated in Major Scott's Road Book, Jeypore possesses no artizans deserving the name, all work being rudely executed with a small hatchet, which every man carries with him for the purpose of felling timber. Sheep and goats are scarce, but cattle plentiful and cheap; and rice wheat, salt, and iron, are sold in the market tho' nothing is procurable without the permission of the Rajah, a helpless old man surrounded by designing and plundering servants, the chief of whom doles out to him a rupee or two a day to purchase the necessaries of life. ~~It~~is revenue is a lac of rupees per annum, tho' it would be

be thrice that in better hands. The distance from Jeypore to Nagpore is said to be 300 miles, along which a road could be easily made, as no ghauts are encountered & it only requires the Jungle to be cleared. The population however is scant, and water is not easily procurable in one or two places. There is another road from Jeypore to Budrachellum on the Godavery; but it is difficult from the numerous ghauts and dense jungle. There are several other roads also to Nagpore thro' the Jeypore country; but the route reported on is considered to be the shortest, and best adapted for traffic.

38. Lieutenant Vertue next adverts to the traffic passing thro' Jeypore, on its way from the coast to Nagpore. He says it is not to be easily estimated, but he imagines it to amount to Sixty or seventy Thousand bullock loads a year, of which twelve thousand travel by the route described. Lac, Bees-wax, turmeric, oil seed,

wheat

wheat, rice, grain, cotton, dammer, soap nut, deer and buffalo horns, skins, and iron, form the downward traffic; and salt, tobacco, saltfish, opium, and cloths, make up the return trade. Lieutenant Vertue dwells upon the importance of this route in a military and commercial point of view, remarking that in respect merely to distance, some 300 miles, equivalent in time to about five weeks, will be saved in a journey to Nagpore via Secundrabad, by the adoption of the line under notice; while the existing trade, by no means inconsiderable, will expand manyfold when the road is formed, especially in the article of salt, which at present, even at the town of Jeypore, is to be had only at more than double the price paid in the low country. Add to this, that the Jeypore Territory will benefit largely in increased cultivation of rice, wheat, potatoes, other European vegetables and fruits of all kind, and extension of trade in timber, there is every inducement to open the country by good roads. In the list furnished by Lieutenant Vertue of the trees discovered by him in the Jeypore Country, are observed many of value some for their timber; some for their fruit, bark, or juice; and some for shade, such as the Teak, Ebony, Satinwood, Vengay, Dammer, Jack fruit, Mango, Bassia Latifolia, Tamerind, Gooseberry, Simpenga, and Damian.

Lieut.

Lieutenant Vertue speaks of camels and elephants as good substitutes for coolies, in constructing the road; but Major Lawford would organize a body of 500 trained and regularly paid laborers, on the principle of the Pioneers, to be superintended by an officer specially selected for the purpose, with reference to his local knowledge and constitutional ability, on the footing of a 3d Class Executive Officer extra to the regular strength of the Department, and with power to engage extra laborers to push on the work at unhealthy parts. Under this officer, he would place two or three European or East Indian Overseers, to be chosen by the Officer himself, and he would attach selected sepoys from the Sappers, to act as Superintendents on the pay of Non-Commissioned Officers. He suggests that medical aid should be liberally supplied, and that this body of trained laborers might be employed in opening the road, eventually from the Coast to Nagpore itself. Such is the outline of the only plan which the Officiating Chief Engineer thinks is feasible, to conduct operations in a country of the nature such as that proposed to be penetrated.

In laying this project before the Government of India the Madras Government desire to give it their strongest support. They regard it as highly

desirable

desirable, first, as tending to promote commercial intercourse between the coast and the Nagpore country; secondly, as a necessary preliminary to the improvement of the Jeypore Territory, and exterpation of the inhuman rites still practised there; and thirdly, from the advantages which will result from it in a Political and Military point of view. Recent events have amply shown the great importance of shorter and more speedy communication between Madras and Nagpore, for troops and Military stores, than the present route by Hyderabad. The value of a road which would enable troops being brought by sea from any part of the Madras sea board, or from Calcutta, and put down within 400 miles from Nagpore, could hardly be over estimated. It may be remarked that the road from Parvatipoor to the Coast at Calingapatam is under construction, having been sanctioned under dates quoted in the margin, so that there will be a continuous line from the Coast to Nagpore on the completion of the whole project.

WAB

From Govt of India Augt 25th/56
—do—do— July 25th/56

Having thus closed the report of the fresh projects proposed in Statement No 1, I am to add but little more in respect to the Budget of 1859/60. It will have been seen that the total expenditure proposed for the year is 52,36,966 Rs. This falls short of the expenditure proposed for 1858/59 by 19,40,609 Rs,* but it exceeds the total sum admitted by the Govt of India for that year by 11,33,474 Rs.× The Estimates submitted to the Govt ~~It has been reduced to the~~ by the Chief Engr, many of them ~~amount assumed however after~~ most urgently, would have involved an expenditure ~~have far~~ exceeded the ~~the greatest care thought, and~~ far exceeding the above sum; & it has been with ~~discrimination on the part~~ great reluctance that the Govt ~~of Govt bearing in mind~~ have been compelled to refuse entry ~~the necessity for economy~~, to so many much needed works. ~~and rejecting~~ ~~suspending~~ They have however adhered to the ~~a great number of works~~ principles enunciated in the com~~which could bear delay~~mencement of the communication, ~~notwithstanding the~~ ……

*

Expenditure proposed for 1858/59	71,77,575.
—do— for 1859/60	52,36,966
Difference Rs	19,40,609

× New Works

Amount sanctioned in Major Strachey's letter 23d Sept/58, N° 6606, in Statement No 1	5,33,660
—do— Statement No 2	9,25,596
	14,59,256.
Repairs	
—do— proposed in the Budget	21,56,615
—do— subsequently sanctioned	4,87,621
Total admitted for 1858/59	41,03,492.
Proposed for 1859/60	52,36,966
Difference Rs	11,33,474

~~importance. Reduced~~ as ~~the accounts, it rests is still~~ and it only remains ~~with~~ for the Govt of India to sanction the whole, or such portion of the expenditure proposed only as they deem proper to place at the disposal of this Govt, on a review of the finances. ~~This Govt begging to repeat that their object is simply to represent the wants of this Presidency, consistently with the need for economy.~~

This Govt would at the same time desire to avoid their involving the finances to the outlay on works [illegible] be raised. [illegible]

Para 41. For the sake of comparison, the expenditure proposed on the Budgets of three years previous to the present one, is contrasted with the expenditure actually sanctioned or admitted by the Govt of India for each year respectively:- (These sums do not include the 6 lacs set apart for emergent & isolated works)

Year.	Proposed Expenditure	Total Expenditure admitted.
1856/57...	82,55,261.	53,71,580.
1857/58...	67,59,671.	30,46,562.
1858/59...	71,77,575.	41,03,492.
1859/60...	52,36,966	

10.

The number of works exempted from the operation of the restrictive orders from January to 20th December 1858, amounted to one hundred and three; but the expenditure authorized on them amounted only to 5,20,557 Rs. Out of the limited fund of four lacs ~~placed~~ at the disposal of this Govt for emergent and isolated works, an expenditure of not more than 2,20,147 Rs was authorized from May to December* of the same year, as follows.

Emergent works above 1000 Rs sanctioned from 1st May to 18th December 1858

Irrigation Works	9,910	
Communications	25,710	
Buildings	101,837	137,457

Under 1000 Rs.

Irrigation Works	1,306	
Communications	2,744	
Buildings	5,368	9,418

Out of the one lac fund

Irrigation Works	5,613.	
Communications	22,006.	
Buildings	45,653	73,272
		2,20,147

* six months of the official year being yet left.

4 The usual annual review on which the Budget is based accompanies this report; and as in former years, a sum of four lacs has been provided for 1859/60, to cover the cost of emergent and isolated works and the extra outlay involved by supplemental estimates, and for the completion of those works which are expected to be completed before the close of the current official year, but which may not be so completed ~~at~~ by the end of that period. This ~~fresh projects are accompanied by the necessary papers of reference~~ sum added to the expenditure proposed on the works in Statements Nos 1 and 2, and on repairs, raises the total estimated expenditure of 1859/60 to 56,36,966 Rs. The fresh projects are accompanied by the necessary papers of reference, such as Engineers' reports, plans, and sketc together with a comprehensive Budget Map for general referen zed on the whole, this Govt trus that the preparation of the Budget will meet with the same approbation, that for ones have received from the Govt of India.

J H B.

23d Dec

Fort St. George,
3 January 18

Public Works 1859 Dept.
Dd. to Cons. 4th January.

No. 2.

To the Offg. Secretary
to the Govt. of
India.
Dd. 3d. January /59.

No. 4.

Submitting the
Budget Report for the
Official year 1859-60

C23-Dec.

Public Works 1859 Deptt
No. to Cons: 4th January

No. 2

To
The Officiating
Secretary to the Govt. of
India.
Dd 3d January /59.

Submitting the Budget Report for the Official year 1859-60.

No. 4.

C 23d Decr