3

M.R.O. 1—77,006—8-6-37.

(1) Number of pages 282

(2) Date of repair 21-6-38

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public Works **DEPARTMENT.**

Cons 4.1.59

G.O. No.	2	Press / Misn.
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 Ag 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 appropriated to each.

Gunjam
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	Communicatn	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 those Districts, and in Masulipatam more especially the formation of the Buncker Canal having been ordered to be proceeded with as a Military Work at an estimated outlay during the year of Rs 60,000, reduced by me to Rs 50,000. 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 3rd to the erection of Buildings at Razapoor in Juggiapettah, at an estimated Cost of Rs 14,210, being indispensable as Military Works for the accommodation of the newly raised Bibendy 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 Sergeant at Bimlipatam, a lightning Conductor to the Guard Magazine at Vizagapatam, and the erection of a Stable Ally 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 dish No 3, I do not think less than you have allotted to each of the Districts in that 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

charges, as absolutely necessary. Experience had 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 Revenue Cons.ns of the 18th January 1858 No 93 as to the large proportion the cost of repairs of irrigation Works bear to the Kunjah 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 partly only partially irrigating the lands under them and partly from the lands either not being assessed at all or only in full after the fourth year of being watered.—

The old Kunjah 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

all the Works of irrigation have been
carefully maintained, and all
make direct returns, & premature
and necessarily unfavorable.—

I have the honor to be,
Sir
Your most Obed Servant
Charles A. Ogden Capt
Ag Insp Irrigation Circle.

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

No. 6197

From

The Officiating Chief Engineer

To,

The Secretary
to Government P.W.D.

Sir,

Public

With reference to my letter of the 30th

Encl 1. November last. para 3 transmitting the Budget Lists
+ No 5888. 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. —

2. The Works recently sanctioned by the
Extract Minutes of Consultation 21st October 1858 No. 2214 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

+ 1858 Octr 4
Public
Letter from the Secy
to Govt
Central Office
Fort St George
dated 10th November
1858
Forwarding Estimates
for Public Works
in the Secunderabad
District Commissioner's
Circle for the
official year 1859/60
with observations

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

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

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

L. Lowgood Lieut. R.E.
Officiating Chief Engineer

Col. J. Oberton &c &c &c Madras

From the Offg Chief Engr
A/ 30th Novr/58 Recd 2 Jan/59 inclo

P.W. 1858 Department
Dy to Corp 4th January/59.
3010

From
The Offg Chief Engineer

To
The Secretary to Government
W.D.

Dated 10th December 1858
Recd 11

No. 6197

Enclot

Forwards with reference to his letter A/ 30th Ult. last para 3 transmitting Budget Lists for the year 1859/60, Lists Nos 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 within mentioned no Expenditure has been entered in the Central Office on them.

No. 2.

Recd 23 Dec. & 3 Jany

C23 Dec. 1858

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	32800	27834	7000	67634	43710	64065	9190	116965				
2	Vizagapatam	"	"	"	"	"	16661	4740	21401	10500	9785	3000	23285	105500	26446	7740	144686				
3	Rajahmundry	"	59170	"	59170	33840	19126	2060	55026	180000	30684	4000	214684	213840	108980	6060	328880				
4	Masulipatam { Godavery	"	"	"	"	"	"	5460	5460	60000	20000	4000	84000	60000	20000	9460	89460				
	{ Kistna Dr.	"	"	"	"	83660	"	9920	93580	80000	13992	10000	103992	18360	13992	19920	197572				
5	Guntoor	"	"	"	"	47540	5000	"	52540	60000	10000	4000	74000	107520	15000	4000	126520				
6	Nellore	"	"	"	"	13528	41010	1220	55758	180000	45937	5400	231337	193528	89947	6620	290095				
7	Cuddapah	"	"	"	"	11482	9985	7444	28811	55000	61185	5000	121185	66482	71970	12444	149996				
8	Bellary	"	"	"	"	19123	"	26200	45323	100000	78735	9596	188329	119123	78735	35794	233652				
9	Kurnool	"	"	"	"	"	84166	6027	90193	29000	28732	3600	61332	29000	112898	9627	151525				
10	Chingleput	"	"	"	"	41526	2242	12460	56228	60000	148506	13390	222196	101526	151068	25850	278426				
11	North Arcot	"	"	"	"	12301	20063	9901	42265	50000	77955	11500	139455	62301	98018	21401	181720				
12	South Arcot	"	"	"	"	780	23960	15920	40660	85000	59225	3000	147225	85780	83185	18920	187885				
13	Tanjore	"	"	"	"	6790	62558	1850	72198	260500	41380	4910	306790	270290	104938	6760	381988				
14	Trichinopoly	"	"	"	"	13100	40550	20234	63884	114000	33626	7000	154626	127100	76176	27236	248510				
15	Madura	"	"	"	"	"	18868	4250	23118	62000	33472	1800	97272	62000	52340	6050	120390				
16	Tinnevelly	"	"	"	"	4491	41644	8300	54435	78000	47100	5082	130182	82491	88714	13382	184617				
17	Coimbatore	"	"	"	"	14436	40255	13700	68391	60001	60970	9000	109970	56436	111225	22700	178361				
18	Salem	"	"	"	"	930	32920	19576	53426	52000	47421	1720	101141	54930	80361	21296	156587				
19	Canara	"	"	"	"	"	33614	14668	48082	"	107685	10300	117985	"	141102	24968	166070				
20	Malabar	"	"	"	"	"	39438	33074	72512	800	29820	12910	43530	800	69258	45984	116042				
21	Sundries { Civil Architect	"	"	"	"	1745	769	16609	19123	1520	3020	3294	43834	3265	3789	55903	62957				
	{ Garrison Engineer	"	"	67700	67700	"	15817	275706	291523	"	100000	100000	"	15817	1059223	107506					
	{ Municipal Commrs.	"	"	"	"	"	"	"	"	"	24397	"	24397	"	24397	"	24397					
22	Mysore	"	"	"	"	"	"	332590	332590	"	6000	5000	11000	"	6000	337590	343590				
23	Jaghatalla	"	"	"	"	"	"	355483	355483	"	3050	3510	6560	"	30850	358993	362043				
	Total.	"	59170	67700	72870	316182	588577	1199582	2104341	3161820	647747	1867282	2831211	1596120	1050814	284010	2930944	1912302	1698391	215292	5726155

Central Office of the Pt.
Fort Saint George
30th November 1858

Lawford Lieutenant Colonel
Officiating Chief Engineer P.W.D.

1858 Department

No.

Enclosure in a letter from the
Officiating Chief Engineer

To, The Secretary
to Government N.W.P.

Dated 30th November 1858

Received 5th December 1858

No. 5883

N.W. 2909/58

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

No. 1-2

Garrison

4 Surveys

L 17

Index for Budget No. 2.

District	Row in the Budget	Work.	Page	Order of Govt. No.	Order of Govt. Date	Amount of the Estimate Cost.	Amount required for the expenditure of 1859/60
	183	I. Head Sluice across the Nagaricutta Channel	321		29th Feb 1856	3,410	3,410
	319	C. Road from Berampore to Ruffelcondah	458		19th Nov 1853	1,42,246	39,27
	320	Completing the above line from Aska to Ruffelcondah	2212		28th Nov 1857	10,000	"
	321	Road from Ruffelcondah to Kimjeo	1847		10th Oct 1856	14,465	6,465
	308.	Planting Sea nurseries	2087		10th Nov 1856	540	"
	322	Road from Chicacole to Calingapatam	2210		23rd Dec 1856	24,500	10,000
	5/14	Canal from the Nowpada Salt pans to the port of Calingapatam	57		9th Jan 1857	18,700	"
	323	Road from Nursannapettah to Calingapatam	148		21st Jan 1857	14,580	4,669
	324	Road from Kimedy to Soondy	329		18th Feb 1857	2,450	"
	325	Trunk Road between Byree and Nursinpetta	380.		27th Feb 1857	5,250	5,250
	326	Branch road to connect the road from Aska to Ruffelcondah	1626		7th April 1857	570	"
	327	Trunk Road from Shunthoshapooram to Bendagedah	1628		24th Aug. 1857	46,550	"
	328	—do— —do— between Chicacole and Sunthoshapooram	do		do	31,200	"
	329	Road from Nowpada Salt pans to Sicakulam	2128		19th Nov 1857	5,330	5,330
	415	Bridge across the Surplus channel of the Vaddadah &c	do		do	350.	"
	42	B. Flag Staves at Soondy & Sonapore	952		23rd Oct 1856	2,240	1,120
	45	Police Ameen's Cutcherry at Berhampore	1978.		24th do	1,280	640
	132	Six Overseers' Store sheds	2087.		10th Nov 1856.	540.	135.
	164	Civil Dispensary at Berhampore	2262.		5th Dec. 1856	3,510	1,165.
	81	Additional room to the Collector's Cutcherry	712		18th April 1857	1,210	605.
	155	Native Choultry at Nojagodah	1719.		9th Sept. 1857.	830	415.
	66	District Moonsiffs Court House at Palasa &c	2011		24th Oct 1857.	2,300.	1150.

No in the Estimate	No in the Budget	Work.	Orders of Govt. No	Orders of Govt. Date	Amount of the Estimated Cost.	Amount requisite for the Expenditure of 1859/60.
	125 B.	Wall round the burial ground at Nellapore	2854	23rd Nov 1857	470.	235.
	126	Do Do at Purlakimedy	886	4th May 1857	380.	190.
	564	Travellers' Bungalow at Chicacole &c	2148	23rd Nov 1857	3980	"
	565	Do Do at Berhampore do		do	2180	"
	566	Do Do at Aska do		do	1520	"
	567	Do Do at Calingapatam	2391	24th Dec 1857	1350	"
	46	Police Cutcherry at Aska	1541	5th Aug 1858.	1780.	1780.
	47	Do Do at Chicacole	2610	30th Dec 1858.	1700.	1700.
	9	Alterations &c to the Staff Surgeons Quarters at Ruttlecondah	2741	20th do	440	440.
	330-C.	Trunk road No 41 miles	1628	24th Aug 1857	9340	"
	446	Masonry work on Trunk Road No	Do	Do	3190	"
	331.	Road from the ferry at Vizagapatam to Punchadarla &c	445	12th Aug 1856.	45750	"
	447.	Works in connection with the bridge across the Chittivalsa river	329	18th Feb 1857.	7000	"
	332	Branch roads from Palcondah to Cheepurpilly &c	42. 407.	27th Jan 1854 27th Sept 1854	30775.	"
	448	Bridges on the new road from Vizagapatam to Yamalawalsa	194. 776.	29th April 1854 28th May 1856.	8565 2120	43.
	449	Bridges on the road from Palcondah to Parvatipore &c	91.	24th Feb 1855	41478	4128
	333	Road from Anakapilly on Trunk Road No 6 to the ferry landing place	116.	20th Jan 1856	10978	5363
	334	Road from Nellamarloo to Tuneyanata	2049.	3rd Nov 1857.	7140	7140
	103 B	Sea Custom House at Vizagapatam and a flag Staff &c	752	24th May 1858.	5610	1955.
	130	Converting a building into a girls School	2339	17th Dec 1858	1000	500
	118	Compound wall &c for the Mattair Church	978	25th May 1857	674.	437
		Skittle Alley for the European Veterans at Vizagapatam			630	630
	184 I.	Calingulah across the Jamesaroo Channel &c	1296.	22nd Nov 1853	5913.5	4579
	302	Aqueduct for the drainage water	344.	21st Nov 1854	1260.	174

No in the Estimate	No in the Budget	Work.	Orders of Govt. No	Orders of Govt. Date	Amount of the Estimated Cost.	Amount requisite for the Expenditure of 1859/60.
	185 I.	Channel from Dungarroo to Koodapore	698.	17th June 1854.	1875	"
	186	Widening the Samulcottah channel	346.	24th Nov 1854.	48227	8402.
	187	Works of Irrigation and Navigation in the Central Delta	321.	10th July 1855.	315932	"
	188	Irrigation and drainage channels in Certain Talooks	657.	30th Nov 1855	21000	4676
	303	Channels to drain the lands irrigated by the Mundapetta channel	157.	5th Feb 1856	3623	2954
	304	Excavating a drainage channel	Do	Do	2300	"
	189	Branch channels of the Cocanada channel	Do	Do	1101.	1094
	190	Canal from Samulcottah to Sooneepore	2109	12th Nov 1856.	234305	"
	191	Calingulah across the Kyance river	32	3rd Jan 1857.	7420	6064
	192	Channels &c between Yanamadoorroo and Vandada	444.	15th Nov 1857	4080	"
	305	Drainage channels from Ricacole to the river Yalairoo	do	do	3180.	3180
	193	A wooden foot bridge at Doorak	2128	19th Nov 1857.	1150	1150
	194	Aqueduct over a drain crossed by the Amlapoor channel	do	do	5400	"
	299	Yennamadoorroo channel embankment	do	do	7500.	"
	172 C.	Improvement of the Coringa Harbour	321.	10th July 1855	62838.	"
	545	Towing path to the Nagaroor Aqueduct	938.	20th Dec 1856	23360	"
	335	Road from Juddangly to Yalairoo	157.	5th Feb 1856.	17200	"
	546	Canal from Mogultoor to Cocanada	2109	12th Nov 1856.	122357	"
	547	Canal from Samulcottah to Cocanada	do	do	117339	19120
	539	47 Crossing places on the Cocanada & Channels	1576	6th Sept 1856	5524	"
	548	Lock &c in the Cocanada Canal	2213	13th Dec 1856.	12430	"
	336	Road from Cotton to the bank of Godavery	2409	23rd Dec 1856.	1200	"
	337.	Branch roads from Rajahmundry road to Dowlaishwaram	do	do	2210	"
	549	Lock, Calingulah & aqueduct in Certain Talooks	2128	19th Nov 1857.	13610	"
		Completing the Nursapore Lock Canal			23500	"

No in District Budget	Work.	Order of Govt. No	Order of Govt. Date	Amount of the estimate Cost.	Amount required for the expenditure of 1857/8
	Rajahmundry Contns.				
82	B. Salook Cutcheries at Nursapore Kea.	35.	8th Mar 1856.	1,000.	"
171.	3 Privies in Dowlaiswaram	2409.	23d Dec 1856.	1,230	"
43	Dead House & the Seamens' Hospital at Cocanada	1st.	22d Jan 1857.	260.	130.
104	Sea Custom House at Cocanada	1783	19th Dec 1857	12,280	2,000
127	Compound wall to the burial ground at Juggannaikporam Kea.	1639	28th Aug 1857	2,495	1,247.
48	Additional Cells to the Police Cutchery at Cocanada	2128	19th Nov 1857.	830.	415.
83	Sub Officers Cutchery at Bortumpolem	Do	Do	570.	285.
128	Compound wall to the burial ground at Dowlaiswaram	1918	13th Oct 1857.	1010.	505.
67	Cocanada District Moonsiffs Court House	2247.	30th Dec 1857.	850.	425.
75	Additions Kea to the Jail at Rajahmundry	407.	8th Dec 1855.	3,698.	3698.
49	Adding a tiled shed to the Police Cutchery at Rajahmundry	2595	22d Dec 1855.	310.	310.
	Coast Irrigation.				
195	I. Canal of Irrigation Kea from the Vayairoo to Ellore	64	10th Feb 1855	28,644	"
196	Locks and Calingulahs at Yalooroo Kea.	43.	8th Jan 1857	6,820	"
306.	Drainage channel to the Venkiah channel Kea.	414	4th Mar 1857	19,510	"
197	High level channel from the Hoodoor main to Dendaloor	2109	12th Nov 1856.	21,485.	"
198	Channel from Soolaroo to the Canal basin	Do	Do	23,107	50,000
199	Banks of the main channel from the northern flank of the Anicut	2287.	10th Dec 1856.	20240	10,000.
200	Tunnel under the Mopedavy channel	2289.	Do.	4,10	"
300	Embankments on the Eastern bank of the Kistnah	329.	18th Feb 1857.	5,910.	10,000.
201	Branch channel from the main channel towards the river Embankment near Royoor	414	4th Mar 1857	3,080	"
202	50 miles of small Irrigating Channels	Do	Do	16,500	"

No in District Budget	Work.	Order of Govt. No	Order of Govt. Date	Amount of the estimate Cost.	Amount required for the expenditure of 1857/8
	Masulipatam Contns.				
203	I. Channel from Yenekepaud to Mootoo	414	4th Mar 1857	23,250.	"
204	Do Valooroo to Kunderadal	do	do	9,500	"
205	Lock & Calingulah near Calarapilly	2128.	19th Nov 1857	13,660	13,660.
257	Hobellapaud tank Kea.	2148.	23d Do.	786.	"
338	C. Road from Ellore to Kintalapoody	116.	25th Jan 1856.	24,630	"
550	Lock and Calingulah at the head of Venkiah channel	2342	1st 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	253.	28th Feb 1856.	14,520	"
552	Lock in the Mopedavy channel	2009.	30th Oct 1856.	3,250	"
551	Extending the Hezoorah and Masulipatam Canal	2148.	30th Dec 1856	12,500.	"
450	Bridge across Mopedavy channel	2121.	13th Nov 1856.	7,600.	"
129	B. Burial ground at Condapilly	153.	24th Jan 1857.	1,000.	500.
178	Additions Kea to Point Divy Light House	64.	10th Jan 1857.	920.	"
568	Travellers' Bungalow on the South bank of the Kistnah	2128.	19th Nov 1857	2,000	"
76	Improvements to the Jail at Masulipatam	2035	20th Oct 1856.	1,870.	1,870.
50	Place of Arms Kea. for the Sibbundy Corps at Juggiapeth	2558.	30th Nov 1857.	8,750.	8,750.
	Guntoor				
206	I. Widening Kea the Soongadudra channel	220.	28th Feb 1854	2,20,747	20,000.
207	Channel from Vellabaroom to tide water	1605.	12th Aug 1856.	1,39,700.	"
208	Do from Soongadudra to Inga-nampadu	1635 / 1636	12th Sept 1856.	146,787.	4,000.
209	Lock Kea. near Vellabaroom	2009.	30th 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 Loonapoody to Doopendaly	116.	21st Jan 1857.	2470	"

District	No in the Estimate	Work.	Order of Govt: No	Order of Govt: Date	Amount of the Estimated Cost	Amount required for the Expenditure of 1857/58
	212	I. Channel from Doogerallah to Sedderavoor	146	28th Jan 1857	7,400	"
	213	—Do— from Sedderavoor to Hirampalem	do	do	7,400	"
	214	—Do— from Doogerallah to Yavanie	do	do	1160	"
	215	60 miles of small irrigating channels	414	4th March 1857	19,800	6,000
	216	Channel from Inganampaudi to near Inkole	1628	24th Aug 1857	32,600	"
	217	Calingulah with a Platform bridge &c across the Toongabuddra Nullah	2128	19th Nov 1857	2800	"
	218	Dam across the Vellatoor channel	2101	14th Nov 1857	500	"
	339	C. District road from Guntoor to Mundlapaud	45	8th Feb 1853	8622	"
	340	Trunk Road No 7 from Copperapaud to Pondigula	247	5th June 1854	88708	"
	457	Timber bridge over the Kistnah Anicut	321	10th July 1855	199931	"
	340	80 boats for the Kistnah channels	393	12th Dec 1855	24990	"
	452	Bridges for completing Trunk Road No 7	241	2nd Feb 1856	14,000	"
	453	Bridge across high level channel for Guntoor &c road	1405	12th Aug 1856	4,424	"
	454	—Do— at Chatrole	241	13th Nov 1856	7,500	"
	455	—Do— near Saudole	do	do	7,500	"
	456	—Do— near Vellatoor	do	do	7,500	"
	553	Locks in the Nizampatam Channel	2009	25th Oct 1856	20,040	"
	457	Platform bridge near Kurlapollem	241	14th Nov 1857	4,500	
	541	Cargo boats for the Dollow works	2148	28th Nov 1857	10,000	5,000
	68 B	Moonsiffs Court House at Hanumpettah	357	19th May 1854	1630	365
	156	Civil Dispensary at Guntoor	16	22nd Jan 1857	2500	1154
	69	Moonsiffs Court House at Kazimpoody	398	12th Aug 1852	521	525

District	No in the Estimate	Work.	Order of Govt: No	Order of Govt: Date	Amount of the Estimated Cost	Amount required for the Expenditure of 1857/58
	219	I. Head Sluice & Vapor Channel	116	25th Jan 1856	2,063	"
	220	—Do— to Drovoor Tank supplying channel	do	do	2,063	2063
	221	Do &c to Pelairoo channel	do	do	2,256	"
	222	Channel from Gollacondacoor Lodoom to Nellore &c	do	do	9,868	4,224
	223	Channel from Venkatagherry river to the Chenroor tank	321	27th Feb 1856	13,910	7741
	224	Anicut across the Mamidy Calwah	do	do	5,750	"
	225	Pennair Anicut posts and Shutters	76	15th May 1856	5,476	"
	258	Improving the Nellore tank	221	28th Oct 1857	17,100	"
	342	C. Trunk Road No 7 from Coroor to Moodegoondah	200	20th May 1854	117,113	"
	343	—Do— No 7	247	6th June 1854	45,213	1,350
	554	Water Communication between Kistnapatam & Goodoor	524	14th Dec 1854	14,500	"
	458	Bridge over Athmacoor tank supplying channel	547	24th Sept 1855	3959	"
	459	—Do— across the Kundalaroo river	887	30th Nov 1855	13,060	"
	344	Communication between Kistnapatam and Goodoor	355	8th Mar 1856	17,790	"
	460	Masonry works on Trunk Road No	1405	12th Aug 1856	84,580	25,000
	461	Bridge over the Koorgaroo	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	18th Dec 1856	5910	"
	346	Road from Nellore to Coduroo	2021	28th Oct 1857	8000	8000
	347	—Do— Do to Gungapatam	do	do	4,000	4,000
	542	Ferry boats for the rivers on Trunk Road No	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 Collectory Salt Cutchery	1820	28th Sept 1857	360	180
	51	Police Tannah at Pullakharp	2012	27th Oct 1857	190	95

No in District Estimate	No in the Budget	Works.	Orders of Govt. No	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the year 1859/60
119	B.	Stair case to the Belfrey of the Nellore Church	2670.	9th Jan 1858	430.	430.
		~~Under Improvements at Nellore~~			240.	240.
259	I.	Cheppully Kanegala Tank.	238.	14th Dec 1854	430.	430.
260		Kistnamacoyneu tank ——— do	do	do	1250	1250.
261		New tank &c at Manchpully.	2411	28th Oct 1857.	6300.	6300.
301		Dyke to protect the wet lands of Yaparilla &c	2246.	3rd Dec 1857	2510.	2510.
348	C.	Cuddapah and Madras road for 69½ miles	1730.	25th Sept 1856.	128,237	"
309		Planting 15 Nurseries	1682.	18th Sept 1856.	2550.	1955
349		Road from Cothoor tank channel to Cuddapah	2124.	14th Nov 1851.	2240.	1980.
463		Six bridges between Nellore and Kulcuddy	1628.	24th Aug 1857.	39,142.	"
		Eight bridges between Kulcuddy and Grolchetty	do	do	53,142	"
350		Portion of road from Cuddapah to Kurnool.	1000.	28th Aug 1857.	3720	3720.
464		Rough Stone Apron below the Kallee bridge &c	2564	12th Nov 1857.	1070.	1070.
465		Dam across the Moolaveukal on Trunk Road No 11 &c.	2148.	23rd Nov 1857.	1160.	1160.
133	B	Powder magazine and Comb Capts Office	1593	6th Feb 1856.	3280.	1562
134		15 Overseers' Store Sheds	1682	18th Sept 1856	1950.	524
569		Travellers' Bungalow at Pedairs	2148.	23rd Nov 1857.	2020	2020.
10		Additions &c to the Hospital at Cuddapah	2616.	4th Dec 1854	1250	1250.
226	I	Head Sluice to Cummacul channel	1713.	8th Feb 1856.	4270	4270.
227		Cummacul Channel ——— do	do	do	4625.	4625.
262		Cummacul tank ——— do	do	do	4700.	4700.

No in Estimate	No in the Budget	Works.	Orders of Govt. No	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the year 1859/60
228	I	Wall below the Culpee Tank	2161	4th Oct 1858	1007	1007
229		Channel from Pennaur for Pengondah	2161	4th Oct 1858	665.	665
263		Pallykal tank	2196.	19th Do.	3150.	3150.
264		Mullapoor &c Muddoocuttah	2257.	26th Do	718.	718.
		~~Wall below the Culpee Tank~~	216.	14th Do	1000.	1000.
351	C.	Portion of Trunk Road No 12	219	6th May 1854	57,057.	"
466		Bridge over the Pennair river	576	9th Dec 1854	35280	"
352		Road from Cojenee to Humpdapur	383	12th July 1855	11456.	"
358		Kellary and Koopatt road	355	8th Mar 1855.	19430	"
467		Bridging the road from Turnapal &c do	do	do	24380	"
468		——— do ——— Kellary &c road	1405	12th Aug 1856.	59,250	"
310		Planting 12 Nurseries	1297	18th July 1856.	2040	"
354		Road from Pamacondah to Gooty	1794	22nd Oct 1857.	5260	"
469		Bridge over the Moodlapoorvunka	2019.	24th do	7480	"
355		Road in to Cantonment of Kellary	2148.	28th Nov 1857	2050.	"
470		Bridge near Coodoolary ———	283	do	2680	"
471		——— do ——— Pennapoor ———	do	do	4710	"
135	B.	12 Overseers' Sheds	1297.	18th July 1856.	1200	600
84		Salook Cutcherry at Hoovinhuddully	289.	10th Feb 1857.	4220	335.
11		Hospital for European Infantry Regiment	1405.	12th Aug 1856.	82,330	25,000
12		Barracks for 16 married Soldiers at Ramandroog.	1431.	25th July 1857.	16,200	10,267
13		Outhouses to the European Hospital	2247.	28th Nov 1857	5,650	2825
136		Carpenters Shed of the Engineers Yard	2458.	2nd Nov 1858.	950.	950.
14		2 Skittle Alleys in the Cantonment of Kellary	2625.	6th Dec 1858.	1000.	1000.
15		Shed for depositing Iron targets —	do	do	325.	325.
16		Guard room for the H. P. Battery —	do	do	413.	413.
17		Quarters for the Garrison Sergeant Major at Kellary ———	do	do	2970.	2970.
85		Peishcar's Cutchery at Doraravendah	2479.	22nd Nov 58	800	800
18		Racquet Court &c for the European Troops in Kellary ———	2336.	26th Do.	3742	3742.
356	C.	Road from Kurnool to Nundicanum	64.	16th Feb 1855.	104,160	11,378
472		Bridge over the Koondaur ———	91	24th Do	13,263	2,778.
473		Bridging the road from Kurnool to Kellary	271.	28th Feb 1856.	22,110.	"
311		Planting 4 Nurseries ———	1207.	18th July 1856.	680	"

No in the Budget	Work.	Order of Govt. No	Date	Amount of the Estimated Cost	Amount required for the year 1857/58
357	C. Road from Cumbum to Vruaconda	2021.	28th Feb 1857.	3900.	3900.
358	Passage on the Mountain Canana shaut	168.	17th Nov 1856	13,300	6392.
474	Bridges on the road from Kurnool to Kundy Canana	2363.	22nd Dec 1857.	9700	9700.
359	Completing the Kundy Canana Ghaut	2135.	12th Oct 1858	50,000	25000.
161	B. Bowry at Lingapoor	36.	24th July 1854	120.	25
157	Mr Scotts Choultry at Gangoolapully	588.	19th Dec 1856	480.	168.
137	4 Overseers sheds	1207.	18th July 1856	400	164.
19	Windows to the Hospital at Kurnool	1622.	10th Sept 1856.	2000	1000.
138	District Engineers Yard and office	1454.	28th July 1857.	3,210	1440
86	Salook Cutcherry at Kundicotoor	120.	14th Jan 1857	210	105
162	Purchase of a Stock of Timber	2009.	30th Oct 1856.	1500.	750.
163	Dismantling the Cumbum Sob	2186.	23rd Nov 1858.	5690	5690.
230	I. Palaur Anicut project	1864.	20th Dec 1854	293,273	25000
231	Vellore river channel head sluice	359.	25th Mar 1854	21,52	1460.
265	Shatorne tank &c	1958.	19th Oct 1857.	470	470
266	Panapaukum ruined tank do	do		670.	670
267	Calingulah &c to Keelanoor tank	do	do	1640	1640.
268	Under sluice to the Rungapooram tank	do	do	290.	290.
269	Thenapaukum Spring pond do	do	do	211	211.
270	Tank, Calingulah &c in Vellore village	2388.	24th Dec 1857.	3070	3070.
271	Tank bank and Masonry works in Keelmony village	do	do	1330	1330.
272	do do in Arnee village	do	do	4030.	4030.
273	do do in Tancor Chum village	do	do	2220.	2220.
232	Grodroopaukum &c tank supply Chaund	538.	19th Dec 1854	4881.	344
274	Malipaudroo ruined tank	677.	24th Feb 1855.	3350	466.
275	Calingulah to Cottoovambadoo tank	do	do	325.	325.
360	C. Road from Palaur Causeway to Setty	1865.	12th Aug 1856.	41,130	
361	Road between Cuddapah and Madras	1930.	26th Sept 1856.	10966.	
362	Road across Puningal Lee backwater	1465.	12th Aug 1856.	33,023.	
363	Road from Vellore to Ramanjairy	169.	12th April 1854.	3982	1850
312	8 Gardeners huts and 8 Nurseries	1207.	18th July 1856.	600	201.
475	Widening Arnee along bridge	1958.	23rd Oct 1856.	21400	

No in Detail the Budget.	Work.	Order of Govt. No	Date	Amount of the Estimated Cost	Amount required for the year 1857/58
476	C. Tunnel &c on the road between Pacumbode and Vellore	1949.	22nd Oct 1858.	650.	650.
364	Road from Coattoor to Vellore	524	11th Dec 1854	14417.	277.
365	do Vellore to the Cortaliar river	443.	23rd Aug 1855.	6236	"
366	Road from Sadras to Perroocaly coorum &c	116.	25th Jan 1858.	14500	"
367	Road from Streepermatoor to Mylapore	321.	29th Feb 1856.	18070.	"
555	Adyaur and Palaur Canal	321 1203.	10th Sept 1855. 25th June 1857.	218,843	"
556	Water Communication between Madras and Arnee Coil	1465.	12th Aug 1856.	72800.	"
557	Canal from Doograzpatam to Kistna-patam backwater	2109.	12th Nov 1856.	139,665	"
558	Completing the Canal at Sadras	444	4th Mar 1857	7800	"
52	B. 3. Tannah Chavadies at Chingleput	580.	18th do	990.	495
53	do do at Sydapett	do	do	990	495.
139	District Engineers office and Work Yard	2121.	13th Nov 1856.	4400	1970
140	8 Overseers Store &c do	do	do	800.	800.
87	Peishcars Cutchery at Streehungeolah	2021	28th Feb 1857	2020	1010.
158	Wards for Lapers in the Dispensary at Chingleput	2330.	16th Dec 1857.	940	470
20	Hospital &c for the mounted troops at St Thomas' Mount	2221.	22nd Oct 1858.	2790	2790.
21	Verandah round the Bombproof Barracks at St Thomas' Mount	2403.	15th Nov 1855.	2920.	2920.
77 88	Moyer Salook Cutcherry Jail	2507.	24th Nov 1858.	90.	90.
	Peishcar's Cutchery at Soonnapa-goortah	2843	6th Nov 1858	410.	410.
170	Preparing the ground for a wharf and Wood Depot	2318.	16th Dec 1856.	23800	"
141	Shed yard Opium Stock office &c	303.	18th Feb 1857.	2380	920.
40	Commissariat Store room at St Thomas' Mount	2688.	6th Nov 1858	2170.	2170.
233	I. Works connected with the Poonay Anicut project	1628.	24th Aug 1857.	158,283	"
234	Palaur Anicut project	1867.	20th Dec 1854	572,871.	"
276	Bank of the Vaniambady tank &c	577	24th Feb 1855	2559	1811.

No in District Budget	Work	Order of Govt: No	Order of Govt: Date	Amount of the Estimated Cost	Amount required for the expenditure of 1859/60.
277	I. Bund of the Bommanaikenpolliem tank	577.	24th Sept 1855.	988.	988.
278	Catamungalum and other tanks	321.	29th Feb 1856.	2670.	2260.
235	Aqueduct for the Alamboo channel	221.	13th Nov 1856	260.	210.
279	Sookwady tank.	2318.	16th Dec 1854.	340	320.
280	Mootoopollium Dalaway tank..	do	do	3300	2000.
236	Ennamangalum tank.	do	do	290.	215.
281	Mootteeroopum tank	do	do	1090	964.
282	Atheranady and Good alore tanks	344	4th March 1854.	2460	2440.
283	Nagalapooram tank.	do	do	600	600.
284	Samudroonal tank.	40.	12th Jan 1852	3040	2240.
285	Valanthanada tank.	577.	24th Sept 1855	294.	109.
237	Aniout to the Sunjungaulloor channel.	do	do	354.	354.
238	Channel from the Cheyaur main channel, to Yea	872	6th May 1854.	32160.	
313 C.	Planting to Nurseries	868.	4th Dec 1855	1700.	995
477	Bridge across the Chittoor river	628	24th Aug 1854.	12482	"
478	——Do—— Culvagoonta river	do	do	21387.	"
368	Trunk Road No 11 from Chittoor to Soothelpett	437.	1st Oct 1854.	9560.	"
369	Road from Palmanair to Venkatagiry-cottah	64	10th Feb 1855.	32153.	10944.
479	Bridge on the Chittoor and Kustkumbaddy road.	91.	24th do.	21426.	"
370	Road from Palaur Aniout to the 65th mile	157.	5th Feb 1856.	2940.	1252.
480	Bridge over the head Sluice of the Caurety tank channel	271.	23rd Feb 1856.	5710.	"
481	——Do—— Mylendravaddy channel	do	do	3700.	"
482	do. Chuckeramellore channel	do	do	5000.	"
371	Road from Venkatapherycottah to Sandghats.	859.	4th June 1856.	600.	495.
372	Road between Cuddapah and Madras.	1730.	25th Sept 1851.	53013	"

Work still continued

No in District Budget	Work.	Order of Govt: No	Order of Govt: Date.	Amount of the Estimated cost.	Amount required for the expenditure of 1859/60
373 C.	Road from the Cheyaur river to the Palaur Aniout	1405	12th Aug 1856	38600	"
483	Bridge across the Palaur ——do	do		94400	"
484	Masonry works on the road from Nagery to Kustkumbaddy	69.	27th Feb 1854.	6902.	1080.
164	Slate Quarry at Kustkumbaddy	182	24th Jan 1854.	200.	100.
374	Road from Ateed to the Palaur Aniout	2148.	23rd Nov 1854.	6160.	"
375	Road between Venkatagherry-Cottah and Mysore limits	do	do.	740.	"
376	Road from Conjeveram to Cheyaur	2594	2nd Dec 1858	29100	15100
——	Road between Vellangaud and Sholinghur	2440	16th Nov 1858.	24240	24240
142 B.	For Overseers' sheds	858.	4th Dec 1855.	1500.	370.
41.	Paymaster's office at Vellore	616.	2nd April 1854.	440.	220.
22	Hospitals for a Native Regiment at Vellore	2221.	28th Oct 1858.	8230	8230.
23	Skittle Alley for European Troops at Ranneputt	265.	4th Dec 1858.	490.	490
	I. Aniout across the Cuddalum river	988.	20th Dec 1855.	24000	"
240	Coverapuk channel	116.	25th Jan 1856.	19000	"
241	Sattayamungalum Aniout	355.	8th Jan 1856.	601.	"
242	Regulating Dam across Mallaur channel	219.	13th Feb 1856	1230.	750.
286	Peria Coorchy ruined tank	2148.	23rd Nov 1854.	1000.	"
287	Verdachellum Cudlat ruined tank	do	do.	2380.	"
243	Aniout across the Gonaganeddy	do	do	1600	"
244	Head Sluice and channel leading from the Vellaur Aniout	do	do	8950.	"
245	Head Sluice &c to the Paukum Channel.	1940.	21st Sept 1855.	2030.	2030.
485. C.	Bridge over the Cuddalam	282.	24th June 1855.	12219.	"
186.	——Do—— Pennyaur	1826.	25th Sept 1857.	5115.	2600.

Work still continued

District	No. in the Budget	Work.	Order of Govt No.	Order of Govt Date	Amount of the Estimated Cost	Amount required for the Expenditure of 1857/58
	377 C.	Road from Sorto hova to the Vellaur Anicut	116.	25th Jan 1856.	20000	"
	487.	Bridges on the road from Polundoor-pett to Calacoorchy	355.	8th March 1856.	12,400	"
	488	Bridge over the Pennaur	1528.	24th aug 1857.	106,333	"
	489	— Do — Sonnyaur	1425	12th aug 1856.	46,901.	"
	490	— Do — Geddelaur	— Do	Do	25869.	"
	491	— Do — Vellaur	— Do	Do	35,920	"
	378	Trunk Road No 8 between Polundoor-pett and Soldoor	— Do	Do	15,050	1857.
	314	Planting 5 Nurseries	1622	18th Feb 1856	850.	"
	492.	Bridge over Manoomadamaddy river.	2318.	16th Dec 1856.	20,000	"
	493.	Bridges on the road from Cuddalore to Salem frontier.	150.	21st Jan 1857.	20870.	"
	379	Road from Chengamal to Salem	742.	30th Oct 1855.	4446	"
	380	— Do — Yaalour to the bank of Vadaur	538.	19th Dec 1854	3,346	923.
	381	Road from Cuddalore to Chellum-brum.	2148.	23d Nov 1857.	5350	5,350.
	382	Do — Moreanum to Sindeiamum	Do	Do	22,800	"
	570 B	5 Travellers' Bungalows	355.	8th March 1856	10,000	"
	89	Sayer Cutcherry at Condamungalam	2009.	30th Oct 1856.	300	180.
	54	Police Cutcherries at Girgee &c	2235.	17th Dec 1856	1,700	650.
	143	Engineer's Yard and office	444.	4th March 1857.	3,450.	1,446.
	571	Travellers' Bungalow at Polundoor-pett	do	13th Jan 1858	3,000	3,000.
	24	Lines for a detachment of Police Veterans &c	2148.	9th Oct. 1858	12,220	12,220.
	572	Travellers' Bungalows at Ossanoor &c	2598.	13th Dec 1856.	1096	1,096
	246 I.	Dam on the Vennaur and Vellyaur &c	23d Nov 1854.		7,050	"
	307	Under tunnels &c for the drainage of Coddiarangacherry	53.	9th Jan 1857.	1340.	1,340.
	247	Conveying an Aqueduct into an Under Tunnel.	2398.	22d Dec 1856	650.	650.

District	No. in the Budget	Work.	Order of Govt No.	Order of Govt Date	Amount of the Estimated Cost	Amount required for the Expenditure of 1857/58
	248 I.	Sluice to the Vikramanar	372.	26th Feb 1857.	2100	2,100.
	249	Head Sluice to the Keertamanaur	2148.	23d Nov 1857.	2,700.	2,700.
	494 C.	Bridge over the Coleroon	321. 35.	10th July 1855 7th Jan 1857.	63000	2,241.
	495	— Do — aur off Moodiconda aur	355.	8th March 1856.	1,750.	"
	496	— Do — Adupaur	1266.	27th June 1857	18,104.	"
	441	Road from Mayloor to Vernegherry	337.	13th July 1855	2,339.	2,339
	442	— Do — Trivenean to Varqueherry	do	do	1868.	1868.
	443	— Do — Do — to Roydavastab	do	do	1,278	1,278.
	497	Bridge across Puneycarroyaur	do	do	2,242	2,242
	498	— Do — Natooniar	321.	29th Feb 1856.	3300	256.
	499	— Do — Do —	do	do	4200	2,500
	500	— Do — Do —	do	do	4800.	2,365
	501.	— Do — Do —	do	do	7,500.	4,458.
	383	Road between Valemgamon and Paupanassum	355.	8th March 1856.	4,300	335
	502	Bridge across Vellaur	Do	Do	10900.	5,542
	503	— Do — Moodiconda aur	16.	5th Jan 1857	10830.	5830
	504	— Do — Vennaur	do	do	19,500	9,500.
	315	Planting Shurseries	444	4th March 1857.	1360	700.
	505	Mennyaur bridge	do	do	2,500.	2,500.
	506	Bridge across Mookkalymooty-vaurel	2148.	23d Nov 1857.	6,400	3,000.
	507	— Do — Do dembogy	do.	do	1300.	"
	508	— Do — Devanathy	do	do	4,500	"
	509	— Do — Vaneyaur	do	do	1470	1,470.
	384	Road from Patroovalaudom to the Lea pat	do	do	10,500.	5,800
	510.	Malondy works on the road from Kotaod to Shungundy	do	do.	14,630.	7,000.
	573 B.	Travellers' Bungalow at the Lower Anicut	355.	8th March 1856.	2,250.	"
	90	Palook Cutcherry at Coolatlam	1327.	24th June 1856.	1017.	508.
	144	8 Overseers' Sheds	444.	4th March 1857.	1600.	800.
	574	Travellers' Bungalow at Amnoor	2148.	23d Nov 1857.	1,450.	"
	91	Converting a certain building into a Record Room at Tranquebar	1210.	25th June 1858.	250.	250.

Retained in the Budget	No.	Work.	Orders of Govt. No.	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the expenditure during 1859/60
	250 I.	Sorroovalay channel.	2148.	23rd Nov 1857.	24,700.	17,100.
	385 C.	Road from Trichinopoly to Coimbatore	2594	2nd Dec 1858.	30,000.	10,000.
	511.	Bridge over the Vellaur.	1805.	12th Aug 1856.	34,263.	8,000.
	386	Road from Trichinopoly to Salem.	do	do	50,000.	"
	387	—— do —— do —— to its junction with Trunk Road No 9.	——	do	43,600.	"
	388	Trunk Road No 8. between Oolundoorpett and Samiaveram	——	do	17,763.	"
	512.	Bridge across Puddoocurray halloo at Vilkal	2148.	23rd Nov 1857.	2,200.	"
	389	Road No 8. between Trichinopoly and Salem	——	do	8,850.	"
	390	Road from Combaconum to Nooduvarpolliem	——	do.	10,420.	"
	——	Reconstructing Coodamoor bridge	2430	17th Nov 1858.	11,450.	11,450.
	575 B.	Travellers' Bungalow at Peraga.	——	——	——	——
	576	—— do —— do —— at Lalapettah	1178.	15th July 1856	1,798.	1,798.
	577	—— do —— do —— at Voyalluppo-dellore.	do	do	1,798.	1,798.
	578	—— do —— do —— at Pudoor	do	do	2,250.	2,250.
	145	Engineers' Yard and Office	186.	24th Jan 1857.	1,998.	1,998.
	146	Nine Overseers' Sheds	do	do	4,000.	2,000.
	25	Hospital at Pudoor	2222	22 Oct 1858.	900.	450.
		Roof of the European Infantry Barracks.			2390.	2390.
					10000.	10000.
	391 C.	Repairing road No 22.	378.	18th June 1855	3610.	"
	392	Making a portion of Road No 25.	305.	5 July 1855.	8812.	5133.
	513.	Bridge across the Goomdaur	do	do	1306.	"
	393	Portion of road No 18.	do.	do	7884.	854.
	514.	Bridge over the Shunmoo-pundi	do	do	15425.	9181.
	394	Road No one Pachey Hills	1173.	8th July 1856	6,000.	"
	515.	Bridge across the Vygay river	1405.	12th Aug 1856	42,200.	"
	395	Road from Pallacottah to Pudukottah	do	do	26560.	"

Retained in the Budget	No.	Work	Orders of Govt. No.	Orders of Govt. Date	Amount of the Estimated Cost	Amount required for the expenditure during 1859/60
	316 C	Planting & Nurseries	2199	28th Nov. 1857	1190	"
	539	Deepening Paumben Channel	1719	25th Aug. 1858	15700	3700
	70 B	Moonsiffs Court House at Dindigal	1762	16th Sept. 1857	1500	500
	147	Seven Store Sheds	2199	28th Nov. 1857	700	350
	148	Converting the late Head Assistant Collectors Cutcherry into an Engineers Office &c.	2148	23rd Nov. 1857	3570	1785
	70	Prison rooms to the Salt amildars Cutcherry at Ramnad	1753	28th Aug. 1858	870	870
	55	Cutwalls Choultry at Dindigal	2049	5th Oct. 1858	850	850
		Staff Serjeants Quarters at do			3900	2000
	288 I	Veerapaneoor Puraicolum tank	839	22nd July 1853	5246	473
	289	Pillayneolum tank	42	5th Janx. 1855	896	448
	290	Marthandapoorum tank	do	do	957	479
	291	Manikneolum tank	do	do	208	"
	292	Subsidiary tank in rear of Nammany tank	488	15th Sept 1856	4976	2650
	251	Cummadum Channel	2225	28th Nov 1856	3700	"
	252	Anaicut at Sravigoontum	1628	24th Aug. 1857	385000	"
	253	Syphon Sluice under the Supplying Channel of Ellenderacoondam tank	723	20th June 1854	371	371
	293	Sluice and Calingulah in Arundanny Colum	42	6th Janx 1855	170	170
	396 C	High road No 4	26	18th Jany 1855	7470	997
	516	Bridge across the Channel of Manaloor tank	242	2nd June 1855	800	"
	397	Portion of road No 4	742	30th Oct 1855	24745	12919
	398	—— do ——	do	do	9941	4498
	174	Jetty at the Port of Tuticorin	355	8th March 1852	4650	
	399	Road No 8 from Palamcottah to Tuticorin	1405	12th Aug 1852	67361	10000
	317	Planting 13 Nurseries	1682	18th Sept 1856	996	"

District	No in the Budget	Work No.	Orders of Govt: No	Orders of Govt: Date	Amount of the Estimated Cost	Amount required by the Estimate for 1857/58
	400	C Road between Soolachinnum's bridge and Thatchanullore				
	401	Portion of High road No 4	1328	10th July 1857	6450	.
	402	Portion of road No 4	2148	25th Aug 1857	20,200	6000
	403	Portion of road No 12	2709	15th Dec 1858	2850	2850
	149	B 13 overseers Sheds	do	do	4380	4380
	71	Moonsiffs Court House at Nad-dooman dalum	1682	18th Feb 1856	1300	650
	92	Arm Racks for Muskets	513	20th March 1857	450	535
	93	Chowkey Cutcherry at Davadanum	1377	15th July 1857	280	140
	94	Compound wall round the Talook Cutcherry at Santoor	2148	25th Aug 1857	180	90
	95	Peishcar's Cutcherry at Nuddaypum	1225	30th June 1858	400	400
	96	Portion of the Talook Cutcherry at Shermadavy	2488	25th Aug 1858	450	450
	97	Chowky Cutcherry &c at Pan-chooly patam	2632	6th Feb 1858	2640	2640
	105	Sea Customs Cutcherry at Vyhaur	do	do	2300	2300
	114	Salt Pan Treasury at Arasady	do	do	530	530
	116	do at Vyhaur	do	do	235	235
	294	I Kampaporam tank	419	13th April 1853	918	.
	254	Padapully channel &c	1094	27th July 1853	23,631	4436
	255	Calingarayen Channel	1405	12th Aug 1856	64,998	10,000
	517	C Bridges on the road from Metto-pollium to Trichinopoly	116	25th Jany 1856	11,500	.
	404	Road from Collegal to Hassanoor Ghaut	do	do	3500	"
	518	Bridges on the road from Sattiman-galum to Bunary	do	do	21,600	.
	519	Bridge over the Ahuhravaty river	1405	13th Aug 1856	63830	.
	520	Bridge over the Sanganoor Nullah	2406	25th Oct 1856	3000	.
	521	Truss Bridge across the Bellical Stream	233	30th June 1857	2200	.
	522	Bridges on the road from Coim-batore to Matookollemic	742	31st Oct 1855	6240	.

Coimbatore Continued

District	No in the Budget	Work No.	Orders of Govt: No	Orders of Govt: Date	Amount of the Estimated Cost	Amount required by the Estimate for 1857/58
	405	C Hassanoor Ghaut	840	1st May 1857	5600	2600
	7	Coonoor Cantonment roads	1993	23rd Feb 1857	960	450
	406	Halting place at the Coonoor &c Ghaut	1881	5th Feb 1857	1470	870
	407	Road from the Railway Station at Mettocoolly to Trunk road No 6	2633	6th Feb 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 Parimudoray 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	Collectors Cutcherry	2102	10th Nov 1857	1800	800
	79	Jail at Coimbatoor	2274	28th Feb 1858	80000	15000
	295	I Nattikapully Agaram tank	577.	24th Feb 1856.	430.	430
	256	Pallampully Anicut	do	do	500.	500
	296	Mullagherry ruined tank	186.	9th Feb 1856.	2,000.	"
	297	Vellyapully new tanks	858.	4th May 1857	5510.	"
	523	C Woodyapully bridge	389. 994.	9th Feb. 1852. 25th May 1857	1,332. 1,068.	"
	411	Road from 12th Mile Stone	551.	24th Feb 1855.	5,500.	2179
	412	— Do — Adamancottah to Malapooram	742.	24th Oct 1855.	15,280.	15,280
	524	Bridge on the Periyagaram Nullah	936.	12th June 1856.	720.	"
	525.	— do over the stream of the Luddavady tank	2121	13th Nov 1856.	650.	"
	526.	do Vellaur river	2318.	18th Dec 1856.	5000.	"
	527.	do at Sasheri Chavadiy	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	182. 1992. 1997.	21st Jan 1857. 23rd Oct 1857. 6th Jan 1858	10000. 1480. 500	3541
	414	Road to connect the town and the Railway Station at Vaniem-buddy	44	4th Mar 1857.	7,500.	2500
	530.	Bridge over the Vaipanattoor river	2248.	28th Nov 1857.	2,040.	"
	415.	Road from Kharampoor to Moopoonoor	do	do	4200	2200

Salem

District	No. in the Budget	Work.	Order of Govt. No.	Order of Govt. Date	Amount of the Estimated cost	Amount required for Expenditure in 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.	3000.	2000.
	418.	Road to connect the town and Railway Station at Salem	2621.	4th do.	11100	11100
	579 B.	Choultry at Lopoor	1796.	29th July 1858.	4000	4000
	150	District Engineer's office &c at Salem	1622.	16th Sept 1856	3640.	783.
	580	Choultry at Adamancottah	444	4th Dec 1857.	1000.	1000
		New Sick Stables at the Remount Depot			12200.	12200.
	419 C.	Road from Coopenangady to Vicentwall	277.	28th July 1858.	8081.	7119.
	420	Plant and road from Yellapoor to Hosa	258.	25th Aug 1858.	1700.	1383.
	421	Road from Guerseppah to Sirsy	524.	14th Dec 1854.	29426.	4234
	422	Yellapore, Sirsy &c road Circuits	321.	16th July 1855.	34996.	"
	175	Quay at Mangalore	91.	24th Feb 1855.	10713.	"
	531	Bridge on the Guerseppah Ghaut and road	1125.	12th Aug 1858.	25994.	"
	560	Canal from the Sheddy river to Coomptah	do	do	36921	"
	318.	Forming 12 Runkeries	1207.	18th Sept 1856.	2040.	"
	532.	Bridge on the Salem &c road	69.	16th Feb 1854.	2440.	96.
	176.	Improving the Trangalore Harbour	491.	4th April 1856	3385.	"
	423	Road from Coomptah to the Sea Coast	344.	25th Nov 1857.	2069.	332.
	533.	Bridge across the Mungalpoody Stream	1860.	30th Sept 1857.	2250.	2250.
	424	Metalling the Sumpaje Ghaut	909.	18th Nov 1856.	17200	6000.
	425.	Improving the Charmandy Ghaut	380.	6th March 58	6000	6000
	581. B.	Sip 2d Class Bungalow	91	24th Feb 1855.	4225	
	99.	Tahsildar's Cutcherry at Kilgly	116.	25th Jan 1856.	4000.	2000.
	100.	do do at Pookoor	do	do	4200	2100
	101.	Seikedar's Cutcherry at Villalangady	do	do	2568.	1279.
	582	Travellers' Bungalow at Sedasheguir	do	do	2090	600.
	151.	12 Overseers' Sheds	1207.	18th Sept 1856		

District	No. in the Budget	Work	Order of Govt. No.	Order of Govt. Date	Amount of the Estimated cost	Amount required for the expenditure 1859/60
Canara Continued.	106 B.	Scalustown House at Coomptah	344.	25th Nov 1851.	1747.	587.
	107	Embankment at the Coomptah & Scalustown Houses	do	do	300.	150.
	56	Police Tannah at Keregody	91.	24th Feb 1855	31.	10.
	108	3 Weighing Sheds at Coomptah	do	do	125.	57.
	179	Light House at Coomptah	192	15th July 1853	1796.	466.
	72	District Moonsiffs' Court at Karkull	79.	27th Jan 1855.	1892.	688.
	8	Cutwalls' Choultry at Mangalore	116.	25th Jan 1856.	390.	74.
	57	Police Tannahs at Munekekemy &c	do	do	132.	66.
	583	Travellers' Bungalow at Guerseppah	2974	6th Nov 1857.	13170.	"
	80	Improvements to the Jail at Honore	557.	27th Nov 1858.	9432	9432
	116	Salt Kotties at Sauce Stah	586.	31st do.	1300.	1300.
	109	Sea Custom House at Caspergode	496.	30th July 1856.	215.	215.
	73	Moonsiffs' Cutcherry at Condapore	2089.	8th Oct 1858.	1690.	1690.
	180	Light House at Carwar Head	244	16th Nov 1858.	2070.	2070.
	181.	do at Sudry	do	do	1710.	1710.
Malabar.	534 C	Bridge over Vadakanchery and Karady rivers	321.	16th July 58	49061	"
	436	Road from Calicut to Paulghaut	do	do	52083	11585
	427	Road from Vadakanchery to Tattamungalum	742.	30th Oct. 55	8630	5984
	428	Road from Malliapooram to Tirooverngady	709.	15th Nov 55	3501	"
	429	Do from Wadoor to Angadypooram	857.	30th do	1570	1108
	430	Do from Tricad to Vylancoonoor	do	do	2300	"
	431	Do from Munjeery to Condoty	do	do	1767	"
	585.	Bridges on the road from Ootacamund to Avalanche	116.	25th Jan 56	2190	"
	536.	Culpully Bridge	do	do	20000	"
	537.	Ponnaparamba Canal Bridge &c	278.	23rd Feby 56	19920	"
	561.	Canal to the Chetwye Lake	321.	29th Do.	1470	"
	444.	Road for opening up the Nilgiri and 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 Coolandy	1148.	23rd Nov 57	5980	"

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
Madras Civil Architect	433 C	Road from Tamberchery to Nuspanum	2148	23d Nov/57	5600	"
	434	Road from Goodalore to the Mysore Frontier	do	do	7501	"
	435	Do from Nadakancherry to the Cochin frontier	1962	23d Sept/58	3330	3330
	436	Perumbaddy Ghaut and road on Trunk road No 4	2594	2d Dec/58	61000	31000
	110 B	Additional Ware-rooms at Cochin	577	21st Feb/65	866	433
	74	Moonsiffs Court Houses at Puttamby &c	857	31st Nov/65	4240	2120
	152	Engineers Store Yard &c at Bryapoor	2057	16th do/56	3500	1760
	584	Moosaferkanah at Nedalcingal &c	713	18th April/57	930	930
	585	Converting the old Hospital of the Malabar Police Corps into a Travellers Bungalow	884	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	2415
	122	Building at Mallapooram for Divine Service	1740	12th do	2920	1460
	111	Sea Custom House at Bypoor	1835	26th do	670	335
	586	Travellers Bungalow at Vythery	1226	30th June/58	4010	4010
	26	Packet Court &c at Calicut	2327	5th Nov/58	5234	5234
	27	Do do at Mallapooram &c	do	do	4794	4794
	28	Converting Certain Buildings at Mallapooram	1748	27th Aug/58	2440	2440
Madras Civil Architect	298 I	Mylapoor tank Calingulah	2622	2d Dec/58	1745	1745
	538 C	Barlow Bridge	2318	16th do/56	4760	"
	563	Banks of the Coonumriver	1475	26th July/58	8580	8580
	437	Road from the North end of No 3 Platform to the Cassin bridge	2661	8th Dec/58	406	406

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.
Madras Civil Architect	165 C	Light House Groyne	618	2d May/56	3000	"
	166	Groynes Nos 14 15 and 16	do	do	12010	"
	438	Road within Clives Battery	do	do	23820	2855
	167	2 small intermediate groins &c	816	29th do	4001	2162
	168	5 Groynes for the protection of the Boatmens 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 Clives Battery	1345	13th July/57	2600	"
		Drains &c at Fort Saint George			10800	10800
	58 B	Constables quarters &c at Poonamallee	415	4th March/57	3080	154
	59	Tallier Naigues Tannah at Cows Maidenpettah	do	do	580	290
	60	Duffadars Tannah in Conelcas-warcis pettah	do	do	530	265
	61	Constables Quarters at Chintadrepettah	do	do	3220	1610
	62	Tallair Naigues Tannah Poodoopauticum	do	do	530	265
	63	Do do at Mowbrays road	do	do	670	335
	64	Jamadars Tannah, Saint Thome	do	do	440	220
	160	Foundling Hospital at the Mowgy Choultry	2029	8th Nov/56	5390	2677
Madras Civil Architect	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 Aug/58	15400	"
	117	Shed at the Salt Cotaurs	2661	8th Dec/58	445	445
	65	Shed &c within the Compound of the Royapettah Police Court	2714	16th Dec/58	700	700

Garrison Engineer

Distt.	No. in the Budget	Work	Orders of Govt. No.	Orders of Govt. Date	Amount of the Estimated cost	Amount required for expenditure in 1859/60
	112 B	External accommodation of the Sea Custom house				
	131	Re-building the Civil Audit Office	1318	21st July/58	19709	9851
	39	Furnace Store rooms &c. to Elwes Battery	1405	12th Augt/58	37350	"
	1.	A portion of the Sea face on the South of the Flag Staff of the Fortifications	1885	11th Octr/58	11770	"
	2.	Do do North of do	288	19th Feby/59	34500	24471
	3.	Do of the North East Drillon Demi Bastion on the Sea face do	do	do	34500	27671
	4.	Saint Thome Caponniere do	do	do	43000	36967
	5.	Do Ravelin do	1616	13th Augt/58	40630	33536
	6	South Lunette of Saint Georges Ravelin	do	do	75000	70000
	153	Enclosing the Mint with a wall	do	do	48630	43630
		Privies of the Euro: Barracks in the Fort	2594	2nd Dec/58	60000	"
		Do in the Saint Georges Bastion			18400	18400
		Wash House & Butchery privies in the Fort			9400	9400
		Public privies in the Fort			6700	6700
	123	Wooden Stand to hang the Bell of Saint Mary's Church			4700	4700
			2583	26th Nov/58	420	420
	29 B	Old Dragoon Barracks at Bangalore	1299	29th July/58	155600	57000
	30	New do do	1405	12th Augt/58		
	31	Quarters for Color Serjeants	2136	26th Novr/57	59225	20000
	32	Purchasing a Building at Homesoor	640	3rd May/56	23750	11750
	33	Female Ward &c. to the dragoon Hospl.	902	11th do/57	1260	1260
	34	Married Men's Quarters in the old dragoon Barrack Lyncare	2561	30th Novr/58	6110	6110
	124	Compound Wall to the Mootoochery Church	2054	5th Octr/58	98000	49000
			2694	2nd Dec/58		
Hyderabad.	35 B	Certain buildings for the European artillery &c.	1677	28th Augt/58	970	970
Jacketlah	36 B	European Infantry Barracks at Jacketallah	2594	2nd Dec/58	123582	73582
	37	Punishment Shed	1599	18th Augt/58	136310	34568
	38	Barrack Serjeants Quarters	634	25th March/59	3270	1635
			329	18th Feby/59	4800	4800
			1570	15th Augt/58		

Madras Continued

Genl. Staff Engineer

Major C

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.	Estimate Cost.	Computed Amount of expenditure required up to 30th April 1859.	Amount of expenditure 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 Drillion Demi Bastion on the Sea face of the Fortifications of Fort St. Geo	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 Georges Ravelin of the Fortifications of Fort Saint George	48630	5000	43630	Do Do
		Total Fortifications	276260	39754	236506	

Nature of the Item.	No	Description of work.	Estimated Cost.	Computed Amount of Expenditure required up to 30th April 1859.	Computed Amount of Expenditure required for in 1859/60	Remarks
		I. State (Contd).				
		A. Military (Contd).				
Cantonments.	7	Widening and improving the Connoor Cantonment Roads. Coimbatore	950	500	450	Budget Est of 1858/9 No 2.
	8	Compound wall to the Cutwalls 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 Amount of Expenditure required up to 30th April 1859.	Computed Amount of Expenditure required for in 1859/60	Remarks
		I. State (Contd).				
		A. Military (Contd).				
Accommodation for Troops.	9	Alterations & additions to the Staff Serjeants Quarters at Rupsalcondah Ganjam	410	"	410	Recommended by Genl. Do No 758 Dt 5636.
		Erecting a Skittle Alley for the use of the European Veterans at Vizagapatam	630	"	630	Recommended by Genl Do No 758 Dt 5636.
	10	Alterations & additions to the Hospitals at Cuddapah	1250	"	1250	
	11	Constructing a Hospital for European Infantry Regt. No 79920 Do Buildings in Connection with the above. Bellary	2400	82330	38909	25000 Budget Est of 1858/9 No 6.
	12	Constructing Barracks for 10 married Soldiers at Ramandroog. Bellary	16200	5733	10467	Do Do.
	13	Constructing out houses to the European Hospitals at Bellary	5650	2825	2825	Do No 8.
	14	Building 2 Skittle Alleys in the Cantonments of Bellary	1000	"	1000	
	15	Building a shed in the vicinity of the Butts of the 76th 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 Hospitals at Kurnool	2000	1000	1000	Do Do.

Nature of the Item.	No.	Description of work.	Estimated Cost.	Computed Amount of expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks.
		I. State. (Cont^{d})				
		A. Military (Cont^{d}).				
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. No. Arcot	8230	"	8230	
	23	Constructing a Skittle Alley for European Troops at Ranipett: 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 removing the roof of the European Infantry Barracks Trichinopoly	10,000	"	10,000	Recommended by Govt 21st Oct/58 No 4764 for immediate expenditure.
		Constructing Staff Sergeants Quarters at Trichinopoly Madura.	3900	"	2000	Submitted to Govt 9th Mar/58 No 239.

Nature of the Item.	No.	Description of work	Estimated Cost	Computed Amount of expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks.
		I. State. (Cont^{d}).				
		A. Military. (Cont^{d}).				
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				
		Deduct for items objected to in E.M.C. 29th Sept 1858 No 2016— 66	5234	"	5234	
	27	Constructing a Racket Court for the use of the European Detachment at Mallipooram Malabar at a cost not exceeding Rupees 3335				
		—Do— a Quoit shed Rs 1495				
		4830				
		Deduct for items objected to in E.M.C. 29th Sept/58 No 2016— 36	4794	"	4794	
	28	Converting certain buildings at Mallipooram into quarters for the non. Com^{d} Offic^{rs} for the Malabar Police Corps viz:				
		Constructing a Cook House & verandah & thatching the buildings for Sergeants— 780				
		do— quarters for Sergeants— 1,130				

Nature of the Item	No	Description of works	Computed Amount Estimated expenditure required for Cost.	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd)			
		A. Military (Contd)			
Accommodation for Troops.		Constructing Quarters for Apothecary — 470			
		Adding a Cook House & Verandah and thatching the building - Malabar — 760	2440	" 2440	
		Taking down and rebuilding the European Barracks Privies in the Fort	18400	" 18400	
		Erecting privies in Saint Georges Bastion for the Department of Artillery in the Fort	9400	" 9400	
		Constructing wash House and Tankery 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 20 of 1858/59 No 16
	30	Construction of New Dragoon Barracks at Bangalore Mysore —	592250 32121	200000	Do No 19 Deferred for the reasons stated in para 11 of Mage Chaplin's letter of 25th Sept 1858 No 460 has been called for from the Chief Engr in C. in his 2nd Dec 1858 No 2594 para 4th providing the requisite data & expenditure will be incorporated in Project — Do — No 36
	31	Constructing 16 Quarters without Houses for Color Serjeants in the old Dragoon Barrack Square Mysore —	23750 12000	11750	
	32	Purchasing a building at Hoonsoor for the use of the Commissariat Staff Serjeant at that station Mysore —	1260	" 1260	Do No 29.

6 A.

Nature of the Item	No	Description of works	Computed Amount Estimated expenditure required for Cost.	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 Servants quarters without Houses in the old Dragoon Barracks 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	
		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 —	7650 3055	4495	Budget No 1 of 1858/59 No 3
		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 Subordinates	320 130	190	

Nature of the Item	No.	Description of work	Estimated Cost	Computed amount of expenditure up to 30th April/59	Amount required for expenditure in 1859/60	Remark
		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 14 1858/59 No 3
		Compound Wall to Hospital	2780	1126	1654	
		Out range of family Quarters for the Non Commissioned Officers	31000	12551	18449	
		Double doors and windows to the Staff Serjeants' Quarters				
	36.	At the Horse Field Battery at the Hailakandie with stores in temporary huts at Jaulkatallah as follows: 5 Range of Hut Barracks with Staff Quarters Jaulkatallah	3750	150	220	
		Work Houses and Privies	8349	2266	2121	1358
		Canteen and Coffee Room —	37100	16798	20302	
		School and Library —	58450	21929	22548	
		Water Course N.W. or No 22	4020	3315	705	
		Barrack Hill excavation Jaulkatallah —	15300	15160	140	
		Two Gun Sheds Jaulkatallah	708	"	"	
		Bridge Bunds and Road Jaulkatallah	37580	32877	"	
		A Small Bund & culvert South of the Barracks Jaulkatallah	8830	"	"	
		Stone drainage for the Barracks & Hospital Jaulkatallah	12640	2000	9000	
		Service Pipes & Cisterns for Barracks Hospital & Married Quarters Jaulkatallah	26470	11000	15470	
		Drainage of Barrack roof Jaulkatallah	14030	"	14030	

Partial item No 12 of Budget No 2 of 1858/59 Rupees 5,71,506 Do Do

Nature of the Item	No.	Description of work	Estimated Cost	Computed amount of expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remark
		I State (Contd.)				
		A Military (Contd.)				
Accommodation for Troops		Water Course N.E. or No 1 Jaulkatallah	11070	1904	2166	Portion of item No 13 of Budget No 2 of 1858/59 for Rs 1571506
		Armourers' Forge Jaulkatallah	990	"	990	Do
		Permanent Married Quarters Jaulkatallah	260000	123917	120000	Do
		Privies for Do Jaulkatallah	12900	5000	4000	Do
		Bakery & Mill Jaulkatallah	15000	"	"	Do The erection of these buildings are provided for and to be laid in accordance with Govt Resolution 20 Augt 1858 No 1736
	37	Punishment Shed Jaulkatallah	3270	1635	1635	Budget No 2 of 1858/59 Item No 14
	38.	Barrack Serjeants' Quarter Jaulkatallah —	1800	"	1800	
		Total accommodation for Troops.	2370078	1187344	841375	

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

Nature of the Item.	No.	Description of work	Computed Estimated Cost.	Amount expended upto 30th April 1859	Amount required for expenditure in 1859/60	Remarks.
		I. State (Cont^d).				
		A. Military (Cont^d).				
Ordnance		Constructing a Powder Magazine & Arbour.	240	.	240	Recommended by Genl 4th Jan^y 1858 & 5th Feb^y for island & subject to inspection
	39.	Constructing Furnace store rooms & other alterations to Civil Battery Madras	11770	9171	.	Budget No 2 of 57/58 No 440 before
		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 Expenditure required for the year 1859/60	Remarks
		I. State. (cont'd)		
		A. Military (cont'd)		
Commissariat.		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	Expenditure up to 30th April 1859	Amount required for the year 1859/60	Remarks
		I. State. (cont'd)				
		A. Military (cont'd)				
		Constructing new Sick Stables at the Removed Depôt Salem	12200	"	12200	Recommended by Govt. 28th Oct 1858 & 14th Jan for remarks & application.

Returned to Home Dr.	Description of work	Estimated Cost	Completed Expenditure up to 30th April 1859.	Amount required for expenditure during 1859/60	Remarks
	I. State. (cont.)				
	A. Military (cont.)				
Staff 41.	Making additions to the Paymasters Office in the Fort at Vellore. North Arcot	440	220	220	Budget Dr 2 of 1859-60 Dr 31.
	Total Staff	440	220	220	
	Total Military	28,11,055	12,37,305	10,80,740.	

Returned to the Home Dr.	Description of work	Estimated Cost	Completed Expenditure up to 30th April 1859	Amount required for expenditure during 1859/60	Remarks
	I. State. (cont.)				
	B. Naval.				
Naval.	42 Flag Staves at Poondy & Sonapore at Rs 1120 each. Gangaw	2240	1120	1120	Budget Dr 2 of 1858/59 Dr 32 The Estimate for a Flag Staff at Gangaw is left out since it was ordered to be proceeded with by Govt. Genl. 15th April 58 Nº 698.
	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 Dr 2 of 1859/60 Dr 37.
	43 Head House to the Seamen's Hospital at Cocanada. Rajahmundry	260	130	130	Dr 2 Dr 36.
	44. Constructing an additional room in the upper story of the Office of the Secretary to the Marine Board Madras	1160	"	1160	
	Total Naval	3660	1250	2410	

Nature of the Work	No.	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd)				
		6. Judicial				
Police.	45	Police Ameens Cutcherry at Berhampore. Ganjam	1280	640	640	Budget estimate 1858/59 No 57.
	46	Constructing a Police Cutcherry at Ichapore. Ganjam	1780	"	1780	
	47	Do at Chicacole. Ganjam	1700	"	1700	
	48	Constructing 2 additional Cells to the Police Cutcherry at Cocanada. Rajahmundry No 666				
		Do a cookhouse to do for the Native Prisoners. No 166	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 Serjeants' quarters &c for the Silhundy Corps at Juggiapett Masulipatam	8750	"	8750	
	51	Erecting a Police Tannah at Suttakhaupetta. Nellore	190	95	95	Budget estimate 1858/59 No 39.
	52	Constructing 3 Tannah Chowdies 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 Chingleput 3 Arcot.	1700	850	850	Do No 42.
	55	Constructing Cutwalls Choultry at Dindigul. Madura	880	"	880	
	56	Police Tannah at Veerapoorty Canara.	31	21	10	Do No 45
	57	Police Tannahs at Mumbakerry & Ekumby. Canara	132	66	66	Do No 46.

Nature of the Work	No.	Description of work	Estimated Cost	Computed expenditure up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State (Contd).				
		C. Judicial (contd).				
Police	58	Constructing Constable Quarters and Palliar Nauques Tannah at the Arrack Godown Street John Pereira's Madras	3080	1540	1540	Budget No 2. of 1858/59 No 47.
	59	Do Palliar Nauques Tanah at Cowsmoidenpettah road opposite the present Tannah Madras	580	290	290	Do No 51
	60	Do Duffadars Tannah near the new Bridge in Comelaswarerspettah Madras	530	265	265	Do No 52
	61	Do Constables Quarters at the junction of Sawmy Naicks and Arrachella Naicks road Chintadrepettah Madras	3220	1610	1610	Do No 53
	62	Do Palliar Nauques Tannah at the Mount road near Pattalas road Poodoopauk in Madras	530	265	265	Do No 54
	63	Do Do at Mowbrays road Mylapore opposite Sullivans Garden Madras	570	285	285	Do No 55
	64	Altering and improving the Jamadars 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	8	700	
		Total Police	29213	7852	21661	

Nature of the Item No	Description of Work	Estimated Cost	Complete & Expenditure up to 30th April 1859	Amount required for 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 1859/60	Remarks
	I. State. (Cont^d).				
	C. Judicial (Cont^d.				
66	District Moonsiffs Court House at Palcaa & Berlampore at Rs 1150 each. Gan paid	2300	1150	1150	Estimate of 1858/59 No 63.
67	Completing Cocanada District Moonsiffs Court House. Rajmundry	850	425	425	Do No 64.
68	Moonsiffs Court House at Bauptah Pak. Guntoor.	1630	1265	365	Do No 65.
69	Repairing the Moonsiffs Court house at Karimpoody. Guntoor.	525	-	525.	
70	Constructing a District Moonsiffs Court House at Dindigal Madura.	1500	1000	500	Do No 67.
71	Constructing a District Moonsiffs Court House at Ruddoormundalum. Tinnevelly.	1050	525	525	Do No 68.
72	Court House for the District Moonsiff at Karkull Canara.	1392	704	688.	Do No 70.
73	Constructing a Moonsiffs Cutcherry at Coudapore Canara.	1690	-	1690	
74	Constructing Moonsiffs Court Houses at Pettam by Sherwood, Pyrand Tamil pooram at Rs 1060 each. Malabar	4240	2120	2120	Do No 71
	Total Court Houses	15177	7189	7988	

Nature of the Item	No.	Description of work.	Estimated Cost	Computed Amount of Expenditure required up to 30th April 1859.	Amount of Expenditure required in 1859/60	Remarks.
		I. State. (Cont'd)				
		C. Judicial (Cont'd)				
Jails.	75	Additions & alterations to the Jail at Rajahmundry —	3698	"	3698.	
	76	Making certain improvements to the Jail at Masulipatam —	1870	700.	1170.	Sanctioned & Charged to Local fund.
	77	Constructing a Jail in the East Verandah of the Nayer Talook Cutcherry at Ponnary. Chingleput	90	"	90	
	78	Constructing Prison rooms to the Jail Amildar's Cutcherry at Ramnaud. Madura —	870	"	870	
	79	Constructing a Jail for the Principal Sudder Ameen's Court at Tutacorin and Coimbatore.	30000	15000	15000	Rec'd Nov 1st/59 No 7.
	80	Rebuilding the boundary wall of the Jail at Honore with Stone in mortar. Canara. Rs 5700				
		Const.d a Jailer's House Rs 950				
		do a Prisoners 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 —	90350	30441	59,909.	

Nature of the Item	No.	Description of work	Estimated Cost	Computed Amount of Expenditure required up to 30th April 1859	Amount of Expenditure required in 1859/60	Remarks.
		I. State. (Cont'd)				
		D. Revenue.				
Repaired & Enlarging	81	Additional Room to the Collector's Cutcherry at Chetterpore for the Printing Press. Ganjam —	1210	605	605.	Budget No 29 1859/60 No 79.
	82	Erecting Talook Cutcherries at Nursapore, Amlapoor & Cotaramachendrapoor. Rajahmundry	11000	"	"	Do No 80 referred.
	83	Constructing a Sub Officers Cutchery at Borrumpolem. Rajahmundry	510	255	255	Do No 81.
	84	Constructing a Talook Cutchery at Hoovinahudgally. Bellary —	4220	3885	335	Do No 82.
	85	Constructing a Paishcars Cutchery at Oravacondah. Bellary —	800	"	800	
	86	Constructing an additional Verandah to the Talook Cutchery at Nundecootcoor. Kurnool —	210	105	105	Do No 83.
	87	Constructing a Peishcar's Cutcherry at Streeharry Cotah in Chingleput —	2020	1010	1010	Do No 84.
	88	Repairing and improving the Peishcar's Cutcherry at Soomanapagovatah. Chingleput —	410	"	410	
	89	Constructing Sayer Cutcherry at Coudaumungalum. South Arcot.	300	150	150	Do No 86.
	90	Extending Talook Cutcherry at Coolatum. Tanjore —	1017	509	508	Do No 87.
	91	Converting into a Record Room the Stables adjoining the Govt House in the Fort at Trangambar. Tanjore —	250	"	250	
	92	Constructing Arm racks for Musketts in charge of the Sibbundy Sepoys on Guard over the Talook Treasuries. Tinnevelly —	280	140	140	Do No 90.

Returned to the Store Dr.	Description of work.	Estimated Cost	Completed expenditure up to 30th April 1859	Amount required to be expended during the year 1859/60	Remarks.
	I. State. (cont^{d}).				
	D. Revenue. (cont^{d}).				
Land & miscellaneous	93 Constructing Chowky Cutcherry at Davadaum. Timevelly	180	90	90	Budget No 29/1859 No 91.
	94 Reconstructing the Compound wall round the Salook Cutcherry at Sankoot. Timevelly	400	"	400	
	95 Constructing a Peishcar's Cutcherry at Ruddypum. Timevelly	450	"	450	
	96 Reconstructing a portion of the Salook Cutcherry at Shermadevy Timevelly	2640	"	2640	
	97 Constructing Chowky Cutcherry Out Godown & Hutties Chowltry at Pamboolypatam Timevelly	2300	"	2300	
	98 Enlarging the Collector's Cutcherry. Coimbatore	1800	1000	800	Do No 92
	99 Tahsildar's Cutcherry at Bilichy Canara	4000	2000	2000	Do No 94
	100 Do at Pootoor. Canara	4200	2100	2100	Do No 95
	101 Peishcar's Cutcherry at Villatangady. Canara	2558	1279	1279	Do No 96.
	102 Erecting an arrack distillery Madras	151,00	160.	"	Sanctioned on Surveyor the work is postponed pending the result of certain Enquiries now being made by Collector of Madras vide Chief Engineer's Letter dated 6th November 1858 No 514
	Total Land and Miscellaneous	56155	13288	16627	

Returned to the Store Dr.	Description of work.	Estimated Cost	Completed expenditure up to 30th April 1859	Amount required to be expended during the year 1859/60	Remarks.
	I. State. (cont^{d}).				
	D. Revenue. (cont^{d}).				
Customs	103 Sea custom House at Vizagapatam with Office for Masters Attendant and a flag Staff at each of the Ports of Vizagapatam and Bunlipatam - Vizagapatam	5610	3655	1955	Budget No 29 1859/60 No 97.
	104 Erecting Sea custom House at Cocanada with apartments for the Masters Attendants Office. Rajahmundry	12280	10280	2000	Do No 98.
	105 Constructing Sea Custom Cutcherry at Ossiaut. Timevelly	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 11 Bare rooms at Cochin for storing 500 Ds Malabar	866	433	433	Do No 102
	111 Constructing a Sea Custom House at Beyporr. 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	1900	950	950	Do No 105
	Total Customs	42043	25937	16106	

Nature of the Items &c	Description of work	Estimated Cost	Computed Amount expenditure up to 30th April 1859	Amount required to be expended in 1859/60	Remarks.
	I State. (cont^d)				
	D. Revenue. (cont^d)				
Opium.					

Nature of the Items &c	Description of work	Estimated Cost	Computed Amount expenditure up to 30th April 1859	Amount required to be expended in 1859/60	Remarks.
	I State (Cont^d)				65
	D. Revenue (cont^d)				
Salt.	113 Constructing an additional room to the Cokapully Salt Cutchery. Nellore.	360	180	180	Budget Rec^d of 1858/59 No 107.
	114 Constructing Salt pan Treasury at Arasady. Tinnevelly	235	"	235	
	115 — Do — at Vypaur. Tinnevelly	235	"	235	
	116 Reconstructing 3 Salt Stores at Sanecottah. Canara	1300	"	1300	
	117 Enlarging the Merchants' Shed at the Salt Golaus Madras	445	"	445	
	Total Salt	2575	180	2395	
	Total Revenue	1,07,73,39,405	35,128		

Madras Public Dept

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 Valtaur Church. Vizagt	875	438	437	Budget No 2 of 1858/59 No 111.
	119	Providing a Staircase to the Belfry of the Nellore Church	430	"	430	
	120	Improvement to the Cooncor 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 Mallapooram for Divine Service Malabar	2920	1160	1160	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 Trivelloor 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 Mahapore Ganjam.	470	235	235	Budget No 2 of 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 Juggannaikapooram R 930				
		Do at Cocanada R 355				
		Do at Rajahmundry. R 1910	2495	1248	1247	Do No 120.
	128	Erecting a Compound wall to the Burial ground at Dowlaitheram. 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	

Mahapadyam

Nature of the Work	Description of work.	Estimated Cost	Computed Amount expended up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
	I. State. (Cont'd)				
Educational	H. Educational.				
	130 Converting a Building in the Church Compound into a Girls School Room at Vizagapatam.	1000	500	500	Budget No 2 of 1859/60 No 124.
	Total Educational	1000	500	500	

Nature of the Work	Description of work	Estimated Cost	Computed Amount expended up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
	I. State. (Cont'd)				
	G. General.				
Government	131 Rebuilding the Civil Audit Office Madras	37,350	"	"	Budget No 2 of 1858/59 No 125 deferred.
	Total Government	37,350	"	"	

Nature of the Work	No.	Description of Work	Estimated Cost	Amount expended up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
		I. State. (Contd)				
		G. General. (Contd)				
Public Works	132	Constructing 6 Overseer's Store sheds at 90 Rs each. Ganjam	540	405	135	Budget Estimate 1858/59 No 126.
	133	Constructing Powder Magazine and Civil Engineer's Office. Cuddapah	3280	1718	1562	Do do 129.
	134	Constructing 15 Overseer's Store sheds at 130 Rs each. Cuddapah	1950	1426	524	Do do 130.
	135	Constructing 12 Overseer's sheds at Rs 100 each. Bellary	1200	600	600	Do do 131
	136	Constructing a carpenters 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 do 132
	138	Constructing District Engineers Yard and Office with Magazine. Kurnool	3210	1764	1446	Do do 133.
	139	Constructing the Chingleput District Engineer's Office and work yard at Chumdy. Chingleput	4400	3330	1070	Do do 134.
	140	Constructing 8 Overseer's Store sheds. Chingleput	800	-	800	Do do 135
	141	Constructing Office & Store Yards and quarters for the Establishment at the Chadayancoopum lock. Chingleput	2380	1456	926	Do do 137
	142	Constructing 10 sheds for the accommodation of Overseers & Storing tools. North Arcot	1000	630	370	Do do 136
	143	Constructing Engineer's Yard and Office. North Arcot	3750	1884	1866	Do do 138.
	144	Constructing 8 Overseers Store sheds. Tanjore	1600	800	800	Do do 139.

Nature of the Work	No.	Description of Work	Estimated Cost	Amount expended up to 30th 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 Estimate 1858/59 No 140.
	146	Constructing 9 Overseer's sheds @ 100 Rs each Trichinopoly	900	450	450	Do do 141.
	147	Constructing 7 Store sheds for Overseers @ 100 Rs each Madura	700	350	350	Do do 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 do 143.
	149	Constructing 13 Overseer's sheds @ 100 Rs each. Tinnevelly	1300	650	650	Do do 144
	150	Constructing an Office & Workshops & Store sheds for the District Engineer. Salem	3640	2857	783	Do do 147.
	151	Constructing 12 Overseer's sheds at 100 Rs each. Canara	1200	600	600	Do do 145.
	152	Constructing an Engineer's Office Yard &c at Beypoor Malabar	3500	1750	1750	Do No 150
		Total Public Works	44270	24684	19586	

Nature of the Item &c.	Description of work.	Estimated Cost	Amount expended up to 30th April 1859.	Amount required to be expended in 1859/60	Remarks.
	I. State. (Cont^d)				
	G. General (Cont^d)				
Public Works.	Road				

Nature of the Item &c.	Description of work.	Estimated Cost	Amount expended up to 30th April 1859	Amount required to be expended in 1859/60	Remarks
	I. State (Cont^d)				
	G. General (Cont^d)				
	Enclosing the Mint with a strong wall with Bastions and for the enlargement of the Premises Madras.	60000	"	"	Budget No 1 of 1858/59 No 9 - Deferred ~~as not included in Estimate of Public Works for 1858/59~~ ~~No 2694~~ - Consequent of a proposition under consideration for removing the Mint from its present site to the North. Vide para 6 of Mil 2^d Dept 1858 No 2594. ~~Same as of Civil 2^d Dept 1858 No 2594~~
	Total Mint	60000	"	"	

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 (cont'd).				
	4. General (cont'd).				
Charitable Institution.	154 Civil Dispensary at Berhampore.				
	Gangaimal	3610	1755	1755	Budget No 29/1859-60 Pa. 152.
	155 Native Choultry at Nagapatam Gangaimal	830	415	415	Do No 153.
	156 Civil Dispensary at Guntoor	2500	1347	1153	Do No 154. The Municipality have contributed for 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 Cuddapah. Malabar	1030	515	515	Do No 158
	160. Erecting a Foundling Hospital without a Officers House at the Monegar Choultry Madras	5390	2713	2677	Do No 160 No Estimate for No 159 of which the 5390 is the contribution of Government. The remainder being met from the Charity funds
	Total Charitable Institutions	14680	7627	7153	

Rutherfurd

Nature of the Estimate &c	Description of work	Estimated Cost	Amount expended up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
	I. State (cont.)				
	4. General (cont.)				
Scientific Institutions	None				

Nature of the Estimate &c	Description of work	Estimated Cost	Amount expended up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks
	I. State (cont.)				
	4. General (cont.)				
Monuments & Antiquities	None.				

Nature of the Item	No.	Description of work	Estimated Cost	Computed Expenditure required up to 30th April 1859	Amount Expenditure required from 1st May 1859/60	Remarks
		I. State (Contd)				
		4. General. (Contd)				
Miscellaneous.	161	Reconstructing a Bowry at Lingapoor Kurnool				
	162	Purchase of a stock of Timber Kurnool	120	85	35	Budget Est of 1858/9 No 167.
	163	Dismantling the Cumbum Fort Kurnool	1500	750	750	Do No 168.
	164	Examining the Slate Quarry at Nurrumbady. North Arcot	5690	"	5690	
	165	Completion of the light House Grayne and for contingencies of the Fort Graynes Madras	200	100	100	Do No 169.
	166	Strengthening Graynes No 14, 15 & 16 Madras	3000	1057	"	Do No 184 Do
	167	Constructing two small intermediate Graynes for the protection of the sea face of Fort St George Madras	12010	10266	"	Do No 185 Do
	168	Do 5 Graynes for the protection of the Boatmens Village at Royapooram Madras	4000	1838	2162	Do No 186
	169	Do dwarf Graynes between the Custom House & Clives Battery Graynes to arrest the encroachment of the sea Madras	21000	19606	1394	Do No 171
			3600	1826	"	
		Total Miscellaneous	51120	35558	10131	
		Total General.	207420	67769	36870	
		Total State	3234948	1385656	1227316	

Sanctioned on Emergency & forwarded to Govt Proper completion and the Work suspended to ascertain the effect of the former

Nature of the Item	No.	Description of work	Estimated Cost	Computed Expenditure required up to 30th April 1859	Amount Expenditure required from 1st May 1859/60	Remarks

Retrenchment

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

Nature of the Item	No.	Description of work.	Estimated Cost	Completed & Amount expended up to 30th 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 Depôt. Chungfu	£3800	1850	"	Budget No 2 of 1859 No. 172. Defence
		Total Town Buildings	3800	1850	"	

Malya Dhyand

Nature of the Item &c.	Description of work	Estimated Cost	Expenditure up to 30th April 1859	Amount required for expenditure during 1859/60
	II. Public (cont.)			
	H. Municipal (cont.)			
Markets.	None			
Paving streets.	None			
Lighting-	None			

Nature of the Item &c.	Description of work	Estimated Cost	Expenditure up to 30th April 1859	Amount required for expenditure during 1859/60	Remarks.
	II. Public (Cont.)				
	H. Municipal (cont.).				
Water Supply.	Laying down cast Iron pipes for conveying water acrs the Elk Hill cutting at Cotaccamund to certain Houses Coimbatore	2750	"	2750	
Sewage.	171. Constructing 3 Public Privies in the town of Doolaiswer- am. Rajahmundry	1230	63	"	Budget No 2 of 1858/59 pg 176. Expired.
	Constructing additional Mains drains &c in Fort St George	10800	"	10800	
	&c Public privies in the North east Bound of the Fort Madras	4,700	"	4,700	
	Total Sewage	1230	63	"	
	Total Municipal	25030	1913	"	

Madras Ry

Nature of the Item No.	Description of work	Estimated Cost	Corrected expenditure upto 31st March 1859	Amount required for expenditure during 1859/60	Remarks
	II. Public. (cont.)				
	I. Marine.				
Harbours & Navigation. 172	Improvement of the Coringa Harbour. Rajahmundry	62838	30563	"	Budgetted for 1858/59 No 177. Deferred
173	Constructing 2 beacon buoys with moorings for the Port of Masulipatam	4300	"	"	Do No 178. Do Deferred.
174	Constructing a Jetty 300 feet long at the port of Tuticorin Tinnevelly	1650	"	"	Do No 180 Do
176	Extension of the Quay at Mangalore Canara	10713	6221	"	Do No 181 Do
177	Improving the Mangalore Harbour Canara	3385	2232	"	Do No 182 Do
	Building a Boat to be employed 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	Estimated Expenditure for 1859/60	Remarks
		II. Public. (cont.)				
		I. Marine (cont.)				
Light Houses.	178	Additions and improvements to the Light House at Point Pedro	920	6/5	"	Rept. No 2 of 1857/59 No 187. Deferred
	179	Light House 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 Light House at Cochin for the exhibition of the light for the Port of Mulakkar	3530	"	3530	Do No 189
		Total Light Houses	10026	2005	7776	
		Total Marine	96672	49021	8536	

Nature of the Item	No	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public. (cont.)				
		J. Industrial				
Manufactures.		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 (Cont^d)				
		K. Agricultural.				
Irrigation Canals.	183	Head Sluice across the Nagaricuttum Channel. Gaiyâm	3410	.	3410	Budget Estimate of 1859/60 Item No 194.
	184	Constructing a Calingulah across the Jannevaroo Channel and excavating branch Channels in the Anulapoot & Rallee Talooks. Rajahmundry	59135	54556	4579	Do do 196.
	185	Channel from Dingairoo to Koodapoor. Rajahmundry.	1875	1127	.	Do do 196. Deferred
	186	Widening the Samulcottah Channel. Rajahmundry.	48227	39826	8402	Do do 196.
	187	Nor Nag Irrigation & Navigation in the Central Delta of Rajahmundry	315932	222077	"	Do do 197.
	188	Irrigation & Drainage Channels in the Ricevale, Nagarum and Samarlcotta Talooks. Rajahmundry	21000	16324	4676	Do do 198.
X	189	Excavating two branch Channels for the proper distribution of the waters of the Coconada Channel. Rajahmundry	1101	7	1094	Do do 200.
	190	Canal from Samulcottah to Tuneer. Rajahmundry	234305	20652	.	Do do 201. Deferred
	191	Constructing a Calingulah and the Byanee River. Rajahmundry	7420	1356	6064	Do do 202.
	192	Cutting Channels & Constructing a Sluice between Yanamadroo & Bandada. Rajahmundry	1030	"	.	Do do 203. Deferred
	193	Constructing a wooden foot bridge over the Calingulah at Doovah. Rajahmundry	1150	.	1150	Do do 204.
	194	Constructing an Aqueduct over a drain crossed by the Anulapoor Channel. Rajahmundry	4700	.	.	Do do 205. Deferred

Nature of the Item	No	Description of work	Estimated Cost	Estimated time for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (Cont^d).				
		K. Agricultural (Cont^d).				
Irrigation Canals.	195	Canal of Irrigation & Navigation from the Nagaroo near the Godavery Anicut to Ellore. Masulip^m	287644	277001	.	Budget Estimate of 1859/60 Item No 197. Deferred
	196	Locks & Calingulahs at Galoorpaud & Chinnacaleveram and Embankments to Nagaroo. Masulipatam.	64820	"	.	Do do 208. Deferred
	197	Northern High level Channel from the Boddonmair to Perikeed. Masulipatam.	Rs 79550			
		Do from Perikeed to Dundalevr. Masulip^m	Rs 134835	214385	24253	Do do 209. Deferred
	198	Channel from Poolairoo near Nagoor to the Canal Basin. Masulipatam.	237107	88128	50,000	Do do 210.
	199	Sloping down the banks of the Main Channel for the first four miles from the Kistna Bank of the Anicut. Masulip^m	20240	112	10000	Do do 211.
	200	Tunnel under the Koopadavy Channel near Nadoor. Masulipatam.	4110	603	"	Do do 212. Deferred
	201	Small branch Channel from the main channel near Penumaloor towards the river Embankment near Nagoor Masulipatam.	3030	"	"	Do do 213. Deferred
	202	50 miles of small irrigating Channels of the average size with Sluices at Rs 330 per mile. Masulipatam.	16500	"	.	Do do 214. Deferred
	203	Irrigating Channel from Yenekapaud to Moorkoor. Masulip^m	23200	.	.	Do do 215. Deferred

Nature of the Item	No.	Description of work	Estimated Cost	Estimated sum for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public. (cont).				
		K. Agricultural (cont).				
Irrigation Canals.	204	Branch Channel from Valoor pool to Irundevadah. Innumerable.	9500	"	"	Budgeted for 1859/60 No. 216. Deferred.
	205	Constructing a Calingulah near Casarapilly Mr. Mahlet's plan No. 1880.				
		Do Lock near Do. Do No. 11780	1366	"	1366	Do No. 217.
	206	Widening & deepening the Toongabadra Channel & cutting a new Channel in Continuation as far as Nazampatam. Innumerable	220417	167870	20000	Do No. 219.
	207	Western bank Channel from Vullabapooram to tide water Innumerable	139700	12478	"	Do Not Passed.
	208	Southern high level Channel from the Toongabadra near the Kistna Anicut to Nizamapada. Innumerable	146787	29957	4000	Do No. 221.
	209	Lock & Calingulah near Vullabapooram. Innumerable	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. Innumerable	22870	1414	1000	Do No. 223.
	211	Channels from Toomapoody to Doogerallah on either side of the Main feeder. Innumerable	2470	"	"	Do No. 224. Deferred
	212	Channel from Doogerallah towards Peddaravoor. Innumerable	7400	"	"	Do No. 225. Deferred
	213	Channel from Peddaravoor towards Nizampatam. Innumerable	7400	605	"	Do No. 226. Deferred.
	214	Channel from Doogerallah to Gavanie. Innumerable	1160	"	"	Do No. 227. Deferred.

Nature of the Item	No.	Description of work	Estimated Cost	Estimated sum for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (cont).				
		K. Agricultural (cont).				
Irrigation Canals.	215	60 miles of small irrigating Channels of the average size with sluices at Rupees 330 per mile. Innumerable	19800	632	6000	Budgeted for 1859/60 No. 228.
	216	Southern high level Channel in Continuation from Nazampada to near Buckle Innumerable	336100	"	"	Do No. 229. Deferred
	217	Constructing a Calingulah with a platform Bridge & Sluices across the Toongabadra Pullad near the head of the Cummamoor Channel. Innumerable	2800	"	"	Do No. 230 Deferred.
	218	Construction of dam across the Vellatoor Channel with drainage tunnel below. Innumerable	500	"	"	Do No. 231. Deferred.
	219	Head Sluice to Vaigoor Channel Nellore	2063	"	"	Do No. 232 do
	220.	Head sluice to Dewoor Tank supplying channel Nellore	2063	"	2063	Do No. 233.
	221	Constructing a head sluice and escape Calingulah to Peelaroo Channel Nellore	2256	281	"	Do No. 234 prepared.
	222	Cutting a new Channel from Gollaconda voor Lodoom to Nellore and constructing a Calingulah across it. Nellore	9868	5644	4224	Do No. 235

Nature of the Item	No.	Description of work	Estimated Cost	Estimated Expenditure for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public. (cont.)				
		K. Agricultural (cont.)				
Irrigation Canals.	223	Cutting a channel from Veneatagherry river to the Chennoor tank Nellore	13910	2989	7241	Budget Sheet 2 of 1859/60 No 236
	224	Constructing an Anicut across the Mennidy Calwah Nellore	5150	105	"	Do No 237 Do.
	225	Pennair Anicut Posts and shutters Nellore	5176	2957	"	Do No 238 Do
	226	Constructing Head sluice to Cummaul Channel Bellary	4270	"	4270	Do No 241
	227	Completing Cummaul Channel Bellary	4620	"	4620	Do No 242
	228	Sinking 2 Wells below the Culpee Tank into Pungondah Talook. Bellary	1000	"	1000	
	229	Improving the direction of an Irrigation Channel from the Pennaur for the Village of Pungondah - 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 328297 is taken in North Arcot
	231	Vellore river channel head Sluice Chingleput	2162	702	1460	Do No 244
	232	Goodoopankum & Nammantank supply Channel Chingleput	4881	4537	344	Do of 1855/56 No 93

Nature of the Item	No.	Description of work	Estimated Cost	Estimated Expenditure for Completion	Estimated Expenditure for 1859/60	Remarks
		II. Public. (cont.)				
		K. Agricultural (cont.)				
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 Do.
	234	Pulicat Anicut project (Portion of the Estimate of Rs 866,144) North Arcot	572871	526217	0	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 Cuddalore Channel and for improving the Alambadoo Channel North Arcot	260	50	210	Do Do No 248
	236	Cutting a new supply Channel to the Ennemungalum tank North Arcot	290	115	245	Do Do No 299
	237	Building an Anicut to the Sumpungamellore Channel and giving a Sluice with a cut from it to the Vellamaidmungapooram North Arcot	357	"	357	Do Do No 249.
	238	Cutting a proposed supply Channel from the Cheyaur main Channel to the Sheauta-vanta tank North Arcot	3270	"	"	Do Do No 250 Deposit 2.

Reference to the Plan No.	Description of work.	Estimated Cost	Estimated Expenditure for Completion	Estimated Expenditure for 1859/60	Remarks
	II. Public. (Cont'd).				
	K. Agricultural (Cont'd).				
Irrigation and Canals. 239	Constructing annicut across the Guddelum river South Arcot	24000	1050	"	Budget No 2 of 1858-59 No 251 Deposited
240	Improving and extending the Coverapet Channel South Arcot	19000	7743	"	Do No 252 Do
241	Rebuilding the Sathyamungalum annicut across Gingee river South Arcot	681	"	"	Do No 253 Do
242	Constructing a regulating Dam across the head of the Mullatour Channel South Arcot	1230	450	780	Do No 255
243	Constructing 2 annicuts across the Gomagandy in the talook of Virdachellum and Cullacoorchy 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 Pankum Channel South Arcot	2030	"	2030	
246	Constructing a regulating Dam on the Vennaur and Vellyaur at the head of the latter river Sanjore	7050	"	"	Do No 260 Deposited

Reference to the Plan No.	Description of work	Estimated Cost	Estimated Expenditure for Completion	Estimated Expenditure for 1859/60	Remarks
	II. Public. (Cont'd).				
	K. Agricultural (Cont'd).				
Irrigation and Canals. 247	Converting an Aqueduct into an under tunnel across the Anmuda Couvery Tanjore	650	"	650	Budget No 2 of 1858-59 No 261
248	Constructing a new sluice to the Vekramanar Tanjore	2100	"	2100	Do No 262
249	Constructing a head sluice to the Keertamanear in the Combaconam Taluk Tanjore	2700	"	2700	Do No 263
250	Deepening the Pooroovalay Channel widening and strengthening its banks Rupees 14000 Making a new cut across the Pooroo -valay Channel Trichinopoly 10700	24700	7600	17100	Do No 265
251	Repairs and improvements to the Cummadeen Channel Tinnevelly	3700	"	"	Do No 266 Deposited
252	Constructing an annicut at Sheveigoontum across the Tambraporoony with Channels to Trechendoor and Tuticorin Tinnevelly	385000	"	"	Do No 267 Deposited
253	Constructing a syphon sluice under the supplying channel Ellenderacondam tank Tinnevelly	371	"	371	
254	Padapully Channel and improving the Channel building new sluice &c. Coimbatore	23631	19195	4436	Do No 269

Nature of Item	No.	Description of work	Estimated Cost	Estimated Amount for completion	Estimated Expenditure for 1859/60	Remarks
		II. Public. (Cont.)				
		K. Agricultural (Cont.)				
Irrigation Canals.	255	Repairing improving and extending Caliyaroyen channel Coimbatore	64898	22085	10000	Budget No 270 1858/59 No 270
do.	256	Repairing Tattumputty Amicut constructing calingulahs and a covered drain and clearing channel Salem	500	"	500	Do. No 271
		Total Irrigation Canal	4155754	1599430	242941	

Nature of Item	No.	Description of work	Estimated Cost	Estimated Amount for completion	Estimated Expenditure for 1859/60	Remarks
		II. Public. (Cont.)				
		K. Agricultural (Cont.)				
Tanks.	257	Restoring the Robellapaud tank and constructing a masonry sluice. Masulipatam	700	"	"	Budget No 2 of 1858/59 No 274.
	258	Improving the Nellore Tank Nellore	17100	"	"	Do. 275 Do.
	259	Reconstructing Cheppully Kanegala tank Cuddapah	430	8	422	Do. 278
	260	Repairing Kistnamma-yanee tank Cuddapah	1250	"	1250	Do. 279
	261	Construction of a new tank with sluices and calingulah at Branch-pully Cuddapah	6300	"	6300	Do. 281
	262	General repairs to Cumma-cul Tank Bellary	4700	"	4700	Do. 282
	263	Storing and improving the Ballytah tank Bellary	3150	"	3150	
	264	Constructing the Mulla-poor & Arathallee or Wuddoocuttahs Bellary	718	"	718	
	265	Restoring the Shatoma tank and constructing a sluice Chinglepute	470	"	470	No 283 Budget No 2 of 1858/59 The Collector has also taken up Martin's work.
	266	Restoring the ruined small tank in Pama-pankum Village and constructing 2 sluices Chinglepute	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^d).				
		K. Agricultural (cont^d).				
Tanks.	267	Constructing a Calingulah and under Sluice to the Keelanoor Tank Chingleput	1640	"	1640	Budget No 20 of 1858 No 285. The whole portion with Rs 5728/11 is taken in North Arcot
	268	Constructing an under sluice to the Runga pooram Tank Chingleput	290	"	290	Do Do No 286
	269	Deepening the Thena pankum spring Pond Chingleput	211	"	211	Do Do No 287
	270	Repairing a large tank improving Calingulah and constructing new under Sluices in Vallore Village of the Paria pollium Talook Chingleput	3070	"	3070	Do Do No 288
	271	Repairing the Tank bank and construct-ing Masonry works in Keelmony Village of the Periapollem Talook Chingleput	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 Chingleput	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^d).				
		K. Agricultural (cont^d).				
Tanks.	273	Repairing an old tank bank and construct-ing masonry works in Tenneer Colum Village of the Peria pollium Talook Chingleput	2220	"	2220	Budget No 20 of 1858/59 No 291
	274	Reconstructing the Madpadoo ruined tank Chingleput	3350	2884	466	Do of 1856/57 No 143
	275	Constructing a Calingula to the cooroovembadoo Tank Chingleput	325	"	325	Do Do No 144
	276	Raising the bank of the Vanniembaddy 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 Bomanaicken polli-em tank renewing new Stone facing and constructing a Calingulah & Sluice North Arcot	988	"	988	Do Do No 293
	278	Building Calingulahs and Sluices to Cotti cummy alum and other				

Nature of the Work	No.	Description of Work	Estimated Cost	Estimated Expenditure for completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (cont.)				
		K. Agricultural (cont.)				
Tanks.		other tanks and channels in Windawash Talook North Arcot.				
	279	Raising the bund and constructing a Sluice to Tookady tank North Arcot.	2670	420	2250	Budget No. 3 of 1858/59 No. 296
	280	Constructing a Calingulah and restoring Iroottoppullum Calapoor tank North Arcot.	340	20	320	Do. Do. No. 277
	281	Rebuilding two Calingulahs to the Moostereecoppum tank	430			
	282	Repairing the Moostereecoppum tank North Arcot.	660	1090	26	1064	Do. Do. No. 300
	283	Improving Autherumboy and Goodaloor Tanks North Arcot.	7620	500	2120	Do. Do. No. 301
	284	Restoring Nagalapoorum tank North Arcot.	600	"	600	Do. Do. No. 302
	285	Do. Samal coonah tank North Arcot.	3046	2819	227	Do. Do. No. 303
	286	Building a Calingalah and Sluice to Vasantharada tank, North Arcot.	294	185	109	Do. Do. No. 304
	287	Restoring Perria Coorchy ruined tank, South Arcot.	1000	"	"	Do. No. 307
	288	Restoring Verdachellum Cusbah ruined tank, South Arcot.	2380	"	"	Do. No. 308

Nature of the Work	No.	Description of Work	Estimated Cost	Estimated Expenditure for completion	Estimated Expenditure for 1859/60	Remarks
		II. Public (cont.)				
		K. Agricultural (cont.)				
Tanks.	288	Constructing a sluice and rough stone revetment to Neelapaycor Periacolum tank Tinnevelly	5246	4773	473	Budget No. 2 of 1858/59 No. 310
	289	Do. a tank to be termed Pillayencolum in the limits of Vellameddum & Tinnevelly	896	448	448	Do. Do. No. 311
	290	Do. Stone revetment to bund of Marthandasapooram tank Tinnevelly	957	478	479	Do. Do. No. 312
	291	Do. a Calingulah in Maniken Colum tank Tinnevelly	208	"	"	Do. Do. No. 313 deferred
	292	Do. a Subsidiary tank in rear of the present Nawmaney tank Tinnevelly	4876	2326	2550	Do. Do. No. 314
	293	Do. a Sluice and Calingulah in Arasamairy Colum Tinnevelly	170	"	170	
	294	Sluice &c. to Hampapooram tank Coimbatore	918	"	"	Do. Do. No. 315 deferred
	295	Raising bund of the Nabikapetty Ugraram tank & constructing a Sluice Salem	430	"	430	Do. Do. No. 317
	296	Restoring ruined tank of Mullagherry Salem	2000	"	"	Do. Do. No. 320 deferred
	297	Constructing 2 new tanks at Vallyapetty Salem	5510	"	"	Do. Do. No. 321

Nature of the Item &c.	Description of work.	Estimated Cost.	Estimated time for completion	Estimated Expenditure for 1859/60	Remarks.
	II. Public. (Cont.)				
	K. Agricultural (cont.)				
Tanks. 298.	Enlarging the Melap= =oor Tank Caligula Madras	1745	"	1745	
	Total Tanks —	96383	15635	49046	

Nature of the Item &c.	Description of work	Estimated Cost	Estimated time for completion	Estimated Expenditure for 1859/60	Remarks.
	II. Public (cont.)				
	K. Agricultural (cont.)				
Dykes. 299.	Extending the embankment of the Yennamadooroo Channel to Doovah. Rajahmundry	7,600	"	"	Budget No 2 of 1859/60 p. 328. Expired.
300.	Improving & strengthening the embankments on the eastern bank of the Kistna from Yanamalacooroo to Hope= davy, a distance of 33 miles. Masulipatam	56,910	14005	10000	Do p. 329.
301.	Constructing a Dyke to protect the wet lands of Yaparilla and Surrelpully on the left banks of the Pennair Cuddapah	3510	"	3510	Do p. 325
	Total Dykes —	67920	14005	13510	

Statement No.	No.	Description of Work.	Estimated Cost	Estimated Expenditure for Completion 1859/60	Estimated Expenditure for 1859/60	Remarks.
		II. Public (cont^{d}).				
		K. Agricultural (cont^{d}).				
Drainage	302	Cutting an outlet for the drainage waters of the Country on both sides of the Goostanuddy. Rajahmundry	7260	5519	1741	Budget No 29/1859/60 No 326
	303	Channels to drain the land irrigable 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 Biccavole to the river Yalairu & from Kollapaulem Caliingulah to the proposed main drain of Yalairu. Rajahmundry	3180	"	3180	Do No 329
	306	A Drainage Channel on the back or S side of the Vaikal Channel and Nagaroo. Nasulpatam	19510	"	"	Do No 330. Deferred
	307	Building two under tunnels &c for the drainage of Coodittangachary. Tanjore	1340	"	1340	Do No 331.
		Total Drainage	37213	6188	9215	

Statement No.	No.	Description of work.	Estimated Cost	Amount Expended to 30th April 1859	Amount required for the current year 1859/60	Remarks.
		II. Public. (cont^{d}).				
		K. Agricultural (cont^{d}).				
Forests	308	Planting Six Nurseries at 90 Rs each. Vizagapatam	540	90	"	Budget No 29/1859/60 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 Singlepah	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 Tellycoor Garden transferred to the Engineers Department as one of the 13 Nurseries Rs	174	996	"	Do No 341 Do
	318	Forming 12 Nurseries, Canara Sumeveley	2040	"	"	Do No 343 Do
		Total Forests	14546	1748	3911	
		Total Agricultural	1,437,316	1,37,706	3,18,623.	

Nature of the Item &c	Description of work	Estimated Cost	Amount of Expenditure from 1st April 1859 to 30th April 1859	Amount required for 11 months from 1st May 1859 to 31st March 1860	Remarks
	II. Public (cont^d).				
	K. Agricultural (cont^d).				
Forests.					

Nature of the Item &c	Description of work.	Estimated Cost	Amount of Expenditure from 1st April 1859 to 30th April 1859	Amount required for 11 months from 1st May 1859 to 31st March 1860	Remarks
	II. Public. (cont^d).				
	L. Communications.				
Metalled Roads.	319 Road from Berhampore to Rupel: Condabaria 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 Rupel: Condab. Ganjam	10000	"	"	Do No 345. Deferred.
	321 Road from Rupel Condab to Koimjoro via Durpinghia at the foot of the Coorminghia Ghaut and Tintillyedda. Ganjam	14465	6000	8465	Do No 346. ordered to be completed in a survey of the line by the Kellaghia Ghaut Sub Conn^r. 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 Thanjapam) Ganjam.	14580	9911	4669	Budget No 2 of 1858/59 No 349.
	324 Completing the road from Kemidy 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. 5½ miles. Ganjam.	5400	1560	3840	Do No 351.
	326 Branch road into the town of Aska to connect the road from Aska to Rupel condab. Ganjam	510	"	"	Do No 353. Deferred
	327 Repairing & improving 34½ miles Trunk Road No 6 from Sunthoskapoorum to Brudagedda near Mchapoor. Ganjam.	46550	"	"	Do No 354. Deferred.
	328. Repairing & improving 39½ miles Trunk Road No 6 between Chicacole & Sunthoskapoorum. Ganjam	37200	"	"	Do No 355. Deferred.

Nature of the Work &c	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).				
Metalled Roads.	329 Constructing 2^d class road from the salt pans at Narsapadu to Tatipally on Trunk Road No 6. Ganjam	5330	"	5330	Budget No 2 of 1858/59 No 356
	330 Construction of Trunk Road No 6 from Chittavulsa to Cheepiole 41 miles. Vizagapatam	93460	"	"	Budget No 2 of 1858/59 No 357. Deferred.
	331 Completing branch road from the Ferry at Vizagapatam to Simhachalam 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 Paleondah to Cheeperpilly and from Paleondah to Parvatipoor and Bobilly Zemindaary Territory. Vizagapatam	30175	28573	"	Do No 359. Deferred.
	333 Improving the road from Inkapilly on the Great Northern Trunk Road No 6 to the ferry landing place opposite Vizagapatam	10978	4715	5363	Do No 360.
	334 Constructing a first class District Road from Nellimookoo to Gumgavanka. Vizag.	7170	"	7170	Do No 361.
	335 Road from Juddungky to Yalavarum. Rajahmundry	17200	11511	"	Do No 362. Deferred.
	336 Road from the Village of Cottoor to the bank of Godavery. Rajah.	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	24630	"	"	Do No 365. Deferred.

Nature of the Work &c	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).				
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 Copperapaud to Roadigul (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 7 from Covoor to Moodegoondah Nellore	114713	76537	"	Do No 370. Deferred.
	343 Do – No 7 (portion of Estimate for Rupees 134021) Nellore	15313	14013	1300	Do No 371.
	344 Completing the communication partly by the Ramsairee 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 Annicut Nellore	5000	2203	"	Do No 375. Deferred.
	346 Do a 2^d 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	10976	"	Do No 379. Deferred. Portion for No. Amt. 53018 do. Chingleput 10966 do. Cuddapah 128237 – 192221
	349 Completing road from Cottoor bank to Pellelying channel to Cuddapah	2240	260	1980	Do No 381.

Numbered thus	Description of work.	Estimated Cost	Computed Amount of Expenditure required to 30th April 1859.	Amount required for expenditure during 1859/60	Remarks.
	II. Public. (cont.)				
	L. Communications (cont.)				
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 & Goodiur. Bellary	57051	34165	"	Dº Nº 384. Deferred
	352 Forming road from Ojeinee to Hunpasagur in Bellary Distt and forming a portion of the Military road from Chitteldroog in the Mysore Territory through Bellary to Cuddaghee in the Bombay Territory. Bellary	11456	17	"	Dº Nº 385 Dº Nº 386 Dº Dº
	353 Metalling the Bellary & Hospet road to the 30th mile stone on the Toongabudra 354 Metalling part of road from Bellary Penna: reconduk to Gooty. Bellary	19430 5460	/	"	Dº Nº 387 Dº
	355 Constructing a 2d Class branch road from Cowle Bazar in the Cantonment of Bellary to the road from Bruspettah to Bangalore Bellary	2050	"	"	Dº Nº 388 Dº
	356 Completing the following Roads Kurnool. Kurnool to Nundiconama do to Rodamore do to Ghooty	107160	95782	11378	Dº Nº 389.
	357 Repairing the portion of the road from Cumbum to Venaconda 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 Gunzempully to Kistumnaiketty pully. Kurnool	50000	25000	25000	Budget 1st of 1859. Nº 26. Transferred from Cuddapah.

Numbered thus	Description of work.	Estimated Cost	Computed Amount of Expenditure required to 30th April 1859.	Amount required for expenditure during 1859/60	Remarks.
	II. Public. (cont.)				
	L. Communications (cont.)				
Metalled Roads.	360 Road from the Palaur Causeway to Vetry through the Town of Ootramullore. Chingleput	41130	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 192221) Chingleput	10966	295	"	Dº Nº 393. Deferred. The other portions of the Estimate are taken as specified opposite Nº 348 & 372.
	362 Road across the Poonamalee Backwater on the Northern Trunk road. Chingleput	33023	1385	"	Dº Nº 394. deferred.
	363 Road from Trivelloor to Ramanjaya Chingleput	3982	2928	1054	Dº Nº 395.
	364 Road from Cavaltoor to Trivelloor. Chingleput	14417	14140	277	Dº of 1856/57 Nº 92
	365 Metalling the road from Trivelloor to the Cortelaur River. Chingleput	6236	"	"	Dº of 1856/57 Nº 147 deferred
	366 Making new road from Sadras to Terocalycondrum and repairing the present road from Terocalycondrum to Chingleput. Chingleput	14500	"	"	Dº Nº 150 Dº
	367 Repairing the road from Streeperumbatoor to Mylapoor. Chingleput	18070	"	"	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 Venkatagherry Cottah. North Arcot	32053	21112	10941	Dº Nº 397
	370 Constructing a branch road from the Palaur Anicut to the 65th Mile on Trunk road Nº 1 North Arcot	2940	1688	1252	Dº Nº 400.
	371 Tracing road from Venkatagherry cottah to Vantylaur. North Arcot	800	5	795	Dº Nº 401.

Nature of the Item	No.	Description of work	Estimated Cost	Computed Amount of Expenditure required up to 30th April 1859	Amount required for Expenditure in 1859/60	Remarks
		II. Public. (cont.)				
		L. Communications. (cont.)				
Metalled Roads.	372	Road between Cuddalore and Madras as far as Ponamallee (portion of the Estimate of Rupees 192221) 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 & 365.
	373	Constructing a 2nd Class road No 5 from the Cheyaur river to the Palaur Amicut 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 Amicut North Arcot	8160	"	"	Do No 406. Do
	375	Restoring a piece of road between Vencatagherycottah and the Mysore limits. North Arcot	740	"	"	Do No 407. Do
	376	Constructing 4th class District road from the Railway Station at Cornpalayam (left bank Coleroon) to Chidambaram (continuing road between Tillaiy and Negapatam) North Arcot	29,100	14,000	15,100	Budget No 2 of 1858/59 No 408.
	377	Completing the road from Porto Novo to the Villaur Amicut on Trunk road No 4 South Arcot	24270	"	24270	
	378	Additional metalling on Trunk Road No 8 between Coloundoorpett and Tolodoor (Portion of Estimate of Rupees 37313) South Arcot	20,000	6,918	"	Budget No 2 of 1858/59 No 408 Deferred
	379	Reconstructing the road from Chengamah to the Salem Frontier South Arcot	15,950	3,193	11,857	Do No 409. The other portion viz Rs 19263 is taken in Trichinopoly. The difference of Rs 3000 is explained opposite to No 305 of Budget No 2 of 1857/58
	380	Road from Vailoor to the bank of the Vadavaur South Arcot	14,46	119	"	Do No 410. Deferred
			3,346	2423	923	Do No 411.
		Metalling				

Nature of the Item	No.	Description of work	Estimated Cost	Computed Amount of Expenditure required up to 30th April 1859	Amount required for Expenditure in 1859/60	Remarks
		II. Public. (cont.)				
		L. Communications. (cont.)				
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 Mercamin to Tindevanum Rs 18,300				
		Metalling the road from the Pattiee Bridge at Mercamin to the Sall Pans South Arcot	4500	22,800	"	" Do No 413. Defered.
	383	Improving and tunnelling the road between Valerngamon & Punpanasem Tanjore	1300	3965	335	Do No 415.
	384	Constructing a road from Porovoor landmen to the Sea Port at Mootoopettah Tanjore	10,500	"	6500	Do No 416.
	385	Metalling and reforming the road from Trichinopoly to Coimbatore within the limits of the former District. Trichinopoly	30000	10000	10000	Budget No 2 of 1858/59 No 18.
	386	Road from Trichinopoly to Salem Boundry. Trichinopoly	50,000	"	"	Do No 417. Defered
	387	Road from Trichinopoly through Areatore and Woodiarpollium to its junction with Trunk Road No 4. Trichinopoly	43,00	"	"	Do No 418. Do
	388	Additional metalling to Trunk Road No 8 between Coloondoor-pett and Vanniaveram (portion of the Estimate of Rupees 37313) Trichinopoly	19263	"	"	Do No 419. Do The other portion viz Rs 15050 is taken in South Arcot. See remarks opposite item No 378
	389	Metalling the Road No 8 from 1st to 15th Mile Stone between Trichinopoly and Salem. Trichinopoly	8850	"	"	Do No 420. Deferred
		Constructing				

Nature of the Work	No.	Description of work.	Estimated Cost	Completed expenditure upto 30th April 1859	Amount required for expenditure in 1859/60	Remarks.
		II. Public. (Contd.)				
		L. Communications (Contd.)				
Metalled Roads.	390	Constructing a new road from Combaconum to Woodiarpolliem between the North bank of the Coleroon river & Woodiarpolliem. Trichinopoly	10420	"	"	Budget No. of 1858/59 No. 421 Defered.
	391	Repairing road No. 22 between Trivavanum and Meyloor. Madura	3610	"	"	Do. No. 425. Defered
	392	Making a portion of road No. 25 between Tattangoody and Oostumputty. Madura	8812	3679	5133	Do. No. 426
	393	Repairing and improving a portion of road No. 18 from Battagoondah to its junction with road No. 15 at Palapatty. Madura	7884	7030	854	Do. No. 427.
	394	Road No. on Pulney Hills. Madura	6000	3000	"	Do. No. 430. Defered
	395	Road No. 17 from Nellacotta to Pulhanoath. Madura	25560	"	"	Do. No. 431
	396	High road No. 4 between Palamcottah and the Arumbooly lines. Tinnevelly.	7470	6473	997	Do. No. 432.
	397	Constructing a portion of road No. 4 from Madura to Palamcottah between Sattoor and Virdoopatty Tinnevelly.	24745	11826	12919	Do. No. 433.
	398	Do. Do. between Gangoondan and Shadekhan's Chattrum. Tinnevelly.	9941	5443	4498	Do. No. 434
	399	Road No. from Palamcottah to Tuticorin. Tinnevelly	67361	"	10000	Do. No. 435.
	400	Constructing road between Soolochenum's Bridge and Thatchanullor. Tinnevelly	6450	"	"	Do. No. 438. Defered
	401	Improving portion of High Road No. 4 from Madura to Palamcottah between Vulchampatty and Oosulumpatty, Tinnevelly	20200	"	6000	Do. No. 439.
	402	Repairing and improving a portion of road No. 4 between Thatchanullor and				

Nature of the Work	No.	Description of work.	Estimated Cost	Completed Expenditure upto 30th April 1859	Amount required for expenditure in 1859/60	Remarks.
		II. Public. (Contd.)				
		L. Communications (Contd.)				
Metalled Roads.		and Shadykhan's Chouttry. Tinnevelly	2850	"	2850	
	403	Repairing and improving a portion of road No. 12 between Nulloor and Aroomooganairy salt pans, Tinnevelly	4380	"	4380	
	404	Constructing road from Collegal to Hassanoor Ghaut. Coimbatore	8500	4000	"	Budget No. of 1858/59 No. 1440. Defered
	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 Mettoopolly to Trunk road No. 5 at Chengapully Coimbatore	12140	"	12140	
	408	Do. from the Railway station to connect the Trunk road No. 5 and the Town of Coimbatore. Coimbatore	11200	"	11200	
	409	Do. from the Railway station at Shonanoor to Trunk road No. 5 near Kamma-thampatty. Coimbatore	4260	"	4260	
	410	Do. from Pavinadoray to the Railway station, Coimbatore	8735	"	8735	
	411	Do. a road metalled with bridges &c. from the 12th Mile stone on the road between Salem and Namant, Salem	5800	3621	2179	Budget No. of 1858/59 No. 444.
	412	Do. a road from Adamancottah on Trunk road No. 5 to the Railway station at Mulla-poorum, Salem	15280	"	15280	Do. No. 447

Nature of the Work &c	No.	Description of work.	Estimated Cost	Computed Amount of funds required to 30th April 1859.	Amount to be provided for in 1859/60	Remarks
		II Public. (Cont.)				
		L. Communication (Cont.)				
Metalled Road.	413	Repairing the road from Salem to the borders of the District towards Trichinopoly. Salem	10,000. 1,480 500	8439	3541	Budget No 2 of 1858/59 No 450.
	414	Constructing a road to connect the town and Railway Station at Vaneembady including the necessary alterations of Trunk road No 1, Salem	7,500	5000	2,500	Do No 451
	415	Improving the road from Dharampoory to Moogoonoor. Salem	4200	2,000	2,200	Do No 452
	416	Do the Salem and Yercaud Cattle Ghaut. Salem	1500	2	1500	Do No 453
	417	Constructing a road to connect the two Cusbah towns of Nammel & Trichengode, Salem	3000	"	3000	
	418	Do a road to connect the town and Railway Station at Salem. Salem	11,100	"	11,100	
	419	Junction road from Coperanagady to Buntwal. Canara	8081	962	7119	Do No 454
	420	Tracing a new Ghaut and road from Yellapoor to the Southern bank of the Black river. Canara	5000	3617	1383	Do No 455.
To be modified to scheme also for a portion of Estl 24 for 1858 to 2504	422	to Sirsy. Canara	20426	16192	4234	Do No 456
	423	Road from the Town of Coompta to the Sea Coast. Canara	34996	"	"	Do No 457 Tenders for labor
	424	Metalling the Sunnajee Ghaut. Canara	2069	1737	332	Do No 460
	425	Improving the Charnmudy Ghaut. Canara	17,200	11200	6000	Sanctioned as emergent
	426	Road from Calicut by Beypoor, Condotty, Mallapoorum, Angadypoorum and Manar to Mundoor on Trunk Road No 1 to Palghaut. Malabar	6,000	"	6000	
	427	Improving road from Vadakancherry to Tattamungalum, Malabar	52083	40498	11585	Budget No 2 of 1858/59 No 461
			8630	2646	5984	Do No 462

Nature of the Work &c	No.	Description of work.	Estimated Cost	Computed Amount of funds required to 30th April 1859.	Amount to be provided for in 1859/60	Remarks
		II Public. (cont.)				
		L. Communication (cont.)				
Installed Road.	428	Improving road from Mallipoorum to Veroovengady, Malabar	3500	150	"	Budget No 2 of 1858/59 No 463 deferred.
	429	Do from Wandoor to Angady-poorum, Malabar	1570	462	1108	Do No 465.
	430	Do from Toycad to Vyluncoonoo, Malabar	2300	"	"	Do No 467 Deferred
	431	Do from Munjerry to Condoty Malabar	17570	"	"	Do No 468 Do
	432	Do from Tellicherry to Cottiaddy Malabar	5980	"	"	Do No 470. Do
	433	Do from Tambercherry to Napaunum Rs 3600				
		Do Cootyaddy Ghaut and road to Manan-toddy, Malabar Rs 2000	5600	"	"	Do No 471 Do
	434	Improving the old road from Goodalore to the Mysore Frontier near Tippacandoo, Malabar	7500	"	"	Do No 472 Do
	435	Metalling and bridging the road from Vadakancherry to the Cochin frontier, Malabar	3330	"	3330	
	436	Improving the Perumbuddy Ghaut and road on Trunk Road No 4. Malabar	61000	30000	31000	Budget No 2 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 Cives Battery. Madras	23820	20965	2855	Budget No 2 of 1858/59 No 473.
	439	Constructing a road across the Esplanade from the Nursery high road to the Elephant Gate of Black Town. Madras	3430	"	"	Do No 474. Deferred

Constructing

Nature of the Item	No.	Description of work.	Estimated Cost	Completed & unfinished up to 30th April 1859	Amount required for expenditure in 1859/60	Remarks.
		II. Public. (cont).				
		L. Communications (cont).				
Detailed Roads.	440.	Constructing a foot path from the North of Vepery by the Elephant Gate to Black Town, Madras	840	"	"	Budget No 21 1858/59 A 475. Deferred.
		Total Detailed Roads	2425453	847130	391120	

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

Nature of the Item	No.	Description of work	Estimated Cost	Computed Amount of Expenditure required for up to 30th April 1859	Amount required for Expenditure in 1859/60	Remarks.
		II. Public. (Cont^d).				
		L. Communication (Cont^d).				
Unmetalled Roads.	441	Sall road from Mayloor to Tellicherry. Tanjore	2339	"	2339	Budget No. of 1858/59 No. 477
	442	Sall road from Trivencaud to Tanquebar and Sheally. Tanjore	1868	"	1868	D^o No. 478.
	443	D^o from Trivencaud to Neydavasal. Tanjore	1278	"	1278	D^o No. 479.
	444	Tracing a line of road for opening up the Wynaad Country to the Coast by the Tamberchery Pass. Malabar.	10,000	5000	5000	D^o No. 469.
		Total Unmetalled Roads	15485	5000	10485	

Nature of the Item	No.	Description of work.	Estimated Cost.	Computed Amount of Expenditure required up to 30th April 1859.	Amount required for Expenditure in 1859/60	Remarks.
		II. Public. (Cont^d).				
		L. Communication (Cont^d).				
Bridges.	445	Constructing a platform Bridge across the Surplus Channel of the Baddadal Basse Eddeh. Vizagapatam	350	"	"	Budget No. of 1858/59 No. 480. Rejected.
	446	Masonry works on Trunk Road No 6 from Cooberam to Chittavalsa 22½ miles. Vizagapatam	31910	"	"	D^o No. 481. Rejected.
	447	Works in connection with the Bridge across the Chittavalsa river on the high road from Vizianagarum to Bimlipatam. Vizagapatam.	7000	44	"	D^o No. 482. Rejected.
	448	Constructing 3 Bridges on the new road leading from the Town of Vizagapatam to Gumoolavalsa. Vizagapatam	8566	10642	43	D^o No. 483.
		Completing 2 of the above Bridges.	2120			
	449	Bridge &c on the road from Palcondah to Parvatipore and Bobilly Territories Rs. 15,560				
		D^o on the road from Palcondah to Chicacole. Serpilly ——— Rs. 20743				
		Superintendence for both roads. Vizag^m Rs. 6176	41478	37350	4128	D^o No. 484.
	450	Bridge of 40 feet across the subsidiary channel for the Inkole and Masulipatam road, Masulipatam	7500	"	"	D^o No. 485 Deferred.
	451	Timber Bridge over the Aniemb across the Kistna river. Guntoor.	199931	151760	"	D^o No. 486. Rejected.
	452	Masonry Bridges for completing Trunk road No 7 from Copperapaud to Ponnigal. Guntoor	42424	"	"	D^o No. 487. Rejected.
	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	"	"	D^o No. 488. Rejected.

Nature of the Work	No	Description of work	Estimated Cost	Computed Expenditure to 30th 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	7500	"	"	Budget No 2 of 1858/59 No 489. Deferred.
	455	Do of 40 feet near Sandole for the same road and the Coast road. Guntoor	7500	"	"	Do No 490. Deferred.
X	456	Do of 40 feet near Vellatoor for the Coast road. Guntoor	7500	"	"	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 Hundalaroo 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	14,010	835	"	Do No 497. Deferred.
	463	Completing the Trunk road No 11 from Chittoor to Cuddapah Estimate of Rs 1,28,753.				
		Six Bridges of from 1 to 9 arches and fourteen tunnels between Kulloor and Kulendda (portion of the above estimate) Cuddapah	39,142			
		Eight Bridges of from 1 to 11 Arches and thirty tunnels between Kulendda and Goolcheroo (portion of the above estimate) Cuddapah	55,742	13,300	"	Do No 500 & 501. Deferred. The remaining portion of the Ground Estimate No 33869 is entered in next Year And vide items No 477 & 478.
	464	Constructing a rough stone apron below the Rolla bridge and for an additional apron in front of the Rolla embankment. Cuddapah	1070	"	1070	Budget No 2 of 1858/59 No 502

Nature of the Work	No	Description of work	Estimated Cost	Computed Expenditure to 30th 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 505.
	466	Constructing a Bridge over the Pennair River on Trunk Road No 12 near Oodersedroog. Bellary	35280	9353	"	Do No 514. Defered.
	467	Bridging the road from Turnagul to the foot of the Ramandroog Hills. Bellary	24380	300	"	Do No 515. Defered
	468	Bridging the Bellary & Humpsagur Road. Bellary	59260	19	"	Do No 516. Defered
	469	Constructing a Bridge over the Moodlapoorvunka. Bellary	7480	"	"	Do No 507. Defered.
	470	Constructing a Bridge across the Nullah near Coodoteny on the Road from Coodoteny to Darojee Bellary	2650	"	"	Do No 508. Defered
	471	Constructing a Bridge across the Nullah near Timmapoor on do Bellary	4710	"	"	Do No 509. Do
	472	Bridge across the Koondaur on the road from Kurnool to Nundicummum. Kurnool	13,263	10467	2796	Do No 510.
	473	Bridging the road from Kurnool to Bellary Frontier near Kodumoor. Kurnool	22,110	5186	"	Do No 512 Defered
	474	Constructing three Bridges on the road from Kurnool to Nundy Cumma. Kurnool	9700	"	9700	Do No 513.
	475	Widening the Marmalong Bridge Chinglepet	21400	"	"	Do No 518. Defered.
	476	Constructing a tunnel Road Dam &c on that portion of the Cuddapah road which lies between the Railway Station at Darumbode & Trivellore Chinglepet	650	"	650	

Constructing

Nature of the Item	No.	Description of work	Estimate Cost	Computed Amount of Expenditure upto 30th 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 Outtoor river on Trunk road No 11 portion of Estimate Rs 128,753. North Arcot	12,482	"	"	Budget No 2 of 1858/59 No 5 Page 167 517. Deposit. The other portion of the general Estimate viz. Rs 94884 is entered in Cuddapah vide items No 463.
	478	Constructing a Bridge of 20 arches of 30 feet span across the Cuttavoontah river on Trunk road No 11 portion of Estimate Rs 128,753. North Arcot	21,387	"	"	
	479	Nine Bridges on the Outtoor & Hurlumbandy road. North Arcot	21,426	"	"	Do No 518. Deposited.
	480	Constructing a Bridge of 6 arches over the Head Sluice of the Converay Trunk channel. North Arcot	5,700	"	"	Do No 519 Deposited
	481	Do a Bridge of 3 arches over the Mylendrawaddy channel. North Arcot	3,700	"	"	Do No 520. Do
	482	Do of 5 Do over the Cheekeramelloor Channel. North Arcot	5,000	"	"	Do No 521. Do
	483	Building a Bridge of 53 arches across the Palaur in connection with the Anicut. North Arcot	94,400	"	"	Do No 522. Do
	484	Masonry works on the road from Vayeery to Kurlumbandy North Arcot	6,102	5022	1080	Do No 523
	485	Bridge over the Guddelum on Trunk road No 8. South Arcot	12,219	231	"	Do No 524. Do
	486	Bridge over an arm of the Ponnyar called the Mullatar and inclosing a creek. South Arcot	5,165	2565	2,600	Do No 525.
	487	Constructing 2 Bridges on the Road from Colundoorpet to Caluvoorlay	12,100	2544	"	Do No 526. Deposited
	488	Bridge over the Ponnar on Trunk road No 8. South Arcot	106,333	"	"	Do No 527 Do
	489	Bridge over the Ponnyar on Trunk road No 9. South Arcot	46,901	156	"	Do No 528. Do
	490	Bridge over the Guddelum on Trunk road No 9. South Arcot	25,869	265	"	Do No 529. Do
	491	Bridge over the Vellaur near Bowanapurry. South Arcot	35,020	367	"	Do No 530. Do
	492	Bridge over the Maroonootamuddy river at Virdachellum on the Cuddalore and Salem road. South Arcot	20,000	155	"	Do No 531. Do

Nature of the Item	No.	Description of work	Estimate Cost	Computed Amount of 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	20,570	1993	"	Budget No 2 of 1858/59 No 532 Deposited
	494	Construction of a Bridge over the Coleroon on the Southern road between Chellumbrum and Sheally — Rs 130,000 Deduct Sanctioned from Pagoda Funds — Rs 92,000 — 38,000				
		Supplemental Estimate for the above. Tanjore	25,000	63000	60739	2261 Do No 523.
	495	Constructing a Bridge across Moodievendan at Sheederkummungalum Tanjore	1,750	"	"	Do No 534. Deposited
	496	Bridge across the Adustpaur on the road from Negapatam to Point Calimere Tanjore	15,107	3375	"	Do No 536. Do
	497	Bridge across Nunnycarroyaur Tanjore	2242	"	2242	Do No 537.
	498	Bridge across the Nursoonaur on the road between Tanjore and Puttoocottah. Tanjore	3300	734	2566.	Do No 538.
	499	Do between Puttoocottah and Manargoody. Tanjore	4200	1696	2504	Do No 539.
	500	Do between Puttoocottah and Mootoopettah Tanjore	4800	2435	2365	Do No 540.
	501	Do between Manargoody & Adumpatum. Tanjore	7600	3042	4458	Do No 541.

Nature of the Item	No	Description of work.	Estimated Cost.	Computed Expenditure required up to 30th April 1859.	Amount Expenditure required for 1859/60	Remarks.
		II. Public. (Cont^d).				
		L. Communication (Cont^d).				
Bridges	502	Bridge across the Vellaur on the road between Codavasul & Coodalcairy. Tanjore ——	10,900	5058	5842	Budget N^o of 1858/59 N^o 543.
	503	Bridge across Moodicondaur on the road from Nachiarcoil to Nunnelum with several tunnels. Tanjore ——	10830	"	5830	D^o N^o 544.
	504	Bridge across the Vennaur on the road from Tanjore to Valangaman. Tanjore ——	19,500	"	9500	D^o N^o 545.
	505	Enlarging Munnyaur Bridge on the road from Shealy to Madras. Tanjore ——	2500	"	2500	D^o N^o 546.
	506	Constructing a Bridge of 7 arches over the Causeway across Moothalymootyauree on the road from Tanjore to Trichinopoly. Tanjore.	6400	"	3000	D^o N^o 547.
	507	Improving a Bridge across the Vodembogy River on the road from Negapatam to Trichinopoly. Tanjore -	1300	"	"	D^o N^o 549
	508	Reconstructing a Bridge of 3 arches across Devanathy river on the road from Negapatam to Tanjore Tanjore ——	4500	"	"	D^o N^o 548.
	509	D^o across the Vundyaur on the road from Trangubar to Shealy. Tanjore —	1470	"	1470	D^o N^o 550.
	510.	Constructing Masonry works on the road from Kotoor				

Nature of the Item	No	Description of work.	Estimated Cost.	Computed Amount Expenditure required up to 30th April 1859.	Amount Expenditure required for 1859/60	Remarks.
		II. Public. (Cont^d).				
		L. Communication (Cont^d).				
Bridges.		to Shungundy in the Pranar-zgoody and Tritrapoondy Talooks as follows: ——				
		A Bridge of 3 arches across the Moollyaur —— Rs 2400.				
		D^o D^o across the Purmoocondaur — Rs 2820				
		D^o of one arch across the Thalovanaur — Rs 2250				
		Two Bridges across the Poodoopaundyaur & Vunganaur Solaedaur Two Tunnels — Rs 3360				
		One Bridge across the Palumpandy —— Rs 1700.				
		Sundry Tunnels and Small Bridges Vide Tanjore — Rs 2100.	14630	"	7000	Budget N^o of 1858/59 N^o 551.
	511	Constructing a Bridge over the Vellaur on Trunk Road N^o 8 Trichinopoly ——	37,263	"	18000	D^o N^o 552.
	512	Constructing a Bridge across Vuddoocurray Nuttoorvaikal on the road between Serrungum and the Upper Anicut. — Trichinopoly. ——	2200	"	"	D^o N^o 553. dispensed
		Reconstructing the Coodaimoorty Bridge on the Coimbatore road Trichinopoly -	11450	"	11450	

Bridge

Nature of the Item	No	Description of work.	Estimated Cost.	Computed Amount of Expenditure required up to 31st April 1859	Amount required for Expenditure in 1859/60	Remarks
		II. Public (Cont)				
		L. Communications (Cont).				
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	Do over the Shunmooga muddy on road Nº 2 Madura	15425	6244	9181	Do Nº 556
	515	Do of 25 arches across the Vygay river at Madura on the high road Nº 4 from Madras to Travancore Madura	42200	"	"	Do Nº 557 deferred
	516	Bridge across the supplying channel of Manaloor tank on road Nº 2 Tinnevelly	500	"	"	Do Nº 558
	517	Constructing 7 Bridges on the road from Metoopallium to Trichinopoly Coimbatore	11500			Do Nº 559
	518	Do of 8 Bridges on the road from Sattimungalum to Bennary Coimbatore	21600	5160		Do Nº 560
	519	Bridge over the Ambrasaty River Coimbatore	63830	13622		Do Nº 561
	520	Construction of a bridge over the upper stream of the Sunganoor Nullah Coimbatore	3000	"	"	Do Nº 562
	521	Building a Truss Bridge across the Bellaul stream on the segoor Chaut, Coimbatore	2200	1000	"	Do Nº 564

Brought forward 1,99,083 3,74,612 1,26,946

Nature of the Item	No	Description of work.	Estimated Cost.	Computed Amount of Expenditure required up to 31st April 1859	Amount required for Expenditure in 1859/60	Remarks
		II. Public. (cont)				
		L. Communications (cont).				
Bridges.	522	Constructing 2 Bridges on the road from Coimbatore to Metoopallium, Coimbatore	6240	193	"	Budget Nº 2 of 1858/59 Nº 565 deferred
	523	Do Woodyapully Bridge Salem	1332 10 8	"	"	Do Nº 568 Do
	524	Do a Bridge on the Peryagraum nullah between Tripatore and Kistnagherry Salem	720	"	"	Do Nº 569 Do
	525	Do a Bridge over the supplying stream of the Luddanaddy tank on the Muddagherry and Bangalore road Salem	630	"	"	Do Nº 570 Do
	526	Do a Bridge over the Vellaur river at Tullavapel on the Salem and Cuddalore road Salem	8000	"	"	
	527	Do a Bridge over the jungle stream at Shashene's Choultry on the Salem & Cuddalore road Salem	1800	"	"	Do Nº 572 Do
	528	Do a Bridge over the Hullaur river near Hurroor on the Salem and Dharampoory road, Salem	3500	"	"	Do Nº 573 Do
	529	Do a Bridge over a Jungle Stream on the Oosoor and Bangalore road Salem	11400	"	"	Do Nº 574 Do
	530	Do a Bridge over the Vapalitta river near Vaniembaddy on Trunk road Nº 1, Salem	2040	"	"	Do Nº 576 Do
	531	Bridges on the new Guerzappah Ghaut and road from its head to the junction with the Siddapoor & Talgoopah lines near Kodkury, Canara	25996	1320	"	Do Nº 577 Do

Brought forward 3,74,125 1,26,946

Nature of the Item.	No.	Description of work.	Estimated Cost.	Computed Amount of Expenditure required for 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 Cafsergode road, Canara —	2640	2544	96.	Vide Letter No. 2 of 1854 & 57. 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 2½ miles) Canara	6000	"	6000	
	534	Bridge over Vidakanckerry & Hanady Rivers, improving the road from Pandyhaut to Trichoor and repairing and improving Cranck roads. Malabar —	49061	8782	.	Do. No. 581 of 1858
	535	Constructing 3 Bridges on the road from Cotecanand to Avalaucka, Malabar —	2190	"	"	Do. No. 582 Do.
	536	Do. Culputty Bridge near Palghaut, Malabar —	20000	"	"	Do. No. 584 Do.
	537	Completing the Poraparamba Canal Bridge and Kernellaor Sluice, 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 Thome, Madras —	4760	"	"	Do. No. 587 Do.
		Total Bridges — —	185362	83869	57129292	

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

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

Nature of the Item	No	Description of work.	Estimated Cost.	Computed Amount of Expenditure required up to 30th April 1859.	Amount required for Expenditure in 1859/60.	Remarks
		II. Public. (cont^d).				
		L. Communications (cont^d).				
Boat Bridges Ferries.	539	Forty seven crossing places on the Coconada & Samul. Cottah Channels. Rajahmundry.	5520	"	"	Budget Rs 2 of 1858/59 p. 684 Deferred.
	540	Building 80 Ferry boats (40 large & 40 small) for the Kistna Channels Guntoor.	14000	4100	"	D^o p. 590. Deferred.
	541	Constructing 10 Cargo boats for conveying materials to the Delta works in the Kistna D^o. Guntoor.	10000	"	5000	D^o p. 591.
	542	Constructing 17 Ferry boats for the rivers on Trunk Road N^o 6. Nellore	5550	"	5550	
	543	D^o Paddle Ferry boat for the Cheppelairoo Nellore	160	"	160	
		Total Boat Bridges & Ferries	35230	4100	10710	

Nature of the Item.	No	Description of Work.	Estimated Cost	Computed Amount of Expenditure required up to 30th April 1859.	Expenditure required for 1859/60	Remarks.
		II. Public. (Cont^d).				
		L. Communication (Cont^d).				
Navigable Canals.	544	Excavating a navigable Canal from the Nowpada Salt pans to the port of Calingapatam Gangaud.	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 Inogulatore to Cocanada. Rajahmundry	122357	"	"	Do No 594. Deferred.
	547	Canal from Samalcottah to Cocanada. Rajahmundry	117339	98213	19126	Do No 595.
	548	Erecting a dock and a Calingalah in the Cocanada Canal between Chintapilly and Madapand Locks. Rajahmundry	12430	"	"	Do No 596. Deferred.
	549	Constructing a Lock in the Nagarum Calook	Rs 4010			
		Do Calingalah in Do	Rs 1670			
		Do an Aqueduct in the Nagarum Calook at Kaddalay	Rs 4720			
		Do Do in Do at Chintalapilly. Rajahmundry	Rs 3210	13610	"	Do No 597. Deferred.
		Completing the Narsapore Lock Canal. Rajahmundry	23500	"	"	Recommended for Sanction 9th Nov 1858 No 6232.
	550	Constructing a Lock and Calingalah 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 Bezwarah 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

Nature of the Item.	No	Description of Work.	Estimated Cost	Computed Amount of Expenditure required up to 30th April 1859.	Expenditure required for 1859/60	Remarks.
		II. Public (Cont^d)				
		L. Communications (Cont^d)				
Navigable Canals.	552	Enlarging lock in the Inspedavy channel near Ameenpoor and constructing a bridge over d^o Masulipatam	3250	"	"	Budget No 2 of 1858/59 No 599 Deferred.
	553	Enlarging 3 Locks in the Nizampatam Channel and adding a bridge & road & making the bridges over the Calingalahs divided for wheeled Carriages as well as for foot Passengers Kistnah	20040	"	"	Do No 601. Deferred
	554	Improving water communication between Kistnapatam and Goodoor Nellore	14000	"	"	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 Ameenpoor Covil. Chingleput	72800	12818	"	Do No 608. Do
	557	Extension of Canal from Doogoorazpatam 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. (Cont^d).				
		L. Communications (Cont^d).				
River Improvements.	562	Improving the river and ford of Masulipatam.	14,570	"	"	Budget Estimate of 1858/59 not Delivered.
	563	Restoring the banks of the Coomroy river throughout the Madras limits, Madras	8580	"	8580	
		Total River improvements	23100	"	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. (Cont^d)				137
		L. Communications (Cont^d).				
Magistrates Bungalows.	564	Constructing 1st class Travellers Bungalow with out offices at Chicacole & Nursunnapettah at Rs 1990 @. Gazyaw	3980	"	"	Budget Estimate of 1858/59 not Delivered.
	565	Do Do at Berhampore Gazyaw.	2180	"	"	Do Rs 614. Deferred.
	566	Do 2^d Class Do at Ichapore Gazyaw	1520	"	"	Do Rs 645. Deferred
	567	Do Do at Caliagapatam Gazyaw	1350	"	"	Do Rs 646. Deferred
	568	Constructing 2^d class Travellers' Bungalow on the North Bank of the Kistnah on the Coad road branching from the Trunk Road, Masulipatam	2000	"	"	Do Rs 618 — Do
	569	Constructing a 2^d Class Travellers Bungalow at Pedaiet. Cuddapah	2020	"	2020	Do Rs 620.
	570	Building 5 Travellers' Bungalows on Trunk Road No 9 between Vicravandy & Lower Coleroon Anicut. South Arcot	10000	627	"	Do Rs 622. Deferred
	571	Erecting a Travellers' Bungalow at Oolundoorpett, South Arcot	3000	"	3000	
	572	Repairing & improving the Travellers' Bungalows at Alpanoor and Kyloor 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 Rs 624. Deferred
	574	Constructing a Travellers Bungalow at Ammapett Tanjore.	1750	"	"	Do Rs 625. 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. (Cont.)				
		L. Communications (Cont.)				
Staging Bungalow	575	Constructing a Travellers' Bungalow at Perugaumuny on the Carvor Road along the South bank of Cauvery. Estt. Rs 2250 Deduct for available materials to be appropriated from the old Bungalow at Gunzaverum Rs 200. Do value of land Trichinopoly Rs 252.	452			
576		Constructing a Travellers' Bungalow at Lalapettah on the same road. Estt. Rs. ___ 2,250. Deduct for available materials to be appropriated from the old Bungalow at Vodiarpolium Rs 200. Do value of land Trichinopoly Rs 252.	452	1798 "	1798	Budget No 2 of 1859/60 No 626.
577		Constructing a Travellers' Bungalow at Voyillagoondalloor on the Salem Road along the North bank of Cauvery, Trichinopoly ___	1798	1798		Do No 627.
578		Do a Travellers' Bungalow at Padaloor on Trunk Road No 8. Trichinopoly. Rs 2,250 Deduct value of land. Rs 252	2250	2250		Do. No 628.
579		Constructing a Choultry at Toopoor for the use of Native Travellers. Salem ___	1998	1998		Do No 629.
580		Do at Adeemaucottah on Trunk Road No 5 for Native Travellers. Salem ___	4000	4000		Do No 637
			1000	1000		Do No 638

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.)				
Staging Bungalow	581	3rd Class Bungalows on the road from Hullial and Irugavaree 1/4 mt at Rupees 704 1/2 each. Canara ___	4225	"	"	Budget No 2 of 1859/60 No 639. Deferred.
	582	Travellers Bungalow at Sedasheguer Canara ___	2090	"	"	Do No 640. Deferred.
	583	Constructing a Travellers' Bungalow at Guersappah. Canara	13170	"	"	Do No 641. Deferred.
	584	Erecting a Moosafforkhana 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 Mallapoorum 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	68575	828	24000	
		Total Communications	5,28,266	15,76,665	5,97,013.	

Nature of the Work	No.	Description of work	Estimated Cost	Amount required for expenditure up to 31st March 1859	Amount required for expenditure in 1859/60	Remarks.
		II. Public. (cont.)				
		L. Communication. (cont.)				
Staging Bungalows						

Nature of the Work	No.	Description of work.	Estimated Cost	Estimated time for completion	Estimated Expenditure for 1859/60	Remarks
		II. Public. (cont.)				
		M. Railway	None.			
		N. Electric Telegraph.	None.			
		Total Public	97766743256745924172			√
		Grand Total of State and Public	130116224642401.2151488			√

Nature of the Service	description of work	Estimated Cost	Expenditure to 30th April 1859	Estimated expenditure for 1859/60	Remarks
	K Public (Contd.)				
	K Electric Telegraphs				

Abstract.

Class.	Section.	No. of works.	Estimated cost.	Corrected Expenditure up to 30th April 1859.	Estimated expenditure for 1859/60.
I. State.	A. Military	10	28,11,055	12,37,305	10,80,795.
	B. Naval.	3	3,660	1,250	2,410.
	C. Judicial.	26	90,350.	30,441	59,909
	D. Revenue	37	1,00,773	39,405.	35,128.
	E. Ecclesiastical	12	20,690	8,986	11,704.
	F. Educational	1	1,000	500.	500.
	G. General	39	2,07,420	67,769	36,870
	Total State	69	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	43,71,816	16,37,206	318,623.
	L. Communications	268	52,83,656	15,76,605	597,013.
	M. Railway	"	"	"	"
	N. Electric Telegraph	4	"	"	"
	Total Public	417	97,76,674	32,56,745	924,172.
	Grand Total of State & Public.	536	130,11,622	46,02,401	2,51,488.

Repairs				Ground 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	42881
180000	30684	4000	214684	213840	49810	12985	276636
140000	33992	14000	187992	223660	78162	24420	326242
60000	10000	4000	74000	107540	15000	6043	128583
180000	46910	5400	232310	193528	90920	6105	290553
55000	61185	5000	121185	66482	71070	10356	147908
100000	78735	9594	188329	119123	78735	57048	254906
29000	28732	3600	61332	29000	87098	12963	129861
60000	149377	13390	222767	101526	199719	26136	327381
50000	77955	11500	139455	62301	102218	20810	185329
85000	59225	3000	147225	87810	83185	22782	193777
263500	32293	4910	300703	270290	95851	6468	372609
114000	33626	7000	154626	131100	61626	19684	212410
62000	33472	1800	97272	62000	76340	6185	144525
78000	47100	5082	130182	82491	88744	13277	184512
90000	60970	9000	159970	54436	111361	27700	194497
94000	47421	1720	103141	54930	88721	7503	151154
"	72692	10300	82992	"	100406	34788	134894
800	29820	12910	43530	800	118587	42971	162358
1520	3020	39294	43834	3265	120006	48751	64022
"	"	100000	100000	"	64111	24776	35310
"	24397	"	24397	"	24397	"	24397
"	"	5000	5000	"	"	331090	331090
"	"	4500	4500	"	"	120767	120767
"	3050	3510	6560	"	30550	355620	350670
96120	1001675	288510	2006305	1910832	1739971	1506263	5236966

Recapitulation

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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	"	"		"	3,410	36,231	10,135	49,776	3,410	36,231	10,135	49,776
2	Vizagapatam	"	"	"	"	"	16,704	2,892	19,596	"	16,704	2,892	19,596
3	Rajahmundry	"	"	"	"	33,840	19,126	8,985	61,951	33,840	19,126	8,985	61,951
4	Masulipatam	"	"	"	44,170	83,660	"	10,420	94,080	83,660	44,170	10,420	138,250
5	Guntoor	"	44,170	"	"	47,540	5,000	2,043	54,583	47,540	5,000	2,043	54,583
6	Nellore	"	"	"	"	13,528	44,010	705	58,243	13,528	44,010	705	58,243
7	Cuddapah	"	"	"	"	11,482	9,885	5,356	26,723	11,482	9,885	5,356	26,723
8	Bellary	"	"	"	"	19,123	"	49,454	68,577	19,123	"	49,454	68,577
9	Kurnool	"	"	"	"	"	59,166	9,363	68,529	"	59,166	9,363	68,529
10	Chingleput	"	"	"	48,100	44,526	2,242	12,746	59,514	44,526	30,342	12,746	104,614
11	North Arcot	"	48,100	"	"	12,301	30,263	9,310	51,874	12,301	30,263	9,310	51,874
12	South Arcot	"	"	"	"	2,810	23,960	19,782	46,552	2,810	23,960	19,782	46,552
13	Tanjore	"	"	"	"	6,790	63,558	1,558	71,906	6,790	63,558	1,558	71,906
14	Trichinopoly	"	"	"	"	17,100	28,000	12,684	57,784	17,100	28,000	12,684	57,784
15	Madura	"	"	"	24,000	"	18,860	4,386	23,253	"	42,868	4,305	47,253
16	Tinnevelly	"	24,000	"	"	"	49,330	8,195	57,330	4,491	41,644	8,195	54,330
17	Coimbatore	"	"	"	10,136	4,491	41,644	8,195	54,330	14,436	50,391	18,700	83,527
18	Salem	"	10,136	"	"	14,436	40,255	18,700	73,391	930	41,300	5,783	48,013
19	Canara	"	"	"	"	930	41,300	5,783	48,013	"	27,444	21,488	51,902
20	Malabar	"	"	"	30,000	"	27,444	21,488	51,902	"	88,767	30,061	118,828
21	Madras { Civil architect, Garrison Engineer, Municipal Commissioner }	"	30,000	"	"	"	58,767	30,061	88,828	1,745	89,86	9,457	20,188
		"	"	"	"	1,745	8,986	9,457	20,188	"	6,411	246,776	253,187
22	Mysore	"	"	"	"	"	6,411	246,776	253,187	"	"	"	"
23	Bycherabad Sir F. Beaumont's	"	"	"	"	"	"	326,090	326,090	"	"	326,090	326,090
24	Jaulcantallee	"	"	42,767	42,767	"	"	73,500	73,500	"	"	116,267	116,267
		"	"	"	"	"	"	352,118	352,118	"	"	352,118	352,118
	Total	"	156,406	42,767	199,173	314,712	581,790	1,254,986	2,151,488	314,712	738,196	1,297,753	2,350,661

Budget Statement

No. 1.

of

1859/60.

Index for Budget No. I.

District	No. in the Budget	Work.	Amount of the Estimated Cost.	Amount required for the expenditure of 1875/76.
Vizagapatam Division.	32. C.	Bridges on Trunk Road No 6	4,220	"
	29. C.	Road from Parvatipoor to Jeypoor	150,000	"
Masulipatam Division.	12. I.	Diverting the Moffedavy channel & Masulipatam &c.	145089	"
	14. C.	Portion of Trunk Road No 6	100,800	"
	15.	Road from Stampatam & Nizam's frontier	44,170	44,170
	16.	Road from Madulipatam to Stampatam	14,000	"
Kurnool Bellary Division.	17. C.	Portion of Trunk No 6	132,800	"
	35. C.	Road from Venkatarazapett to Royachoty	41,300	"
	38.	Road from Royachoty to Poonganoor	48,100	"
	2. B.	Married Quarters for the European Infantry at Bellary	11,700	"
	33. C.	Bridges over the Yanalair river, Pullaroo 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	25330	"
	18.	Repairing a portion of Road No 6	48100	48100
	19. B.	Central Prison at the Red Hills	163,200	"
Chingleput. Red Hills.	19. C.	Road from Chittoor to Gowriattum	57,734	"
	3. B.	Barracks &c. for European Infantry and Artillery	2,73,790	"
	~~1.~~	~~Anicut across the Poonpair~~	~~6,000~~	
	20/29/2 C.	Portion of Trunk Road No 9 with bridges	27,120	"

District	No in the Budget	Work.	Amount of the Estimates for Coll.	Amount required for the expenditure of 1859/60
Canjore.	13. I.	Dam across the Cauvery & a River	40,000	"
	C.	Bridges on road from Caupanasaum to Caridalum		
	35.		41,880	"
Madura.	21. C.	Road No 6 from Madura to Camootchee	10,200	"
	22.	Road from Dindigul to the Ambravally river	24,000	"
	23.	Repairing & a high road No 4	74,250	24,000
	24. C.	Repairing &c. part of the main road No 4	25,310	"
Coimbatore & Trinopoly.	25. C.	Road & a between Coonoor & Polaeamund.	32,000	10,000.
	26.	Metalling 76 miles of Trunk Road No 5	32,580	"
Madras.	27. C.	Road from Nellore to Shedasiegar	126,400	"
Nilgherries.	28. C.	Completing the road from Calicut to Palghaut	88,830	30,000.
	11. B.	General Post and Electric Telegraph Office with an Exchange Hall	18,000.	"
	1.	Repairs to the Fortifications of Fort St George	160,950	"
	7.	Additions &c. to the Gun Carriage Manufactory	98,100.	"
	8.	Range of Buildings for making Menie Mullets &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	27,200	27,200.
Fort St. George.	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 Estimates for Coll.	Amount required for the expenditure of 1859/60
Nilgherries	6. B.	Sen ranges of married men's quarters for the European Infy & Artly at Secunderabad	180,300	"
	5.	School room &c. to the Trincalgherry Barracks	42,764	42,764.

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 portion of the Fortifications of Fort Saint George.				
		22 Estimates amounting to Rs. 1,44,84/0				
		Deduct one Estimate for constructing a tunnel within the Fort sanctioned by this Govt on Emergency Rs. 11,260				
		Do Six Estimates Sanctioned by the Supreme Government amounting to Rupees 27,620			27,620	
					28,7520	
		Fifteen Estimates awaiting Sanction	1,16,950	"	"	
		Total Fortifications	1,16,950	"	"	
Accommodation for Troops.	2	Constructing Married Quarters for the families of the European Infantry at Bellary	1,16,700	"	"	
	3.	Constructing Barracks for 2 Companies of European Infantry and Artillery in the Men's Buildings at Vellore Rupees	1,53,000			
		do 4 Married Officers or Captains & Subalterns Quarters &c at do	"	50,300		

Budget list of 1858/9 not recommended by the Honorable Court of Directors Vide para 6 Major Norman's letter dated 23rd Sept 1858 No 46 bob. The report requiring in Captain Yule's letter of 18th January 1858 No 24 has been called for from the Chief Engr

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			
			273,790	"	"	
		Erecting Glomades in the lower and upper Verandahs and a portion of the East side of the Mutton range in the Court yard and along the entire Eastern and Southern faces of the Eastern and Southern external rangel of the European Barracks in Fort Saint George	40,000	1 Year	40,000	
		Erecting Native Commissioned, non Commissioned Officers and Sepoys lines at the work of Black Town and constructing the necessary new buildings at the Screw Godown near to Seven Wells, for the occupation of the Madras Sapper Militia	240,000.			
		Adding a wing to the Native Veteran Battalion Hospital for the Sapper Militia	2,600			
			242,600	1 Year	242,600	
		Erecting Native Commissioned, non Commissioned Officers and Sepoys Lines, Hospitals &c. in the Landen's Garden on the Ponamallee 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		Improvements to the Foot Artillery Barracks at Bangalore	106600	1½ year	"	
	5	Constructing a School room with School Masters Quarters and out offices attached to the Trimulgherry Barracks near Secunderabad —	38067.			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 Item of Rs 4700
		Do an Armourers Work Shop in connection with the same Barracks	4700			
			42767	1 year	42767.	
	6.	Constructing 10 Ranges of married Head quarters in connection with the European Infantry Barracks at Secunderabad.	180300	2 years	"	
		Total Accommodation for troops.	179057	"	42764.	
Ordnance	7.	Additions and improvements to the Buildings of the Gun Carriage Manufactory at Madras &c. -vide accommodation for working the Steam Machinery received from England	98100	1 year.	"	Vide page 6 of the Report of the Board of Ordnance in para 6 of their Letter dated 23rd Sept 1858 No 2060. are under the consideration of Govt. in the Military Dept. and a Million of Rupees is proposed for 1859/60.
	8.	Erecting a range of Buildings on the site of the old Mouth of Connection in one of the Bastions of the Black Town Fortification as a Factory for making Minnie Bullets, Friction Tubes, Detail &c. Rupees	27,000.			
		Construction of a loop holed wall with Banquette in front of the entrance to the Minnie Bullet Factory and the clearance of a considerable space inside by the removal of certain buildings	13,000	40000 2 Years	"	Do Do Do
		Total Ordnance	138100	"	"	Do Do Do

Nature of the Items	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	15,240	"		Budget Est of 1858/59 Nos. The Estimates of the Govt of India in para 6 of Major Stracheys letter of 23d Sept 1858 to 4866 are under the consideration of Govt in the Military Dept
		Total Stud	15,240	"	"	
		Total Military	21,75,447	"	62,767	
		B. Naval.	None.			
Jails	19	C. Judicial. Constructing Central Prison at the Red Hills Madras	1,63,200	2 Years	"	Submitted to Govt of India with letter dated 11th May 1858 para 23 but subsequently deferred by that Government at the recommendation of Major Stracheys letter dated 23 Sept 1858. Rs 1,63,200.
		Total Judicial.	1,63,200	"	"	
		D. Revenue	None.			
		E. Ecclesiastical	None.			
		F. Educational	None.			
		G. General.				
Government Bs		Constructing a new General Post and Electric Telegraph Office with an Exchange Hall at Abercombie's Battery on the north beach Madras.	187,000	2 Years	"	Budget Est of 1858/59 Rs 8. The original proposed site of Abercombie's Battery is now objectionable & special report on this project will be submitted hereafter. Reappropriation was allowed for 1858/59 for the reasons explained in the Report.
		Total Government	187,000	"	"	
		Total General.	187,000	"	"	
		Total State	25,25,647	"	62,767	

Nature of the Items	No	Description of work.	Estimated Cost.	Estimated time for completion.	Estimated Expenditure for 1859/60.	Remarks.
		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 Mopedavy channel to the town of Madulipatam and constructing a branch to Wandapollam on a navigable arm of the Kistnah, Madulipatam	165089	3 Years	"	
		Constructing an Anicut across the Sonnyaur in the limits of Inuradoor for the supply of the Rajanier, Mullatam, Muradoor & Sea channels South of Ist.	61000	"	"	Budget Est of 1858/59 Nos. Not sanctioned by the Govt of India vide para 7 of Major Stracheys Letter of 23d September 1858 Nos 1.
		Constructing a regulating Dam across the Cauvery and Veerasholen river at the head of the latter river at Sargore.	40000	2 Years	"	
		Total Irrigation Canals	185089	"	"	
		Total Agricultural.	185089	"	"	
		I. Communications				
Metalled Roads	16	Constructing a portion of Trunk Road No 6 from Bezwarah to Bendalore, a distance of 40 miles Madras	108,000	3 Years	"	Budget Est of 1858/59 No 16. Ordered by the Govt of India to commence forthwith vide para 7 of Major Stracheys Letter of 23d Sept 1858 Nos 4 Pol.

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 Srahimpatam to Nizam's Frontier Records Estimate Rupees - Masulipatam 10,000 2 Original - do - sanctioned Item No 4 of Budget No 2 of 1856/57 Rupees 55,832				Budget Not of 1858/59 No 8. do - do Early sanction is solicited to this and the following items vide Chief Engr's report on the Projects
	16.	Constructing the road from Masulipatam to Srahimpatam on one of the embankments of the Canal from Masulipatam to Bezwarah and on the river Dykes above the latter place, Masulipatam	144,170	1 year	144,170	
	17.	Constructing portion of Trunk Road No 5 from Guntoor to Inkole, a distance of 42 miles, Guntoor	132800	"	"	Budget Not of 1858/59 No 9 Ordered by the Govt of India to be over for more favourable time vide para 7 of Major Stratchey's letter of 23d Sept 1858 No 4606.
	18.	Remetalling a portion of Trunk Road No 5. Chingleput	48,100	1 year	48,100	
	19.	Road from Chittoor to Gooriattum North Arcot	57,734	5 years	"	Budget Not of 1858/59 No 5. Ordered by the Govt of India to await more favourable times - vide para 7 of Major Strachey's letter of 23d Sept 1858 No 4606.
10/1		Metalling and gravelling 16 miles of Trunk Road No 9 between Saupurumpet and the Coleroon North Arcot	24,900	2 years	"	Do Do No 17 Do Do Do Do the remaining portion of estimate entered under the Budget No as below
	20.	Formation of road No 6 from Madura to Cannatheer Madura	101,250	3 years	"	Do Do No 19 Do Do Do
	22.	Improving Road No 2 from Dindigul to the Ambrasetty 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				
		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	Budget No 1 of 1857/58 No 21 Ordered by the Govt of India to await more favourable times vide para 7 of Major Strachey's letter of 23 Sept 1858 No 4606.
	24.	Repairing and improving part of the main road No 4 from Madras to Travancore Tinnevelly	25,310	2 years	"	Budget No 1 of 1857/58 No 22 Ordered by the Govt of India to await more favourable times vide para 7 of Major Strachey's letter of 23 Sept 1858 No 4606. Application made in letter of 2d Dec 1858 No 2593 for an outlay of Rs 10,136.
	25.	Metalling the road and constructing parapet walls bet between Coonoor, Jackatallah and Potteamund Coimbatore	32,000	2 years	10,136.	
	26.	Metalling 7½ miles of Trunk Road No 5 from Walliar to Bowany, Coimbatore	32,500	2 years	"	Do Do No 2023. Ordered by the Govt of India to await more favourable time vide para 7 of Major Strachey's letter of 23d Sept 1858 No 4606.
	27.	Completing the road from Hullical to Shedasegaram via the Singaravara Ghaut, Lauasa	12,400	"	"	
	28.	Completing and bridging Road from Calicut to Saulghaut via Moondoor Malabar	88,830	3 Years	30,000.	
		Total Metalled Roads.	1,961,944	"	1,56,406	

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				
Unmetalled Roads.	29	Construction of a Cartroad from Parvatipoor to Joypoor 64½ miles Rupees	50,000	"	"	
	30.	Road from Venkatarayanpatty to Rayachoty Cuddapah do	41300	2 Years	"	Budget No 1 of 1858/59 No 25 Ordered by the Govt of India to remain in abeyance vide para 8 of Major Stratey's letter of 23d Sept 1858 No 4606.
	31.	Constructing a 2d Class road from Rayachoty to Poonganoor. Cuddapah	48,100	4 Years	"	Do Do No 27 Do Do Do
		Total Unmetalled Roads	239400	"	"	
Bridges	32	Constructing Bridges on Trunk Road No 6 from Chittoor to Kanthoshapooram Rupees	23490.			Budget Dist of 1858/59 No 28. Ordered by the Govt of India to remain in abeyance vide para 8 of Major Stratey's letter of 23d Sept 1858 No 4606.
		do do do from Kanthoshapooram to Dendagedda near Itchapoor Ganjam Rupees	23430.	4/220	3 Years.	"
	33.	Constructing a Bridge of 9 Arches across the Yarnalair river on the Northern line of road Rupees	35000.			
		Constructing a bridge over the Pilly Vaugoo on the Northern line of road near Cuttack Rupees	1640			
		Constructing a bridge over the Suggalairoo River at Gudalore on the Northern line of road between Cuttack and Pandy Ganjam Rupees				

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				
Bridges Continued		Constructing a bridge across the Pullavanpoo Stream between Ongole and Kalluru Cuddapah Rupees	6800	46990	3 Years	" Budget Dist of 1858/59 No 29. Ordered by Govt of India to remain in abeyance vide para 8 of Major Stratey's letter of 23d Sept 1858 No 4606.
	34.	Constructing a bridge of 58 Arches over the Causeway across the Palaur near Chinglepat on Trunk Road No 8. Chinglepat		47780	4 Years	" Budget Dist of 1858/59 No 30. Ordered by Govt of India to remain in abeyance vide para 8 of Major Stratey's letter of 23d Sept 1858 No 4606.
	35.	Constructing a bridge across Poriel Chengal Doab	1380.			
		do Chinna do do	840	2220	2 Years	" Budget Dist of 1858/59 No 31 Ordered by the Govt of India to await more favorable time vide para 8 of Major Stratey's letter of 23d Sept 1858 No 4606.
	35.	Completion of the road from Pauparapalum to Cavelitalum Bridge across the Cauvery No.	14,500.			Budget Dist of 1858/59 No 27. Ordered by Govt of India to remain in abeyance vide para 8 of Major Stratey's letter dated 23d Sept 1858 No 4606.
		do across the Arasalaur	7150.			
		do Trinelvoyen	5570.			
		do Caramonty	1460.	6,680	4 years	"
		Total Bridges	185890.	"	"	
Navigable Canals.	36.	Excavation of a fresh class tidal Canal from Madras to Sandicherry	3,15,000.	2 Years	"	do do No 33 Not sanctioned by Govt of India vide para 8 of Major Stratey's letter of 23d Sept 1858 No 4606. The work must be postponed for 1858/59 for 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	16,570.			

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 1855/56 No 38. Sanctioned by Govt of India vide para 6 of Major Strachey's letter of 23rd Sept 1858 No 2086.
		Total Navigable Canals		400330.	"	"
		Total Communications		1887564	"	156406.
		M. Railway		None.		
Electric Telegraph		**N. Electric Telegraph.** Electric Telegraph office at Abercrombie's Battery on the North Beach, See Item No M. of this List.				
		Total Public		2072653	"	156406.
		Grand Total of State & Public		4598300	"	199173.
		Amount allowed for isolated works to be sanctioned during the year 1859/60 under Rules III and V. Communicated by the Government of India in their Proceedings of the 31st March 1856 No 1554.				100000.

Abstract.

Class.	Section.	Page of Estimate	Estimated Cost.	Estimated expenditure for 1859/60.
I. State.	A. Military	9	2175447	42767.
	B. Naval.	"	"	"
	C. Judicial	1.	163200.	"
	D. Revenue	"	"	"
	E. Ecclesiastical	"	"	"
	F. Educational	"	"	"
	G. General.	1.	187000	"
	Total State		2525647	42767.
II. Public.	H. Municipal	"	"	"
	I. Marine	"	"	"
	J. Industrial	"	"	"
	K. Agricultural	2	185089	"
	L. Communications	26	1887564	156406
	M. Railway	"	"	"
	N. Electric Telegraph	"	"	"
	Total Public	26	2072653	156406
	Grand Total of State & Public	37	4598300	199173.

Budget Statements

No 42 with their

Indices for

1859/60.

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

Districts	Applied for by the District Engineers for 1858/59 — Irrigation Works	Communications	Buildings	Total	Entered in the Budget for 1858/59 — Irrigation Works	Communications	Buildings	Total	Nuniah Beriz collected in each District during the last Year
Tanjam	40,000	20,000	2,000	62,000	32,800	24,834	2,000	59,634	32,637
Vizagapatam	10,000	7,810	2,000	19,810	9,200	8,785	2,000	19,185	11,081

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 viz Rupees 32800 is sufficient which is about 10 ℔ Cent. on the Nuniah Beriz.
				Communications	Recommends Rupees 1560 to be added to this head. —
				Buildings	Recommends Rupees 5000 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. —
19,500	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 Nuniah collections being from 8 to 9 ℔ 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.

Cadavery Division	Rajahmundry	183000	27000	12300	222300	204000	36348	10300	250648
	Masulipatam	60000	20000	1200	81200	25900	25200	"	50900
Krishna Division	Masulipatam	100000	7750	8850	116600	60500	9742	10050	80292
	Guntoor	90000	10000	4200	94200	45100	10000	4200	59300

180000	30000	4000	214000
60000	20000	4000	84000
80000	12000	10000	102000
60000	10000	4000	74000

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 ½ per cent. the intrinsic value of the works both in the Delta and Upper Taloobs. The value of the Irrigation works in the latter being assumed to be such as to yield only 20 per 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. Complains that in Masulipatam and Guntoor the percentage of the Nuzjah Berg expended on the repairs is so much in excess of that of Tanjore. —

Nellore	76623	33649	2000	112072	77400	29857	2000	109257	669053	180000	42137	5400	227537	Irrigation Works
														Communications
														Buildings
Cuddapah	60000	68928	3432	112360	26800	41427	3432	71659	970112	53000	61186	5000	121186	Irrigation Works
														Communications
														Buildings

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.

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 12286 are however added to the sum shewn in the last Budget (of which Rupees 4286 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.

The amount proposed has been founded on the known requirements of the various descriptions of buildings.

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 ¼ per cent on the Nunjah Berij of the District.

Hamilton's allowances for four roads to the extent of Rupees 18150 and an increase in the Discretionary allowance of Rupees 7500 have been added to the amount entered in the last Budget.

Considers the sum proposed to be very necessary for the repairs of buildings in the District.

Bellary	78080	53525	4376	136581	72700	73235	5086	157121	870205	78980	55925	9594	144499	Irrigation Works	Recommend 1/ac 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 Toonzabuddra Channels to Rupees 10,000. —
														Communications	Proposes increasing the amount sanctioned for the Heriall &c. roads to Rupees 20,000 so as to embrace the repairs required for the Ghauts about 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	20,000	13,000	2,000	35,000	3,000	13,440	2,000	18,440	64,926	29,000	26,932	3,600	59,332	Irrigation Works	About 10 ℔ Cent of the revenue derived from Irrigation Works is charged for the maintenance of these works in Kurnool. Thinks that if 10 ℔ 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 Taluk 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. —
														Communications	100 Rupees per Mile is allowed for the maintenance of Government peons and a discretionary allowance is included and yet Bundobusts have to be kept up. —

Chindlepet	47,262	103,082	1186	151,530	39,800	104,226	1186	145,212	9,72,161	60,000	136,606	13,390	196852	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	122,655	14,94,724	30,000	70,955	11,500	132,455	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	66/	1,32,634	71,800	56,005	3,000	1,30,805	1,43,271	85,000	56,000	3,000	1,64,000	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 ℘ᶜ Cent on the present years revenue. The amount entered in the Budget of 1858/59 is just 5 ℘ᶜ 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, maintenance 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 Contingencies
														Buildings	The sum entered under this head appears sufficient

Tanjore	2,08,416	31,573	31,263	2,45,902	1,63,500	32,293	3,340	1,99,153	38,43,258	2,63,500	42,572	4,910	3,10,982	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 — the above sum is 10 per cent above the
Trichinopoly	96,688	39,908	4,979	1,41,575	1,14,000	33,626	5,000	1,52,626	7,46,141	1,14,000	33,626	5,000	1,52,626	I think 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. Enclose a Statement shewing the expenditure on Irrigation Works during the past six years. —

2,75,400/16
22
15

Madura	31,065	2,937	1,800	35,802	29,400	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 hold 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 I recommend 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. I recommend therefore that the District Engineer and the Collector should have the power of sanctioning maintenance repairs and had entered the probable cost of such repairs at Rupees 20,475.

Tinnevelly	₹1,299	3,322	₹175	8,196	58,400	11,280	3,000	₹2,680	16,37,799	₹8,000	4,100	5,082	1,30,812

Irrigation Works

It 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 and 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 4/5 p.c. Cent on the Ayacut is not by any means a high per centage to be devoted to repair.

Communications

Proposes Rupees 47,100 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 500 for repairs to Military Buildings, and Rupees 2,500 for repairs to Public Buildings at Ceylon.—

Coimbatore	30,000	46626	9620	85246	21400	49692	8500	79392	65283	40,000	60,000	9000	10,000	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% on the amount of Munjah Boriz 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. —

							Fuly 1265						
Salem	38,460	14,229	1,265	53,945	33,500	14,221	1,265	62,986	46,894	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 Canvery Channels which raised the amount to Rupees 54,000.

Communications

In addition to the sum entered in the last Budget proposed 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	"	17,607	8770	86377	"	50492	8770	59262	"	9,988	10,350	108288	Communications
Malabar		1000	24,500	6910	32,410	800	29820	6910	37530	800	29,820	12,910	43500	Irrigation Works
														Communications
														Buildings

Under this head Rupees 36,996 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.

Rupees 1530 have also been entered in excess of the amount sanctioned in the Budget of 1858/59 in consequence of the high price of materials.

The amount entered will be sufficient to repair the few surplus dams in use in this District.

The sum proposed should not be reduced on the grounds shown in the District Engineer's letter dated 23rd August 1858 No. 190.

Recommends an increase of Rupees 6000 for reasons stated in letter dated 7th July 1858 No. 143.

Mauritius	Civil Architect	1,664	"	43194	44658	1464	800	43194	45458	"	1,520	3020	39294	43834	Based on the average expenditure for the last 3 years.
	Garrison Engineer	"	"	66089	66089	"	"	66089	66089	"	"	1,00,000	1,00,000		It thereto 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 1,00,000 is therefore entered which includes the Quarterly repairs to the fortifications of the Fort. -
Bangalore		"	"	3,000	3,000	"	3,925	3,000	6,925	"	"	6,000	5,000	11,000	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 5,000 is recommended. -

...ers and that entered in the Budget Statement at F. 3 of 1858/59 and the
...ds on which it has been prepared.

1575

Recommended for the Budget of 1859/60.

Irrigation Works	Communications	Buildings	Total

1858 / Department

No.

Enclosure in a letter

From The Officiating Chief Engineer

To The Secretary to Government N.W.P.

Dated 30th November 1858

Received

No. 5888

WR 2909/58

4 Jany 59

No 12

Precis of the Replies from the Districts called for by District Engineers to the explanation as to the disproportion between the amount allowed for irrigation repairs of the Hungah Bengy of the several Districts.

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

No. 5888

From

The Officiating Chief Engineer

To,

The Secretary
to Government P.W.D.

Public

Sir,

Encls. 12.
Ex. 1

List No. 1
" 2
" 3

Abstract Statement
Estimates
Abstracts included in Estimate of 1858/59 & included from that of 1859/60.
Captain Orr's letter 16th November 1858
Precis of correspondence regarding Statement No. 3.

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 of 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 fully 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 of November; and that Estimates submitted, or orders of Government received, after that date, have not been included therein.

Ex. de 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. 1058

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.t

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.

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.

*exclusive of heads in list no. 1

6th November 1838 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 Berij, 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 when 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	56098
1856/57,		54430
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, Viz^t. higer wages for labour caused by the decrease of assessment, and increase of foreign trade — emigration — the abolition 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 margen of 10 p^r. 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

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

Central Office of Ord.
Fort Saint George
30th November 1858.

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

L 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/58 " 87-88.
From the Chief Engr: Dy 30th Novr/58 C No 3010 inb.

Pc Works 1858 Department
Dn to Cons 4th January/59.
No 2909.

From

The Officiating Chief Engineer

To

The Secretary

to Government Dept.

Pcns 6 & 12

Dated 30th November 1858

Received 30th November 1858

No 5888

Enclosures 12

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

No 1.

I Submits for the consideration and orders of Government the Budget of Public Works proposed for execution in the ensuing Official Year 1859/60. †

C 23 Dec R 3 Jany

† C to C. 30 May 1856 No 828. Page 304 of Grant's C. Book

Public Works Department

No—1.

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

Read the following letter from the Officiating Chief Engineer.

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

I 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

included in Statements
Nos 1 and 2.

2 The expenditure proposed by the Officiating Chief Engineer in these 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	134,22,765	22,31,633
Total for new works	187,93,488	30,48,503
Repairs.		
No 3		29,42,444
Total for new works & Repairs	187,93,488	59,90,947

But as the Government of India have in framing 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

* Major Strachey's letter of 23d Sept. 1858 No 4656 Commun. with Sanct. 21st Oct. 1858 No 2170

* Statt No 1. 892820
do " 2. 4166494
Repairs . . . 5059314
2118261
Total 71,77,575

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

Statement No 1 of new Projets exceeding in cost in each case Rs 25,000

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.

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 those works estimated to cost in each case under a lac of Rs, the appropriation for the year proposed for such works in the Budget of 1858/59 will be made applicable for

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, Jackatallah and Aolacamund in Coimbatore with reference to the letter to the Govt of India 2d Dec. 1856 No. 263.

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 Matataur on Trunk Road No 8 in South Arcot ------ do - " 42,470

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 Clears 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

* Vide Ctte. 24 Nov. 1858 No. 2505.

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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	Amounts Rs
	Guntoor	
19 Nov. 1857 No 2128 18th Jany 1858 No 93/57.	Draining the Country to the westward of the Commanoor Channel by diverting the Nuckeravagoo into the Nullah Meidda embanking the latter and constructing tunnels under the Commanoor Channel	38,100
12th March/57 No 461 18th Jany/58 No 93/57.	Converting a Bandy track from Guntoor to the Cuddapah Frontier into a second Class road	56,450
	Nellore	
28 Oct 1857 No 2021 18th Jany/58 No 93/57.	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 Venkatairaunagut to the Rampoor Ghaut at the boundary of the Nellore District	73,900

6. The remaining Pro-
-jects to be entered in the
present Statement are 11;
of these it is observed
four are for the accommo-
-dation of European troops,
six are for roads, 5 re-
-quired 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.

Accommodation of Troops.		
Barracks and Hospital for two Companies of Cur.n Infty and Artillery at Vellore &c. Amot.	Rs.	2,73,790
Married Quarters for the Cur.n Infty at Bellary —	"	1,16,700
Improvements &c. to the Fort Arty Barracks at Bangalore Mysore Divn		1,06,600
Married Quarters for the Cur.n Infty at Secunderabad. Hyderabad		1,80,300
Roads required chiefly on Military and Political grounds.		
From Parvatipoor to Jeypoor. Vizagapatam		15,000
From Masulipatam to Ibrahimpatam. Masulipatam		14,6000
High road No 4 in Madura.		7,4,200
From Hullial to Sedasheyr in Canara		1,26,400
Bridging &c. the road from Calicut to Paulghaut. Malabar		88830
Road required for the transit of the Mails.		
Reheatalling a portion of Trunk Road No 6 in Chingleput		48,100
For the improvement of the Revenue.		
Diverting the Moped and Channel &c. in Masulipatam		1,15,089.

× Para 4 of Col Baker's Despatch d/ 11th July 56 No 178
Page 129 of Selections No XXXVIII

7. The project of a
School-room with subsidiary
buildings, and Armourers'
work shop, in connection
with the Trimulgherry
Barracks at Secunderabad
estimated at Rs. 42767
and submitted to the
Government of India
on the 29th September 1858
× not having been then sanc-
-tioned by that Govt,
will be included in
the present Statement.

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

† Letter No. 2020

Statement No 2.

× Major Stracheys letter of
23d Septr 1858 No 4606. in
Encl 21st Octr 1858 No 2214

× E. M. C. No. 2594

been in possession of the Chief Minister of the latter date, when he closed the Budget, made no provision for the execution of these works during the remaining five months of the current year; the Govt. therefore resolved 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 kept 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 pending the decision of the question for removing the 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

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 1420	Constructing a Reservoir at Pooree in Ganjam	7,500	The information required as to the probable cost of the Channels not furnished-
2	19th Nov 1857 No 2128 18th Lany 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 Oct 1858 No 2169	Constructing four second class Travellers Bungalows at Rs 1632 each on Trunk Road No 6 one at Loontam between Tooburam and Chittivalsa and the other three at Koppera Pudiny and Doodoomain on that portion of the road between Chittivalsa and Chinnacole 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 Nov 1857 No 2128 18th Lany 1858 No 93 p: 17	Constructing an Embankment &c to the Godaveri from Rajahmundry to Seetanagrum	21,080	Deferred on financial grounds-
5	4th Nov 1858 No 2322	Making a drainage cut from the Cowvella into the river near Moonjaiaum	4,490	Do Do Do
		Masulipatam		
6	12th May 1858 No 919-	**Masulipatam-** Constructing a Post office-	2,500	To 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-
7	23rd July 1857 No 1409 18th Lany 1858 No 93 p: 17	**Nellore-** Bridging Trunk Road No 6 across Moosaroor Valley-	21,155	Deferred on financial grounds.
8	28th Oct 1857 No 2021 18th Lany 1858 No 93 p: 17.	**Bellary-** Constructing a second class road from Kumply to Kosputa-	23,000	Do Do Do
9	11th Nov 1858 No 2366	**Chinglepute-** Building a new wall to the old burial ground at Pulicat-	1,230	Do Do Do
10	23rd April 1858 No 759	**Coimbatore-** Constructing a Chultrum for native Travellers at Avinaseeramd-	8,000	Do Do Do
11	10th March 1858 No 422	**Canara** Adopting the buildings of the old Jail at Honore to the purposes of a Civil Dispensary-	1,440	Do Do Do
12	30th June 1858 No 1228	**Madras-** Forming a road within the Compound of the General Police Office at Royapettah between the Meer Saibpettah 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 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 2,00,000 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 submitted on the 24th Decr 1858 No - 2818 -

There

× Letter 8/23 - September 1858 - No 4666 p: 4.

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 appears

× Rs 29,42,444 including Byderabad.

Respectfully to the Board A.

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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 attention the observations made by the Govt of India in their restrictive orders of the 3 July 1857 in the following words.

"There will be some repairs
"which, though generally
"advisable, may without risk

The file keeper will be supplied with a list of these references

* Comp with Ex Mem Govt of 17 July 57 N° 1372.

"risk, be deferred for the
"present, and it will be
"understood that a strict
"watch is to be maintained
"upon this branch of the
"Public Works expenditure,
"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 Officers.
"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 separate
"clap of structure."

14 One other point in the Statement requiring notice is the frequent entries made by the Officiating

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 acted 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

"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 23d September 1858 No 4606 for the sub-division of the expenditures 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 59,99,947/1 but the Govt have by the orders above given reduced the

* Com[d] with Ex. Mun. Com. dy 21 Oct/58 No 2214.

* Expenditure proposed for 1858/59 ---- Rs 74,77,575
do for 1859/60 ---- 52,36,966
Difference ---- Rs 19,40,609

* New Works.

Amount sanctioned in Major Strachey's letter dy 23 Sept/58 No 4606 in

	Rs
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 Govr having thus closed their review of the Budget of 1859/60, resolved that in addition to

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 the sum of 56,36,966.

	Rs.
For isolated works	100000
For the other classes of work	300000
Total	400000

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 Officer of the Engineer Department the sums ordered to be placed at their disposal, which however it should be understood will

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 Estimate, and isolated works &c	Total
	Rs	Rs	Rs
Ganjam	116,810	16,000	132,810
Vizagapatam	42,881	17,000	59,881
Rajahmundry	276,635	17,500	294,135
Masulipatam	326,242	14,000	340,242
Guntoor	128,583	15,000	143,583
Nellore	290,553	18,700	309,253
Cuddapah	147,908	28,000	175,908
Bellary	256,906	24,000	280,906
Kurnool	129,061	10,000	139,861
Chingleput	327,381	12,800	340,181
North Arcot	191,329	21,000	212,329
South Arcot	193,777	18,500	212,277
Tanjore	372,609	22,000	394,609
Trichinopoly	212,410	13,000	225,410
Madura	144,525	30,000	174,525
Tinnevelly	184,512	23,000	207,512
Coimbatore	193,497	20,000	213,497
Salem	151,154	19,000	170,154
Canara	134,094	20,000	154,094
Malabar	162,358	19,500	181,858
Madras — Civil Architect	64,022	5,500	69,522
Madras — Garrison Engineer	353,187	5,500	358,687
Madras — Municipal Commrs	24,397	..	24,397
Mysore	331,090	2,000	333,090
Hyderabad	120,767	1,500	122,267
Jacknatallah	358,678	6,000	364,678
Total	5236,966	400,000	5636,966

19. The sums above specified will however be drawn under the restrictions and in the manner indicated in para 64 of Extract Mily 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 158 also to the several Departments of the Secretariat, and Chief Engineer.

Last Budget Resolution

* Page 304 of Grants Book

To the Chief Engineer Disp 27
" the Accountant General "
" the Board of Revenue "
" Pub Wks Dept "
" Mily Dept "

W H B

23d Dec 1858

Public Works 1859 Dept.
Nº 10 Cons: 4th January

Nº 1.

Extract Mins of Cons:
Dd 3d January 59.

Nos 1 & 3.

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

023. Dec.

To
F. Chpd
Cr 15 Jan 59

Public Works Dept.
Nº 2.

Major R. Strachey,
Offg Secretary Govt of India,

Sir,

I am directed by the
Right Honble 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 State
-ments Nos 1, 2 and 3, and other
papers forming annexures to
that Document.

In submitting this
Budget, I am instructed to draw
that the Madras Govt are not
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. The
~~observations~~ portion of the Cha

~~of strictness in their several~~
~~and this Jackpot, and they state~~
~~their deference, that they were~~
~~kindly devised.~~ On the present
occasion as on the last, the
principle upon which this
Govt have prepared their Budget
is to represent the wants of this
Presidency, ~~and~~ as ~~they~~ urgent
~~shall~~ not ~~appear~~ unmindful
~~of that preparation by the Com.~~
~~missioner~~ of the necessity for close
economy; and then to leave it
entirely with the Supreme Govt, with
their better knowledge of the cir-
cumstances of India, to decide what can be sanctioned
~~what to leave~~
tion for present expenditure, and
what must be deferred until ~~better~~
circumstances will admit of
a fair expenditure on Public
works; and for acting on this
principle, this Govt trust that
they will not be ~~deemed obnoxious~~
understood
to censure. It will be ~~there~~
therefore, that many
~~fore all~~ Projects of general
importance, which they may have
~~having~~ for their
which the welfare or improve-
ment of the country, or its people

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

in order to give

Of the increased Military Force of European Soldiers does

but refused by the Govt of India,

At the same time it has been considered desirable that all should be entered on the Budget, in order that objects

nical considered and weighed on
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 Bud-
get, 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 Nos 1 and 2 of the
several projects of Public Works
proposed to be undertaken or con-
tinued in the official year
1859/60.

Statement No 1 as usu-
al 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 Offi-
cial year; and of this latter
sum, nearly all is asked for on Military
grounds, leaving only 34,136 Rs being
for purposes other than those
connected with the State.

Statement No 2 brings
forward works above the estima-
ted cost of 25,000 Rs each, which
have been already approved and
sanctioned, but continue unfi-
nished; and exhibits besides all
those works, 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
21,57,488 Rs. For 224 works

no expenditure is proposed in 1859/60, as these works, it is thought, may be kept 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 up to 30th April 1859; and it is proposed to expend 23,50,661 Rs 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 30th April 1859, & 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	21,51,488.	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 this Presidency, in 1859/60 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.	21,51,488.
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	"	8,536.	8,536
Industrial	"	"	"
Agricultural	"	3,18,623.	3,18,623
Communications	1,56,406.	5,97,013.	7,53,419
Railway	"	"	"
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 23rd 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 items of Establishments, which they observe amounts by the last returns to upwards of 30 per cents 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 rates to work performed in that year, viz above 40 per cent. The earnest and immediate consideration of the Central Office was therefore directed to be given to the subject, and a report was called for as to the measures that could be adopted for giving effect to the wishes of the Govt of India. The Offg Chief Engr's reply has just been received, and is now under consideration. A fair sum will therefore from the Budget of a separate report. It will be sufficient here to observe that Govt agree with the 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 necessary works. I am to point out that a reduction in the expenditure does not necessarily indicate a reduction to the same proportion in the expense of the Establishment, inasmuch as it has been necessary to keep up

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. 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 Compd 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.

Adverting to the remark that no appointment 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 must be referred to the Home Govt. This course has received approval in para 4 of Col Baker's dispatch dated 11th July 1856, No 3173. I am to add in this place, that no appointments for the next year's expenditure are entered in the present Budget, but for those works, (with the two exceptions to be presently noticed, from the which the Govt of India have lately withheld their sanctions; but that, during the cold season, the Govt of India deem proper to order any of those works for execution in the ensuing official year, the appointments entered in the Budget of 1858/59 will be considered applicable in each case; & the orders of the Supreme Govt

Reduced but a larger proportion of highly salaried Officers, whose services must be retained, will increase to retaining a large portion of Subordinate & low paid Superior Officers. Upon the appointments to be suspended by the diminished by any decrease of expenditure on Establishment.

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

13. Difference between Original & Revised Estimate for the Masulipatam Road from Ibrahimpatam to the Nizam's Frontier ---------- Rs. 44,170.

22. Metalling, and constructing parapet walls to, Road between Connor, Jackaballa, & Ostacammund ---------- 32,080.

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 36 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 referred on in my letter dated 2nd Dec.r 1858, No. 2,593. I there said that the condition position of the road from Connor to Ostacammund on the face of steep hills with precipices below rendered it a unique case; that the Rt Hble 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 absolutely intended to construct at the dangerous parts of the road. This amount is 10,136 Rs; and it is the appropriation now entered in the Budget.

In respect to the project of embanking the Mahanuddee in Sanjam under an estimate of 64,840 Rs, the Govt of India were informed in Mr. Bycroft'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 Lohenkundy, 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 30,000 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 has been since represented that the estimate of 6,326 Rs provided for detached embankments and sluices in the upper part of the Mahanuddee, or above Asha, and that similar works were required in the lower portion, or between Asha 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.

In sanctioning the construction of a road from the Railway station at Conjeveram, (a) the reformation and metalling of the Trichinopoly and Cimbatore road, (b) and the metalling and travelling of Trunk road No. 4 from the Mysore frontier to Cauvery inclusive the Perumbadry Branch, (c) the Govt of India suggested the establishment of tolls upon

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

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

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

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

them 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 Proposal 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 treat 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 Peracudday and Perambore, and of the means which it would thus afford of having waggons loaded both ways, but also of 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 records

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, besides Rupees 2,00,000 the amount proposed to be spent in that year on the new Dragoon Barracks at Bangalore. In respect to this work, they desired to be furnished with an immediate and detailed 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 was accordingly directed to obtain & forward

Date of No will be inserted afterwards

the required documents without delay, and in the meantime to issue orders for the suspension of all work in connection with the Barracks. In my separate letter dated 24th Dec 1858 No 2818 the Govt of India will have been informed that the Offg Chief Engr withheld the issue of such orders by him, but that he at the same time represented the very serious loss and inconvenience which must be entailed by the stoppage of the work in its present stage. Referring to the reasons assigned in my separate letter above referred to, & to the earnest request of the Govt for his early report and plan for the proposed work, I am to explain that I withheld the orders.

In para 12, the Govt of India requested that none of the works of improvement proposed under Statement 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

X that an appropriation of 2,00,000 Rs has been entered in the present Budget for expenditure on the Dragoon Barracks at Bangalore in 1859/60.

mes 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 exception as occ-
curs, 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 how-
ever of the grounds of exemption
in each case.

The last point to be re-
ferred 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 appears
of the wishes of the Supreme
Govt reached too late to be com-
plied 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.

Having thus disposed of
the points raised in your letter
of the 23d Sept.r 1858, I am next
to report a few other circum-
stances 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 ~~with~~ by a raised causeway. This project has been removed from the Budget under the following circumstances. The present District Supr, Capt Ford, 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 Ford 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 lieu of the one of 42,670 Rs entered in the Budget of 1858/59; but the Govt have cancelled the latter, and directed the substitution 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 Sinderal bar. Weir, at an estimated cost of 8,35,600 Rs. This item has been omitted from the present Budget, 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 ~~should not~~ be undertaken until Capt Lieut 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 Masters Quarters and Out-Offices in the Trimulgherry Barracks near Secundabad, 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 Secundabad 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 4th, 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 that only 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 Armorer'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 above mentioned advance of 20,000 Rs, this Govt were informed by

certain correspondence from the Resident at Hydrabad, that he sanctioned the advance in question 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 Nov.r 1858, 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 Oct.r 1858, No: 5298, you requested that the Plans of the Rom.n School School Masters Quarters and Armorer's Workshop might be forwarded for inspection. The Plan of the former work was not sent up, because it was in accordance with the Standard Plan transmitted with Col Baker's letter of the 17th July 1857, No: 3630; but the copy received from the Chief Engr of Hyderabad is herewith forwarded, together

with the Plans for the Armorers Workshop. These two works form item No 5 of Statement No 1 of the present Budget.

I now proceed to the report upon the eleven public works newly 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 extension 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 this it is intended in the present Budget, it will be observed that sanction for its prosecution is asked for,

* directing the Mopadéve 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 Estimate.

Construction

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 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 to be laid before Govt, with his recommendation that the altered project should receive sanction. Govt ~~naturally~~ from inquired 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.

The Quarters are to consist of six ranges, each to contain sixteen quarters; to accommodation is to be provided for that 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 veran-
dah 9'- 3" in height. Each
range of building is to contain
thirty six rooms; viz sixteen main
rooms, 16 × 14; two end rooms,
14 × 10; sixteen back verandah rooms,
14½ × 10; and two end back
verandah rooms, 10 × 10¼; 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 formation.
The middle mills are to be thirteen
feet, and the side ones seven and
a half feet in height. They consist
of Cook rooms, mush-houses, and
necessaries, but for further partic-
ulars in detail, the Sub wants
refer to the Engr's Report on the estimate
which accompanies. From the
plans of the disposition of the
buildings, it must appear that
each range has a piece of ground
and garden before it. The pro-
ject has been examined in the
Central Office; and it is reported
that the estimate is correct, and the plan the standard one. Col Lawford has made a change in the disposition of the blocks, as will be seen on an examination of the little sketches which accompany his Sub withdrawn the Commander in Chief's recommendation of the project. WMcM

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 Comr 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 is a place of very considerable strength and importance, situated in the midst of a numerous population of Mahomedans; that it contains an Arsenal, & Magazine with a large supply of ammunition, and a stand of eight or ten heavy guns on works; that a great prestige attaches to the possession of the Fort, and that it should therefore be maintained, and always pro-
vided with a suitable European Garrison. With this view, His Excel-
lency has proposed a garrison of two companies of Infantry to be detached from the European Regi-
ment 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.

16. The estimates accompanying are five in number, totalling Rs 2,73,790, and provide for a set of Barracks with necessary offices, Officers' Quarters with out offices 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 Artillery. From the plans it will be observed that the lower

*Estimate for Barracks — 1,53,100.
— do. Officers' Quarters. 50,300.
— do. Out offices. do — 13,000
— do. Skittle Alley — — 490
— do. Hospital &c. — 57,000
Rs 2,73,790.

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 storey. This the Offg. Chief Engineer explains is necessary, because the site of the Barracks is within the Fort; and it is desirable in order to ensure thorough and complete ventilation, to provide accommodation for the majority of the men in an upper storey. The space too allowed for the men is comparatively large, viz 1400 cubic feet per man, an allowance however, which Colonel Crawford says is by no means excessive, considering the climate of Vellore. Besides the accommodation mentioned above, provision is also made for two Mess rooms, two Canteens, a Library, a Lavatory, 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 storey. There is to be accommodation for eight married officers,

four above and four below; and for dispensaries, 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 garrisons. It provides for eighty 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 Dispensing Rooms, Medical Apprentices' Room, and Hospital Serjeants 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 a two storied Building and

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 cover the extra expense of constructing upper storied buildings. Provision is also made to meet the cost of laying out and constructing the necessary road, with efficient drainage, adjoining the several buildings. The barrack arrangements are considered by his Excellency to be "most admirable in every respect;" and I trust strongly support his recommendations for early sanction to erect these buildings.

W. R. B.

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 the last 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 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 Generals' 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 fashioned 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 Horse 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 Barrack 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.

18. 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
Cook room 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
Privys	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 floor will be flagged with granite; the roofs terraced; the building ventilated, with ground floor ~~[illegible]~~ sliding ventilators to open to the ~~[illegible]~~ shut at convenience, with ~~[illegible]~~ during windows above. ~~[illegible]~~

doors, windows, and all woodwork will be of teak. The compound wall will be 8½ feet high, round will be 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 Sergeants' 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 Bens. ford, who in countersigning the estimate remarked, "I fully agree 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 this 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 esti-

mate, 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

Constructing Married Men's Quarters for the European Regiment of Infantry at Secundrabad. 180,300 Rs.

Govt having authorized the pulling down of the old par- cherry attached to the Infantry Barracks at Secundrabad, at the instance of His Excellency the Comr. in Chief, on the strong recommenda- tion of several Medical Officers on Sanitary grounds, the Quarter Master Genl represented that it be- came necessary, in consequence to provide for the residence of the mar- ried 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) oc- cupied the new Barracks at Sirnal- cherry, 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 Pardesy system continued. Govt decided in giving up the Pardesy 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 Pardesy, so that there would be no accommodation whatever for the families of the Regts, 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 Mulgherry Barracks. From the accompanying plan, it will be seen that the Quarters consist of well ventilated buildings in ten ranges, each ranging providing for thirteen families including Non-Commissioned Officer, 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 no 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.

14.

285

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

The ~~estimate~~ project now to be noticed ~~provided for the following~~ ~~letter~~ provides for a change in the terminus ~~of terminations~~, 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

*Madras Rs. 149,797.

from the Pobairoo at a point not fur from the little town of Weyoor, and running along the eastern or left bank of the Kishnah 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 being shewn to have progressed only ~~a~~ part of the way ~~to~~ to a point nearly opposite Madoor, probably about 3 or 4 miles in extent.

It is now 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

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 19½ miles in extent; while the branch to Wandapolliem will be about 5¼ miles making in all nearly 25 miles of Canal, the cost of constructing which is estimated at 166,000 Rupees, or a rate of 6,640 Rupees per mile of Canal.

27. 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 discembogement, 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'

thro' the talooks of Sullapully and Bunder, containing about 30,000 acres of fertile land, but very little of which is used for such 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 canals is 90,000 Rupees, or upwards of 54 per cent 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

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, viz: the Mungalamandoo Kodoo, the Sheenacanuddy Channel, and the Soolthangigrum or Mungulairoo channel. The first receives the drainage of the Moonastalum and Sullapully talooks; the second, the drainage of the large Canya tank and western part of the Bunder talook; and the third, the drainage of the Eastern part of the Bunder, and part of the Goodewadah talook. For each of these a double under drainage tunnel is provided; and in addition, two Calingulahs 60 feet long are to be built. Lieut. 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

e section map

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 caliniculah, 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. Both on the other hand, the District Engineer reports that there will be a net saving in the original

* At the rate allowed in present estimate, thus

Locks	19,246
Caliniculah	8548
	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 Sadacoodoo, 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 Caliniculah, the actual estimated cost of the new project will be reduced to 1,45,089 Rupees.

28. The Collector objected to the project on the ground that the proposed Channel would reach, but three Government Villages leaving small expenments, and in one of which only there was a little

little wet cultivation; that the area of these land in these Villages although 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 although 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 Taber 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 Mausulipatam 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 river, while the 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

capabilities of the canal 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 Cuntoor being gladly paid by the cultivators there, who are fortunate enough to obtain water from the Kistnah

Kistnah Annicut 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

accept Colonel Taber'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 much 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 so soon as circumstances will admit.

W H P

Construction of Road from Masulipatam to Srakim-
patam. Rs. 1,46,000.

24. The history of the project for reconstructing the great Mili-
tary 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 Masuli-
patam and Srakimpatam, 49 miles in length; and (II) between Srakimpatam 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 how. Must we have forwarded the com plaint of the Srakim Canal from Ellore- & the use of water from Commodore?

I think we are Empowered.

H

Yes they certainly are. This a direct one & Cant But a circuitous one by water wd obviate the neces- y disembarking at Bunder

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 a water carriage could be made available, by taking advantage of the projected Canal from the Wayairoo 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 expenditure should 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;

* Paras 14 and 15 of the Report.

and on their notice 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.

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 paper 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 carriage 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 insufficient 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. 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 roads 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 Collr 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 probable 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 shall be made in the channel bunk, 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 Fisher therefore 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 Bezwarah; and that the laying on of a similar thickness of good material on the old line would involve an expenditure for carriage 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, on the large, is comparatively moderate. As regards the large amount for earthwork, Col Fisher 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 2½ yards above the level of the country. It appeared from this to be the intention of the District Engr to form the new road between Mandipatam and Ibrahimpatam on the level of the present canal embankments, which as pitch dated 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 heights 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 removed 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 recommendations of the Chief Engr, that the present estimate of 1,46,000 Rs for the portion of the Masulipatam and Ongole Road lying between the former place and Nuzvid, 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 necessarily moving westward from Masulipatam. The particulars of

the estimate are as follow.

Earthwork	44,905.
Gravelling	88,997.
17 Masonry Tunnels of 1 vent and 3 feet	1,662.
Revetments & Parapet walls to Sluices & Tunnels in chan. nel Bank	3,400.
Sundries & Contingencies	6,986
	Rs 1,46,000

The length 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

sanction may be accordingly granted to this and to the following 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 Secundrabad from the East Coast readily practicable at all 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.T.

W A B

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 Off.g 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 line, the expediency of its early restoration to a practicable condition hardly 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 to further portions of the road, for which however the present contract does not provide. In laying Messrs Taylor & Co's letter before the Offg Chief Secy, 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 happened 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

Rewetalling

to the great lines of Post Road. Under ordinary circumstances, this Govt would have felt justified in sanctioning the above estimate as an emergent repair of the road, but considering the present state of affairs and the fact of a maintenance allowance being about being 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 of the maintenance 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, is 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 ~~carts~~ carts per day between the 5th and 16th mile stone, and 449 ~~carts~~ carts per day between the 16th and 37th milestones.

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 and ~~the~~ south ~~of~~ formy the District of Madura, was at first submitted to Govt with immediate reference to your Circular letter dated 30th June 1858, No 3242, the estimate was originally prepared and submitted to the Central Superintendence 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. Advertising 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-

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.

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, 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 Lawford submitted a correspondence with the Quarter Master Genls 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, the Southern Division of the Army he wrote thus. "Being aware that the 2nd Extra Reg N.I. will be shortly marching to Palamcottah, I have the honor to report the very bad state of the road 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 part of the road is situated between Cottapollium and Meylore: to get over the two first miles from Cottapollium, it took the carts with the detach-

ments 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 breadth,
but whether a bridge, or only
the road which is above the
level of the place, has been car-
ried away, I cannot say; of
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

(81)
40-25

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 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 Cotta-
pollium to Meylore. The only
bit of good road is near Madura?
This representation having been
forwarded by Lieut Budd to the
Quarter Master Genls 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 Crawford 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 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 cer-

tainly, 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 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 four much insufficient, 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 Lawford, "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

(33)

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 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, Levelling &c.; and that one item alone under the last mentioned head amounts to 44,495, 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, 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 64 miles from the northern boundary of Madura at Pookeeputty, 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 &c.	2,058.
Blasting rock & removing stones	31.
2 Bridges of 1 arch of 6×3 span	240.

6 Tunnels varying in size ——— 291.
13 Platforms Tunnels - do. ——— 694
37 Road Dams of various lengths. ——— 620.
1 Sluice ——— 50.
1 Sluice and Tunnel ——— 80
Converting 13 Pavements into
side dams varying in lengths ——— 388
Lengthening a side dam ——— 25
—— do - a Tunnel ——— 30
Repairing 82 Tunnels ——— 164.
Repairing a side dam ——— 1
Repairing 47 bridges ——— 537
Repairing a Stone Post ——— 2
Tools, Contingencies, Cunganies &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 on expenditure is still inoperative. The line passes thro' a populous & well cultivated country, the principal towns bordering on it being Cottampetty, Meylore, Madura and Droomungalum. Govt strongly recommend the estimate for sanction.

WH D

* No 63, Statement No 1.

26.

Second Class Road from Sedashegur to Hullial, via the Linguawarree Ghaut, in North Canara. Rs. 1,26,400.

The project of opening a road from the Port of Sedashegur to Hullial on the North western frontier of North Canara, via the Linguawarree Ghaut, was first brought before Govt in 1853 when Mr. J. C. Malby, 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 Soonda, which rendered it necessary again to place a detachment at Jugalpett. When I state that the whole of the country comprised in your sketch map is a dense jungle in the nothing but a narrow tortuous path, where a stranger is entirely dependent on a guide, and that this country is constantly infested by bands of robbers from the Soonda and Mahratta Country, it seems unnecessary as Magistrate of the District I should 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 Sirsey 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 Soonda, I consider that where troops have twice 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 Mullapore, 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 Soondshegoor, the regulation of the timber trade, and the opening of this road, will all combine towards the improvement of a country, naturally fertile and rich in wild products, and thro which in spite of all impediments a very valuable trade already finds its way to Soonda, through as to Sedasheegur." On this occasion however first were only asked to sanction an estimate of £9,850 Rs for opening out this road of 56 miles, including the formation of the Singanurree Ghaut; but the actual expenditure has been altogether 13,681 Rs, of which the sum of 3,685 Rs was granted by the Govr from the discretionary fund 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. ~~Inspected~~ No less than 50 out of the 56 miles of the line have been traced and opened to widths varying from 1½ to 4 Yards; but however satisfactory this may be, compared with the outlay with which it has been effected, the work done does not at all meet the requirements of the case. It is accordingly proposed to complete the road and make it a second class dry weather communication, fit for wheeled traffic throughout from Kulleal to Sedasheguv, at an estimated cost of 126,400 Rs inclusive of superintendence, as follows.

Earthwork, Grubbing &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 Assists + 2 Subordinates, & 10 Jemadars	10,800
Rs	1,26,400

The items for superintendence was

5/

added on an enquiry from this office, as to whether competent supervision was available for the work, the first 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 Sedasheguv and Kulleal and Singanmarree 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~~ although the insurgents have surrendered & the large military force assembled there to overawe them ~~is not~~ 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 Annamuntha Savantha, one of the sons of Ponda Savantha 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 depredations 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 Desayees in the neighbourhood being reported to have been gravely compromised in the affair. In consequence of these disturbances, the talooks of Coopah, Soondah, 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 Engineer says that had the proposed road which forms the subject of this report been properly opened ten years ago, it is not impossible that Veerammen Tewar would not have given further 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 Cadasheper 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 Court have called upon the Chief Engineer to furnish plans and estimates for the requisite harbour works. Under these circumstances, I would strongly recommend the road for construction.

8.

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, Mallapooram, Angadypooram, to Mundow on the Trunk Road to Paulghautcherry, 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 Nov. 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 represen-

tion 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. Robbs 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 11/2 miles, or nearly one-sixth, had been completed; about 25/2 miles, or one third, had been finished without drains; of about 17/2 miles, or one fourth, the earth work was in progress; and 18 miles, or one fourth, was not commenced; and of this unfinished part, 13/2 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 Collr reports that when the order to stop all expenditure on Public works arrived, it found the District Officers fully aware of their previous errors, and on the point of setting into 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 portion 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 Trovarangaddy 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 fine 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 Paulghaut Cherry road. "Above all", said His Excellency, "the road between Calicut and Mallipooram should be at once completed on emergency; the distance is thirty miles. The

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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 the stoppages put to all Public Works. I have ever considered 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. Mallipooram 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 in the instant; whereas at present, communication between the posts is a work of days, besides being at

tended 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 Talooks of Walloovanaad, Ernaad, and Wernaad, and to bring the Continuance of Mallaporam 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 thus suffice to bring a formidable body of Europeans from Mallaporam, 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 through 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 & turbulent 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 the most inaccessible in India wherever there are no roads; 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 rebellion a Military detachment at Mallaporam, or the transport of

Commissariat Dpt. supplies, is now almost as difficult and uncertain as it was ~~two~~ ten years ago: even coolies with Commissariat supplies take confiderably 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 these enterprizing Moplah population, which would convert these fine but wild Talooks into the most productive and populous of the Country."

34 In his report of the 9th

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 88,830 Rs has been laid before them. It is really in amount 1,13,235 Rs, but deducting the balance, Rs 24,405, of the original estimate recently at par, 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 Nagavandi river estimated at 11,250 Rs; that for the Coondy river, Rs 14,440; and the third for the Cokilangaddy 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 far 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.

(91)

64-72

Cart Road from Parvatipooram to Jeypore.

Rs. 150000

The important project here brought forwards is for opening out a good cart road from Parvatipooram 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 Jeypore. 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 131,000 Rs, this

&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 64½ 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 on which they recommend for sanction. The 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 Seypore country. The desirability of opening the passes from the Seypore 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

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

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 shewed 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

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

were commonly perpe-
trated and passed with-
-out 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 pro-
per arrangements be crossed
in one day, when there
would be no fear of
fever; that the upper por-
tion 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 improve
ment 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 thereupon issued to the Chief Engineer in the Public Works Department, to report upon the suggestions of the Commissioner. The receipt of the above

From Comr. No. 15th April 56 No. 61
in Jud. & Pr. 9th June 56 No. 61

*E. Pr. 14th June 56 No. 967

Pub. 9th June 56 No. 169.

above Dispatch from the Honorable Court, and the orders issued by this 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.

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 7th Jan 1857 No. 64

belonged to the Public Works Department pro-
ceeded however under the orders of
this Government; and in
Extract Minutes Consultation
2d December 1856, No 2242,
of two routes proposed
to them, Viz^t by Madagole
in the South, and Par-
vatipoor in the North of
the Vizagapatam District,
the Govt expressed them-
selves 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
should be taken to in-
spect the line by Parvatipoor,
and to 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 for-
warded extract from
a report by the Deputy
Commissioner of Racepore
on the opening up of passes
from his division to the
Coast. Lieut. Elliot ob-
served 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 Racepore. After
specifying these routes, he
recommended the selection of
a line which should not
greatly exceed the shortest
of them (350 miles), and
which

which would proceed through the Thasildaree station of Dhunteery, the Kakeir Zemindary, the chief town / Jugdulpore / in Bastar, 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, esctent,

and

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

This Government in commenting upon the above, Extract Minutes Consultation 15th July 1857, № 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

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 under-
taken hereafter in com-
munication with the
Commissioner of Nagpore
when more information
respecting the country
had been obtained.

37. In his very inte-
resting description of the
country between Parvati-
pooram and the town
of Jeypore, now laid
before the Govt of India,
Lieut. Verner divides the
tract into four portions
Viz. I, from Parvatipooram
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, Bundagoem,

and

and Narrainapatam;
the last named contain-
ing 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 vici-
nity 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 great improve-
ment would be effected
in the state of the Country
for the traffic, now con-
veyed by different and
longer routes to the neigh-
bourhood of Seypore
& 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 sa-
sanitary condition of
the Country. Various kinds
of rock are found on the
Ghaut, but principally
soft sand stone and
soapstone occur; and
iron

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 chaut, 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 obtained by taking the greatest advantage of the undulations. The Country from the foot of the chaut 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 althō' this part-

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 temparature 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 rocky~~ steep & about 1700 feet in

in height. It is said to be very productive, & 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. Seypore itself, with a population of 7000 inhabitants, is described 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, Seypore 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

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. ~~His~~ revenue is a lac of rupees per annum, tho' it would

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

the Jeypore country;
but the route reported
on is considered to be
the shortest, and best
adapted for traffic.

38. Lieutenant Verture
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, tur-
-meric, oil seeds,
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 Verture 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 Nag-
-pore viâ Secundrabad, by
the adoption of the line under
notice; while the existing
trade, by no means inconsider-
-able, will rebound many fold
when the road is formed,
especially in the article of
salt, which at present, even
at the town of Jeypore, is
to

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 very
inducement to open the country
by good roads. In the list
furnished by Lieutenant
Tertius 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, Goosebery,
Sumpanga, and Domicus.

Lieut[t]

Lieutenant Tertius
speaks of camels and elephants
as good substitutes for Coolies,
in constructing the roads; but
Major Lawford would organize
a body of 500 trained and regu-
larly paid laborers, on the
principle of the Pioneers, to be
superintended by an officer
specially selected for the pur-
pose, with reference to his
local knowledge and constitu-
tional ability, on the
footing of a 3[rd] 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

would attach detached Corps from the Coppers, to act as Superintendents on the Corps 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 plans 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, 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 extirpation 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

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 Vadingapatam is under construction, having been sanctioned under date quoted in the margin, so that there will be a continuous line from the Coast to Nagpore on the completion of the whole project.

W.A.D.

From Govt. of India Augt. 25th/58
—do— do— July 28th/58

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 £2,36,966 Rs. This falls short of the expenditure proposed for 1858/59 by Rs. 19,40,609, but it exceeds the total sum admitted by the Govt of India for that year by Rs. 11,33,474. The estimates submitted to the Govt have been reduced by the Chief Engr, many of them most urgently, by the Govt, and it has been with great reluctance that the Govt have been compelled to refuse entry to so many much needed works. They have however adhered to the principles enunciated in the correspondence which could hardly have escaped notice.

* 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 Thackeray's letter 23d Sept/58, No. 4606, 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 economies, it ~~was~~ is still with the Govt of India to sanction the whole, or such portions only of the expenditure proposed 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 duty is simply to represent the wants of this Presidency, consistently with the need for economy. Para 41.

For the sake of comparison, the expenditure proposed in the Budgets of three years previous to the present one, is contrasted with the expenditure actually sanctioned by the Govt of India for each year respectively. (These sums do not include the lakhs set apart for emergent & isolated works)

Year.	Proposed Expenditure.	Total Expenditure Sanctioned.
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	"

The Govt would at the same time desire to accede their wishes with reference to the outlay on works abo...

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.

* 4 months of the official year being yet left.

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

Irrigation Works	9,910	
Communications	25,710	
Buildings	1,01,837	1,37,457
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

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 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 estimates together with a comprehensive Budget statement for general reference and on the whole, this Govt trusts that the preparation of the Budget will meet with the same approbation, that former ones have received from the Govt of India.

W. H. B.

23d Dec

Fort St. George,
3 January 186

Govt of India

Budget Report of

Public Works 1859-Dept.

Dr to Govt: 4th January.

No 2.

To the Offg Secretary
to the Govt. of
India.

Dated 3d January 1859.

No 4.

Submitting the
Budget Report for the
Official year 1859-60

C23-Dec.

Public Works 1859 Dept.
Dft. to Cons: 4th January

No. 2

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

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

No. 4.

C 23d Decr