M.R.O. 1—82,400—23-11-30.

MADRAS RECORD OFFICE.

Government of Madras.

Judicial DEPARTMENT.

Cons. 29 Oct 57

G.O. No. 2727 Press Mis.

71-103

Dated 28 Oct 1857

Not to be folded or roughly handled

Read the following Reports from Colonel C. E. FABER,, Chief Engineer; to H. FORBES, Esq., Acting Secretary to Government, dated 6th December 1857, No. 8662.

No. 91. Report W, Proposod improvement of the line of road from Nellore to Gungapatam, amount of estimate Rupees 4,000 distance 11 miles 4 furlongs 110 yards.

The traffic from the Salt pans at Gungapatam to Nellore, is very considerable, being about 1,000 laden bullocks nearly 600 unladen bullocks per diem, as taken in the month of July 1856, persons carrying loads 800, and unloaded 3,800 per diem. Bandies laden and unladen 5 per diem,.and there can be no reasonable doubt but that an improved road would be very beneficial to the trade in Salt, as reported in the Collector's letter. Of the above distance of 11 miles, nearly two miles is a 1st Class road, and from Nawabpettah to within a mile of Narrainreddypettah a distance of 1½ mile, the earthwork for a 2nd class road was done last year to afford employment to the poor.

This estimate provides for completing the earth work for the road 5 yards wide, turfing side slopes, building a large number of tunnels, thus completing the road with the exception of metalling, which can be done hereafter when found to be necessary, as will doubtless be the case, and no outlays are perhaps more certainly or more rapidly repaid to Government than those incurred for the improvement of Salt roads the rates for the work are those usual in the District, and are moderate, and I recommend the work for sanction and entry in the Budget of 1857-58.

Letter from Lieutenant JOHN MULLINS, Assistant Civil Engineer in charge of Northern District to Colonel C. E. FABER, Chief Engineer, dated Nellore, 14th November 1856, No. 1272.

SIR,

* 1 Estimate.
1 Abstract Estimate.
1 Detailed Estimate of masonry works.
1 Traffic return.
1 Copy of letter No. 434, from Captain Ritherdon
1 Copy of letter No. 323, from the Collector.

I have honor to submit for sanction and estimate amounting to Rupees 4000, together with documents as per margin* for constructing a second class road from Nawabpett, a suburb of Nellore, to Gungapatam.

2. An estimate amounting to Rupees 47,230, for a first class road on the same line was submitted for entry in the Budget of 1856-57, but Government in Extract Minutes of Consultation No. 157, dated 5th February last, declined to sanction so large an outlay when a road from Nellore to Kistapatam on the coast had been already commenced.

3. The sum now asked for is very small a little under 350 Rupees a mile and though it will not be sufficient of course to make a very good road, it will tend greatly to facilitate a traffic, even now far from insignificant, and to render intercommunication somewhat less difficult than it is at present and the road will be capable of improvement at any future time to meet the wants of an increasing trade.

4. I should mention that from Nellore to Nawabpett a distance of nearly 2 miles a first class road exists, and from Nawabpett to within about a mile of Narrainreddypett, almost all the earthwork for a 2nd class road was executed last year, to afford employment to the poor people of Nellore at a time of scarcity.

Return of Travellers and Traffic across the Nabobpett Bridge from 1st to 31st July 1856.

Detail.	Palankeens.		Bandies.		Horses.		People.		Cattle.		Remarks.
	Laden.	Empty	Laden.	Empty	Laden.	Empty	Laden.	Empty	Laden.	Empty	
From East to West.....	7	15	50	33	52	54	11,420	40,980	14,850	8,750	
From West to East.....	9	16	22	66	35	44	12,477	73,141	17,275	9,111	
	16	31	72	99	87	98	23,897	114121	32,125	17,861	

2nd Assistant Civil Engineer's office, Nellore Dt. Nellore, 29th October 1856.

(Signed) AUGUSTINE RITHERDON, Captain,
2nd Assistant Civil Engineer Nellore District.

(Signed) JOHN MULLINS, Lieutenant,
Assistant Civil Engineer in charge Nellore District.

Letter from Captain A. RITHERDON, 2nd Assistant Civil Engineer Northern District; to the Civil Engineer Nellore District, dated 29th October 1856, No. 434.

SIR,

I have the honor to forward an Estimate for a road from Nellore to Gungapatam amounting to Rupees four thousand.

II. As regards the necessity and utility of making this road I believe not the slightest doubt exists in the minds of those who are acquainted with the country through which it will run: and as an expensive road was not deemed an expedient undertaking when sent up for sanction on a former occasion, I have now reduced the outlay to the least passable sum being convinced that the smallest outlay in the construction of a passable road will be a boon to the inhabitants of a great many Villages to the Eastward of Nellore.

III. The work I propose to do is merely cutting a side Channel to preserve it and afford protecion from the encroachments of the agriculturist and to raise those portions which are under water when it rains. A few absolutely necessary road tunnels, and a pavement where the waste water from Gungapatam Tank crosses the road constitute the masonry works. The width of the road where it is not raised is to be six yards but the raised portions at present will only be made five yards top width, with sufficient space to allow of an increase should it be proved hereafter that the traffic demands an improvement.

4. A traffic return of passengers and cattle is herewith sent. It was taken just before the time of year salt and grain are brought inland and may be considered as a fair average.

5. The sketch Map will be forwarded hereafter.

Letter from F. B. ELTON, Esquire Collector of Nellore; to Lieutenant J. MULLINS, Assistant Civil Engineer in charge of Northern District, dated Nellore, 10th November 1856.

SIR,

With reference to your letter of the 7th instant No. 1227 I have the honor to return duly countersigned the Estimate forwarded by you amounting to Rupees 4000 for making a 2nd Class Road from Nellore to Gungapatam, which I consider very desirable in order to open up

the country in that direction, and make the Salt Pans nearest to Nellore more accessible, at a comparatively small outlay.

No. 92. Report RRR, upon the proposed enlargement of the Nellore tank.
Amount of estimate Rupees (17,100) seventeen thousand, and one hundred.
Anticipated return given by Collector 12,539
Do. as calculated by Chief Engineer ... ... 7,728 only

The Collector of Nellore in forwarding the District Engineer's estimate, states that there are 13 villages under the Nellore tank, depending wholly, or in part, upon it for irrigation, and that the area of arable land is 8,995 acres, assessed at Rupees 37,583, but that, of this 5,184 acres only, having an assessment of Rupees 22,562 are cultivated, leaving a deficiency of 15,000 and of this 1,236 acres only, assessed at Rupees 7,126, are capable of cultivation. He states however that out of the Rupees 22,562, which ought to be realized from the land cultivated, the annual remission for the last ten years, has been 8,119 Rupees, and he assumes that $\frac{2}{3}$ of this may be saved in addition to the 1,236 acres to be brought under the plough, which are at present never cultivated thus making a total return of Rupees 12,539.

2. The District Engineer states that the area of the tank is $4\frac{5}{8}$ miles equal to 14,800,000 superficial yards and that the tank averages 2 yards in depth; its contents is thus $29\frac{1}{2}$ million cubic yards of water, which is more than sufficient for irrigating 5,184 acres of land, but taking into consideration that only 3,368 are watered from the tank, on the average. I am disposed to think that either the tank is less deep than the District Engineer assumes it to be, or that the supply of water is defective; and I am confirmed in this opinion, from the fact of the great outlay of Rupees 18,900 having been sanctioned for the improvement of its supply channel from the Pennair river, and from a considerable affluent of the Pennair called the Gollakundacom Loodum having also been diverted into it.

3. The proposal of increasing the capacity of the tank $\frac{1}{3}$ by adding to the height of its bank one yard will enable it to hold a further supply of 14,800,000 cubic yards of water, sufficient for an additional 1,850 acres of land, which would give an increase of Rupees 7,728, and this is all that I am disposed to think should be assigned as the interest, on the outlay of 17,100 Rupees, or 45 per cent. The other increase should be, if it has not already been calculated, as interest on the 18,900 Rupees previously sanctioned.

4. The measures proposed by the District Engineer to effect the improvements, are to raise the bank of the tank throughout, so as to make it capable of containing this extra yard of water, to construct a new Calingulah at the southern end of the tank, in place of the existing defective one, and to give this Calingulah such a capacity as to ensure the disuse of two small Calingulahs at the north side, and which are not only troublesome, but cause a great loss, as they discharge the water back into the river.

5. By the proposed arrangement having but one instead of three Calingulahs, and that situated at the south side, the superfluous water can be left off to other tanks below it, and so none need be lost.

6. From the situation of the tank immediately above the Town of Nellore, it is of the greatest inportance that the tank should be protected from all possibility of breaching; and this will be ensured from the fact of the tank being so situated that only $9\frac{1}{2}$ miles of country besides its own bed of $4\frac{1}{2}$ miles can drain into it, by the new Calingulah as it is to be of sufficient capacity to draw off 9,50,000 cubic yards per hour, which is $\frac{1}{3}$ more than the quantity which would be required to be carried off, even, on the unlikely supposition that the tank was full on the commencement of heavy rain, a contingency of no probable occurrence.

7. The Calingulah requires some modification as to the shape of its wing walls; but this need not affect the grand total of the estimate; and the requiste change will be pointed out to the District Engineer. The rates are moderate and sufficient for the work and I recommend this project for sanction and entry in the Budget of 1857-58.

Letter from Lieutenant JOHN MULLINS, Assistant Civil Engineer in charge of Nellore District, ; to Colonel C. E. FABER, Chief Engineer, dated Nellore, 18th November 1857, No. 1295.

SIR,

1. Abstract Estimate.
2. Plan of a Calingulah.
3. Letter from Collector, No. 300 dated 30th Oct. 1856.

I have the honor to submit for sanction an estimate amounting to Rupees 17,100, with enclosures as per margin, for improving and increasing the capacity of the Nellore Tank.

2. The area of the Tank, as at present, when full is about $4\frac{5}{8}$ miles or 14,800,000 square yards, and from levels which Captain Ritherdon, has occasionally been able to take across several portions of the bed, the average depth of water is estimated to be 2 yards, giving a total capacity of about $29\frac{1}{2}$ millions of cubic yards, and a reference to paras. 3 and 4 of the Collector's letter No. 300, of the 30th Ultimo, a copy of which is enclosed, will shew that this estimate of capacity is not very far wrong, for it appears that on the average 5,184, acres of land are in the occupation of the Ryots, and that remission is granted for 1816, acres out of this amount, so that 3368 acres are generally supplied with water by the Tank. This number multiplied by the quantity of water probably consumed by each acre, which, taking the length of the time, the better crops are on the ground, is about 8000 cubic yards, gives 27 millions of cubic yards as the actual quantity required by the lands, and the remaining $2\frac{1}{2}$ millions may without much fear of error be considered to be consumed by the wasteful habits of the Ryots, and the want of proper regulating works on the several channels which convey the water to the fields.

3. I now propose to raise the bund of the tank 1 yard, so as to enable it to retain a depth of 1 yard of water above the present high water line, and by this arrangement the capacity of the Tank will probably be increased to the extent of 15 millions of cubic yards, being sufficient for the irrigation of 1875 acres of land, in excess of that now usually brought under the plough.

4. The Calingulahs now existing are three in number, one, the principle one, at the east end of the bund, is 162 feet in length, and consists merely of two wing walls built upon, and numerous large granite stones (which obstruct nearly half the water way) let into, a large uneven mass of laterite rock which crops out at this point, the other two which are small, 30 feet long each, are situated about 3 miles from the large one near the west end of the bund, all are much too low even for the present water line of the Tank.

5. The surplus water of this Tank is not, as is usually the case, wasted (unless indeed when the present larger Calingulah, by itself, proves too small, when the minor ones, which communicate almost immediately with the river, are opened) but is conveyed by the ordinary, irrigation channels to the fields, or when these are satisfied, is carried off by numerous small supplying channels to Tanks, which being too high for the river channels, are dependant on the local rains, and are therefore much benefitted by any water that they may receive from the Nellore tank, and the discharging power of the Calingulahs, from the obstruction caused by the thick rough upright stones, and the unevenness of the rock on which the larger one is built, must be considered at about one half that due to their apparent length, or with one yard on their crowns the discharge in cubic yards per hour would be 2,15000.

6. It is proposed to remove the two small Calingulahs, and to build, on the site of the present larger one, a new Calingulah 157 feet in length, provided also with 19 Sluice vents 4 feet square, for the better regulation of supplies from this point to the irrigation, and to the Tanks below, as well as to afford additional vent to the Tank in case of extraordinary floods, though these have, as far as possible, been provided against by the submission of an estimate* for a head sluice to the supplying channel of the Tank which will cut off all except local drainage, the basin of which does not exceed 8 or 9 square miles in extent, and the drainage from which with a fall of 9″ of rain in 24 hours would be about 300,000 cubic yards per hour. The Calingulah now proposed with a depth of 1 yard on the crown will discharge 370,000 cubic yards per hour, and under similar conditions the 19 vents would convey a way an additional 580,000 cubic yards, per hour so that even were the head sluice to be damaged, ample provision

* Forwarded this day with a batch of estimates with my letter No. 1294, dated 18th November 1856.

would exist for carrying off all the water that would be brought down by the channel. The principal use of the vents will however consist in the regulation of the irrigation and surplus supply, and when the river channels connected with this fine tank are put into proper order, I am sanguine that a very large additional cultivation will be carried on under the Ranoopurty-paud and other Tanks to the south, whose supply will then be rendered tolerably certain from their connection with the Nellore Tank.

Upon the revenue merits of this project it is not necessary for me to enter, the Collector's letter affording full information on these points, I may however remark that even if the recent outlays for the preservation of *existing revenue*, as shewn below, be added to the estimates in connection with this Tank now proposed for sanction, and if an ample allowance moreover be made for the improvement of the channels, which will be carried out from time to time on ordinary estimate, the improvement of this important reservoir will still be a very renumerative work, and the subsidiary benefits that will be derived, such as the better supply of the town wells, and the health of the town generally, are so important, that this project will I trust receive the favorable consideration of Government.

Statement shewing the recent (in progress) proposed, and prospective outlays for the improvement of the Nellore Tank.

Sanctioned in Extract Minutes Consultation, dated 25th January 1856.	Calingulah and new cut from Gollakundakoor Loodum	9,868 0 0	
	Deduct probable saving from a slight change in the line estimated for by Major Boileau by which rock has been avoided	2000 0 0	
			6,868 0 0
	New cut from Gollakundakoor	1,439 1 0	
	Loodum in progress on emergent estimate	3,200 0 0	
			4,639 1 0
	Estimate for Head Sluice &c.		4,160 0 0
Submitted for Budget of 1857-58.	Do. raising Tank bund providing new Calingulah &c., ...		17,100 0 0
	Probable outlay on the channels		3,232 15 0
		Total...	36,000 0 0

expected increase of Revenue Rupees 12,539 or more than 35 per cent on the total outlay, and „ 68 „ on the amount of this estimate added to that for the Head sluice &c., if the other recent expenditure be considered as laid out for the preservation of existing revenue.

Letter from F. B. ELTON, Esq., Collector of Nellore ; to Lieutenant JOHN MULLINS, Assistant Civil Engineer in charge Nellore District, dated Nellore, 30th October 1856, No. 300.

SIR,

I have the honor to acknowledge the receipt of your letter of the 2nd Instant, No. 1648, forwarding for my countersignature and for a report on the Revenue merits of the Project, an estimate amounting to Rupees 17,100 for improving and increasing the capacity of the Nellore Tank.

2. Owing to the silting up of the bed by the gradual accumulation of Allunical deposit, the raising of the bund is very necessary and the improvements now contemplated, with the measures in progress for increasing the efficiency of the supplying channel, appear to me well calculated for the preservation of existing Revenue as well as for the extension of cultivation.

3. There are 13 villages under this Tank, depending wholly or in part upon it for irrigation. The area of arable wet land in them amounts to 8,995 acres assessed at Rupees 37,583. Of this the average extent in the occupation of Ryots amounts to 5,184. Acres bearing an as-

sessment of Rupees 22,562 and the remaining 3,811 acres assessed at about Rupees 15,000 is unoccupied waste about ⅔ of this, however, or 2,415 acres, is supposed to be unfit for cultivation, from being situated in the beds of Tanks, and therefore liable to be submerged even in ordinary seasons, and from other causes. The remainder, acres, 1,236 assessed at Rupees 7,126 may be expected to be cultivated with a more steady and continuous supply of water than can now be commanded, provided over Assessment or low prices do not prevent its being renumerative.

4. But the above is not all the return that may be looked for. Out of the average extent already stated as being in the occupation of the Ryots, a portion varying in amount according to circumstances, is annually left waste, whether from deficient irrigation poverty of the soil, want of means in the holder or other causes. The amount of Assessment remitted on such waste during the last 10 years averages Rupees 8,119 per annum, assuming two thirds of this remission to be owing to the first of the above causes viz. a deficient supply of water, the gain to the Revenue when this no longer exists will be Rupees 5,413 which added to the increases referred to in the last para, will make the total anticipated return Rupees 12,539.

5. Independent of the gain in a Revenue point of view, as above considered, the projected improvements are very important in their relation to the welfare of the Town. When the supply in the Tank now fails, which as it holds but about 6 months water, is liable to be the case in the hot season the wells in Nellore almost entirely dry up, and as there is at times no water running in the Pennar it is of the greatest consequence to ensure an unfailing supply in the Tank.

P. S. The estimate is herewith returned countersigned, and with the necessary entries filled in.

No. 93. Report SSS, upon a proposed 2nd Class road from Nellore to Todairoo Cusbah of Thoomulthalpoor Talook, dated Central Office of P. W. 6th December 1856.

Distance 14 miles amount of estimate 8,000 eight thousand cost per mile 571½.

The above road is to be 6 yards wide, and to have Tunnels and road dams, than which no larger works will be required, and as the soil is of gravel it is not at present considered necessary to gravel or metal it of the sum of 8,000 Rupees the items are.

	Rs.
For earthwork	4,061
Clearing jungle...	1,161
Tunnels...	990
Road dams...	1,788
Superintendence and sundries	581
Total Rupees...	8,000

eight thousand.

2. The rates for the above work are moderate, but sufficient for the construction of the road, which seems to be judiciously laid out.

3. The traffic is stated to be considerable, notwithstanding the tortuous nature of the present track, which appears to be simply a jungle road.

4. As this road runs directly through the jungle from which firewood is cut for the supply of the Town of Nellore, and moreover goes, past extensive beds of Nodular Limestone, it will considerably cheapen that article at Nellore, that at present used being brought a distance of 20 miles. The Collector approves of the proposed road, and I recommend it for sanction and entry in the Budget of 1857-58.

Letter from Lieutenant JOHN MULLINS, Assistant Civil Engineer in Charge of Nellore District; to Colonel C. E. FABER, Chief Engineer, dated Nellore, 17th November 1856, No. 1286.

SIR,

I have the honor to submit for sanction an estimate amounting to Rupees 8,000 for constructing a 2nd cla s road from Nellore to Todairoo, the Cusbah of the Toomulthalpoor Talook.

2. The length of the road is 14 miles and a few yards, and the proposed outlay therefore amounts to Rupees 571½ per mile.

3. The masonry works consist entirely of small tunnels, and road dams, and no larger works than these will be required.

4. The soil is a firm gravel sand, and, at all events until the traffic shall have become so considerable as to render a harder coating necessary, it is not proposed to metal any portion of this road.

5. A very considerable traffic already exists, and it is hoped that, when a decent road is substituted for the present tortuous track, which to avoid the jungle is compelled to follow for the most part the beds of the small Nullahs, this traffic will be considerably augmented, as the line runs through the jungles which supply Nellore with firewood, and near Todairoo, moreover, there are extensive beds of Nodular Limestone, which will probably supersede the lime quarries from which all the chunam used at Nellore is obtained, and which being upwards of 20 miles from the town, render the cost of chunam very great

6. The surface of the road will be 6 yards in width, with a space of 2 yards on each side between it and the side channels, there are no heavy embankments, and only at one point, near Amancherla, does the raising exceed ½ a yard.

1 Abstract Estimate.
2 Detailed estimate for masonry works.
3 leter from Collector No. 326, dated 15th November 1856.

7. Documents as per margin* are forwarded with the detailed estimate.

Letter from F. B. ELTON, Esq., Collector of Nellore; to Lieutenant J. MULLINS, District Engineer Nellore, dated 15th November 1856, No. 326.

SIR,

With referenc to your letter of the 13th Instant No. 1265, I have the honor to return herewith duly countersigned the estimates forwarded by you for constructing a 2nd class road from Nellore to Todairoo the present Cusbah of the Toomulthalpoor Talook.

No. 94. Report W, repair of part of the road from Cumbum to Vinakondah. Distance 1 mile 5 furlongs 40 yards, dated Central Office 6th December 1856.

Amount of estimate Rupees (3,900) three thousand and nine hundred.

Amongst the estimates prepared for the budget for the year 1856-57, was one amounting to Rupees 1,28,700 for constructing a road from Cumbum in the Cuddapah District to Vinakondah in Guntoor.

2. This estimate was returned for revision. The present District Engineer states that there are so many other roads in an unfinished state that he wishes to postpone the consideration of the making of it until the half finished roads have been completed.

3. The Sub Collector has called his attention however to the very bad state of the road immediately to the North of Cumbum which is by far the most stony and uneven portion of the whole road from Cumbum and Vinakondah and upon which carts are greatly shaken.

4. The traffice upon this road is very considerable amounting to 320 a month for the nine months during which accounts have been made besides bullocks and laden Coolies.

5. The rates at which the work is calculated are reasonable and sufficient for the purpose, and the work being simply repairs and the construction of a few tunnels requires no particular description, and I recommend that sanction be granted for the sum of Rupees (3,900) three thousand and nine hundred, for this portion of the road to be entered in the Budget of 1857-58.

Letter from Lieutenant E. HEMERY, Civil Engineer Cuddapah District; to Colonel C. E. FABER, Chief Engineer, dated 14th October 1856, No. 595.

SIR,

Among the estimates prepared by Major Boileau for the Budget of 1856-57 and returned to me for revision was one amounting to Rupees 1,28,700 for the road from Cumbum to Vinakonda, but as this may be considered a new work I have not revised the estimate as there are so many other roads in a half finished state which should be completed before other new works are undertaken.

The Sub Collector however having called my attention to the very bad state, of the road immed'ately north of Cumbum, I directed Mr. Sub Assistant Revenue Surveyor D. Rozario to prepare the accompanying estimate for repairing it, and I beg to solicit sanction for the amount viz., Rupees 3,900 required for 1 mile 5 furlongs and 40 yards.

This is by far the most stony and uneven portion of the whole distance between Cumbum and Vinakondah. In traversing it, carts get greatly shaken and it is very desirable that an attempt should be made at improving it.

Return of Traffic from Guntoor, Innacondah, &c. through Gajalacondah into Cumbum.

Months.	Bandies.	Bullocks.	Horses.	Asses.	Cavady Coolies.	Coolies.	Passengers.
1855.							
From 23rd to 31st August.	64	291	13	.....	1	6	15
In September.	176	275	9	110	4	13	144
,, October.	26	22	10	.....	...	...	44
,, November.	100	290	33	90	17	11	140
,, December.	175	340	9	8	...	22	138
1856.							
In January.	119	105	21	270	1	30	69
,, February.	215	61	6	.....	3	16	65
,, March...	183	52	52	350	...	4	105
,, April.	305	35	3	29	2	2	69
Total	1,363	1,471	156	857	30	104	789

From Cumbum through Gajalacondah to Gunicor, Innacondah, &c.

1855.							
From 23rd to 31st August.	16	36	3	66	5	1	48
In September.	86	133	15	101	6	3	61
,, October.	70	1	3	200	...	...	28
,, November.	81	494	5	313	...	21	115
,, December.	82	38	11	236	...	6	72
1856.							
In January	136	7	38	132	...	...	89
,, February...	254	81	6	40	...	...	89
,, March...	661	255	65	2	...	109	5,164
,, April.	122	29	11	86	4	5	182
Total	1,511	1,074	157	1,206	15	115	5,818

Civil Engineer's office,
Cuddapah District,
10th October 1856.

(Signed) A. WEDDERBURN,
Sub Collector.

(Signed) E. HEMERY, Lieutenant,
Civil Engineer of Cuddapah District.

No. 95. Report YYYYY, upon a proposed new Tank at Manchpully in the Sidhout Talook of Cuddapah, dated Central Office 6th December 1856.

	Rs.	A.	P.
Amount of estimate six thousand three hundred....	6,300	0	0
Expected Revenue...	1,874	8	3
Revenue.	29	0	0

This Tank is proposed to be constructed across a fine hill stream near Manchpully in the Sidhout Talook it is to be constructed on 2nd Class section its area of bed is 360,000, superficial yards and will contain 720,000, cubic yards of water.

2. The estimate seems to be well considered, and the rates are those usual in the district. The report No. 14284, accompanying gives full information as to the capabilities of the Tank and the available land below it.

3. The Collector recommends the project for sanction, and I concur with him, and forward it for entry in the Budget of 1857-58.

Report to accompany the proposed new Tank at Manchpully in the Sidhout Talook Cuddapah District.

1. Constructing the bund of the Manchpully new Tank and constructing 2 sluices and 1 Calingula.

2. Amount of estimate Rupees (6,300) six thousand three hundred comprizing the following items.

					Rs.	A.	P.
2,235 Cubic yards Earth work at 1 anna per Cubic yard...					139	11	0
	A.	P.					
8,925	do.	do.	at 1	3 per	do.	697	4	0
15,765¾	do.	do.	at 1	6 per	do.	1,478	0	0
12,792	do.	do.	at 1	9 per	do.	1,399	2	0
3,774⅜	do. Rough stone revetment at 6 ans. per do.					1,415	7	0
3,032 Sqre. yards turfing at 4 pice per Sqre. yard.....						104	13	0
Sundries.....						265	11	0
1 Sluice (tunnel 14 yards long).....						150	0	0
1 do. (tunnel 22 yards long).....						275	0	0
1 Calingula.....						375	0	0
Total estimate Rupees					6,300	0	0

SIRKAR.

Poonjah land 86 acres 12 Coontahs assessed at different rates yielding a Revenue of Rupees..	218	13	2		
The same if converted into Nunjah and assessed at different rate would yield a Revenue of Rupees.	640	6	6		
Entered in the statement furnished by the Collector } Increase Rupees.....				421	9	4
Waste land capable of being brought under cultivation 116 acres 32 Coontahs if assessed at different rates shewn in the Statement furnished by the Collector would yield a Revenue of Rupees...				962	15	3

ENAM.

Poonjah land 47 acres assessed as shewn in the Collector's Statement yielding a Revenue of Rupees.	206	6	11			
The same if converted into Nunjah would yield a Revenue ...	412	0	10			
Increase Rupees...				205	9	11
Total Rupees.....				1,590	2	6

Waste lands under a small ruined Tank that would also be brought under cultivation 28 acres 18 Coontahs yielding at present no Revenue would yield...	319	1 3
	1,939	3 9
DEDUCT.		
Assessment of land that would be submerged in the bed of the new Tank...	64	11 6
Total expected increase.....	1,874	8 3

Expected increase of Revenue 29 per cent on proposed expenditure.

The Tank will be of the 2nd Class and Government property its area is 360,000 superficial yards and when full it is capable of containing 720,000 cubic yards. Its source of supply is a very fine hill stream.

Civil Engineer's office,
Cuddapah District,
28th November 1856.

(Signed) E. HEMERY, Lieutenant,
Civil Engineer of Cuddapah District.

Report from Colonel C. E. FABER, Chief Engineer; to H. FORBES, Esq., Acting Secretary to Government, dated 1st April 1857, No. 11479.

No. 96. Report E, on an estimate, prepared by the District Engineer of Bellary, for constructing a 2nd Class road from Kumply to Hospett, via Camalapoor a distance of 18¼ miles Amount of estimate Rupees (23,000) twenty-three thousand, comprising the following items.

56,685	Cubic yards earth work	@ 1 anna	₹ cubic yards	Rupees...		3,513
13,080	do.	do.	„ 1 anna 6 pice	„	do.	„ 1,226
46,560	do.	metalling	„ 2 annas	„	do.	„ 5,820
5,060½	do.	do.	„ 1 anna 6 pice	„	do.	„ 475
7,200	do.	clearing stones	„ 1 anna	„	do.	„ 450
26,160	do.	do.	„ 1 anna 6 pice	„	do.	„ 2,452
2,640	do.	stone revetments	„ 4 annas	„	do.	„ 660
Clearing bushes and blasting and removing rock						„ 374
Levelling and romping						„ 1,039
20 Tunnels varying in size from 2 to 5 vents of 6 feet span						„ 3,295
1 Bridge of 1 arch 30 feet span...						„ 2,010
18¼ Miles of Avenue trees						900
Superintendence and sundries...						756
				Total Rupees...		23,000

1. The top surface of the road is to be 6 yards in width, and metalled where necessary. The embankments to have side slopes of 3 to 1.

2. The Superintending Engineer Central Circle having recommended in connexion with the Toombuddra projects generally, that the bund of the Camalapoor tank should be greatly raised, the bridge over its Surplus channel which crosses, the line of road has been omitted from the estimate.

3. The Collector of Bellary in his letter, No. 221, dated 5th instant observes, that the line is an important one, and very much needed, both as connecting the commercial towns of Kumply, Hospett, and Chitwadighy, with one another, and with the Main roads from Bellary to the two former, and as giving free outlet for the produce of the lands under several large villages lying between those roads.

4. The District Engineer observes, that the lands are watered by the Ryah Toort, Ramsungen, and Kumply channels, and that the already extensive cultivation under them, is likely to be increased.

5. No traffic returns have hitherto been taken, but as the road passes close to Humper, or Beejanugger, whither immense multitudes of people flock annually, there is but little doubt of its being much frequented. From Camalapoor a road goes down to the Toombuddra, to the Anagoody ferry, at Kumply there is another Ferry, and at Hospett, the line joins the Eastern road from Humpeagur.

6. Sufficient has been advanced both by the Collector and District Engineer, to shew, that the proposed road will be one of great value, and the rates allowed for the work being moderate and sufficient, the Chief Engineer recommends the estimate for entry in the Budget of 1858-59.

Letter from Lieutenant J. F. FISHER, District Engineer of Bellary; to Colonel C. E. FABER, Chief Engineer, dated Ramandroog, 12th March 1857, No. 217.

SIR,

I have the honor to forward an estimate amounting to Rupees 23,900 for a road from Kumply to Hosspet together with a letter from the Collector of Bellary.

The bridge which I have not included in the estimate is to spare the surplus channel of the Cumlapoor Tank I have rejected this for the present as the Superintending Engineer has recommended this Tank bund be greatly raised.

Letter from C. PELLY, Esq., Collector of Bellary; to Lieutenant J. F. FISHER, District Engineer of Bellary, dated 5th March 1857, No. 221.

SIR,

In returning with my countersignature the Survey and estimate for a road from Cumply to Hospett via Camalapoor amounting to Rupees 23,900 received with your letter of the 3rd instant No. 175, I have the honor to state that it is an important line very much needed and fully approved of by me. It connects several valuable villages and will give a free outlet to their produce, besides connecting the mercantile towns of Cumply, Hospett and Chitwadighy one with another and with the main roads. I therefore strongly recommend its adoption.

Report from Colonel C. E. FABER, Chief Engineer; to H. FORBES, Esq., Acting Secretary to Government, dated 17th December 1857, No. 8932.

No. 97. Report B, on an estimate for a Peishcar's Cutcherry at Streehurrycottah in the District of Chingleput.

Amount of estimate Rupees (2,020) two thousand and twenty.

With reference to Extract from the Minutes of Consultation dated 1st July 1856, No. 1077 and to Extract from the Proceedings of the Chief Engineer No. 5480 dated 2nd August last, a revised estimate of Rupees (2,020) two thousand, and twenty for a new Peishcar's Cutcherry at Streehurrycottah is now submitted, and as the rates appear sufficient, I beg to recommend its entry in the Budget of 1857-58

Letter from Lieutenant A. S. MOBERLY, District Engineer of Chingleput; to Colonel C. E. FABER, Chief Engineer, dated Camp at Guindy, 29th November 1856, No. 1283.

SIR,

With reference to an Extract from your Proceedings No 7836, I have the honor to forward a revised estimate amounting to Rupees 2020 for the Peishcar's Cutcherry at Streehurricottah as the rates allowed in the sanctioned estimate are insufficient.

Reports from Colonel C. E. FABER, Chief Engineer to H. FORBES, Esq., Acting Secretary to Government, dated 6th December 1856, No. 8662.

No. 98. Report MMMMM, upon an estimate for completing the Road from Venketaramarazpett on Trunk road No. 13, in the Cuddapah District, by the Umbalainy and Raupoor Ghauts to Goodoor in the Nellore District.

Portion of the above road in the Cuddapah District.

	M.	F.	Yds.
Length.	20	4	30

Amount of estimate Rupees (73,900) seventy-three thousand and nine hundred.

The expenditure on the whole distance from Venketaramarazpett to Goodoor a distance of 57 miles 5 forlongs 156 yards up to 30th April last was (65,128) Rupees sixty-five thousand one hundred and twenty-eight.

The amount required to complete the line is Rupees 1,47,900 one hundred and forty seven thousand and nine hundred, and the road when finished will thus have cost 3,670 Rupees three-thousad six hundred and seventy a mile no very heavy expenditure when it is considered that there are two high mountain ranges, one near Chiterail with a ghât of 4 miles, and the other the Raupoor 12 miles in length.

2. The work required to the portion of the road now under consideration, consists in removing rock, cutting side drains and building Bridges and tunnels.

3. Of the masonry works the only two of importance and which requires individual notice are the following a Bridge of 6 elliptic arches of 45 feet span each, over the Goonjamah river the rise of the arch being 11 ′ 3 ″ ¼ of the span. The section of the river gives an area of 7467 square feet and the area of the water way of the bridge is 8322 feet, giving ample space for extraordinary full floods. The bridge is 18 feet wide between the parapets and is to be built of brick in chunam on Clay and Gravel foundation, the cost of the above is estimated (26,500) Rupees twenty-six thousand and five hundred. A bridge of 3 elliptic arches of 40 feet span and 9 feet rise over the Coolunga river. The sectional area of the river is 1,520 square feet, and that of the water way of the bridge 1776 square feet, the amount of estimate is Rupees 9,150 nine thousand one hundred and fifty. The building is to be of brick in chunam and the foundations are in a stiff clay, width of road way 18 feet between parapet.

4. The rates for the bridges I consider rather high, but Lieutenant Hemery has pointed out that they have been made with every view to economy and I shall therefore pass them as he desires without reduction; but I shall point out to him that I expect to find, hereafter, a considerable reduction in the item of brick work, in that district.

5. The remaining portions of the estimate requiring notice are the items which come in for the formation of the road, the rates for which, earth work, removing rock, metalling, turfing revetting with stone &c. seem to be moderate and have been carefully considered

	Rs.
The total of these items is...	29,836
Masonry work...	41,634
Superintendence for 18 months...	2,430
Total Rupees	73,900

seventy three thousand and nine hundred.

6. The road is 7 yards wide and the metalling 6 yards wide and 6 inches deep.

7. The commercial importance of this road has already been brought before Government, at the time sanction was first granted for its commencement.

8. A separate report on the Nellore portion accompanies this.

9. I recommend the above for sanction and entry in the Budget of 1857-58.

Report upon an estimate for completing the portion of road Vencataramrazpooram by the Umbalainy and Raupoor Ghauts to Goodoor which is in the Nellore District.

Amount of estimate Rupees 74,000 seventy-four thousand, distance 37 miles 1 furlong 126 yards.

The whole distance from Vencatramrazpooram to Goodoor is 57-5-156 money spent up to last April was Rupees 65,128 sixty-five thousand, one hundred and twenty-eight, so that with the addition of the estimate for the portion in Cuddapah submitted in another report amounting to Rupees (73900) seventy-three thousand, and nine hundred, and of this estimate 74,000 seventy-four thousand, the total cost per mile will be 3,670 three thousand, six hundred and seventy.

2. This estimate though for work in the Nellore District has been by orders of Government prepared by Lieutenant Hemery who describes the work still to be done as considerable before the road in the Nellore limits will be passable, even for Bullocks that in some parts the line is not even marked out, in others that there is a track 3 yards in width but that it is nearly obliterated by the jungle having grown over it since the work was stopped.

3. He remarks that he has allowed very largely for metalling in the Nellore District where it is absolutely required, in the embankments and that without this metal which is 6 yards broad and 6 inches thick the road will always be impassable in wet weather.

4. Upon the subject of rates Lieutenant Hemery observes that he has framed them on actual personal observation and enquiry and urges the impolicy of reducing them, they are rather high, but considering the country through which the road runs it perhaps is necessary to allow the rates to stand as now fixed by an officer of Lieutenant Hemery's tact and experience.

5. The masonry works though numerous are small and require no particular attention, the abstract of the estimate is as follows.

Earth work remaining Rock jungle &c.....	31,780	0	0
Masonry work.....	18,260	0	0
Superintendence for 18 months.....	3,960	0	0
Total Rupees.....	74,000	0	0

seventy-four thousand.

6. The commercial value of the road was stated to Government when sanction was first granted.

7. I strongly recommend that the completion of the road be sanctioned and that a sum of Rupees (74,000) seventy-four thousand, be entered in the Budget for 1857-58, and cannot too earnestly depricate renewed delay in carrying to completion an undertaken which the country so much requires and upon which so much trouble, time and money have already been expended.

Letter from Lieutenant E. HEMERY, Civil Engineer Cuddapah District; to Colonel C. E. FABER, Chief Engineer, dated Cuddapah, 27th November 1856, No. 715.

Cuddapah District.

1 Survey estimate. 1 District do. for Masonry. 1 Abstract estimate. 2 Specification. 7 Plans. 1 Sketch. 1 Traffic return.	Estimate. Rupees 73,900.
14 Total.	

Nellore District.

1 Survey estimate. 1 Detailed estimates for Masonry work. 1 Abstract estimate. 1 Specification. 10 Plans.	Estimate. Rupees 74,000
14 Total.	

Total documents for both Districts, twenty-eight.

Sir,

In accordance with the instructions conveyed in Extract No. 5770 from your Proceedings under date the 14th August 1856, I have the honor to forward 2 estimates amounting together to Rupees 1,47,900 for completing the road from Venketramrazpett on Trunk road No. 13 in the Cuddapah District over the Umbulainy and Raupoor Ghauts to Goodoor on Trunk Road No. 6 in the Nellore District.

The amount required for the portion of the road in this District, 20 miles 4 furlongs and 30 yards in length, including a large bridge over the Goonjana river at Chitwail, is Rupees 73,900, whilst the estimate for the Nellore portion including the greater part of the Raupoor Ghaut amounts to Rupees 74,000 the distance from the boundary of the 2 Districts to Goodoor being 37 miles 1 furlong and 126 yards. The total distance is therefore nearly 58 miles.

The expenditure on this road up to the 30th April last was Rupees 65,128, the amount now required to complete it is Rupees 1,47,900, the road when furnished will therefore have cost about 3,670 Rupees a mile, by no means a large sum as there are two Ghauts on the line, one, the Umbalainy west of Chitwail 4 miles long and the other the Raupoor 12 miles in length from the foot on the Cuddapah side over the hills to the foot on the other side in the Nellore District.

On the Cuddapah side of the Raupoor Ghaut the work remaining to be done consists in removing a few large masses of rock, cutting side channels and building tunnels but in the Nellore District there is a vast amount of very heavy work still required before the new road will be passable even for Bullocks, in some parts the line is not even marked out, in others there is a track about 3 yards in width but the jungle has sprung up since the work was stopped and nearly obliterated the original trace.

The estimates having been very carefully prepared and the rates fixed from actual observation and enquiry. I trust that no reductions will be made with a view to lessen the total amount submitted for sanction.

I have allowed a large item for metalling in the Nellore District where it is absolutely required on the high embankments that have been thrown up wherever the road runs through wet cultivation or low ground; unless the road in these places is metalled it will not be passable in wet weather.

I have the honor to annex a copy of statement of Annual Traffic over the Raupoor Ghaut forwarded by Major Boileau with his estimate last year.

Return of Traffic the Raupoor Ghaut in the Goondoovole Talook, prepared with reference to the account given by the Caupoos Curnums and merchants of Raupoor as per Hookoom No. 13, *in the Marahmut Department, Fusly* 1265, *year* 1855.

No.	List of Articles passes from west to east through Raupoor Ghaut. Names of Articles.	In each year about.	Remarks.	No.	List of Articles passes from east to west through Raupoor Ghaut. Names of Articles.	In each year about	Remarks.
1	Nuts Maunds..	4000	Bandies are not coming as they could not go through the pass, bullocks and asses were coming with loaden goods belonging to Lumbadies, Yeroocalvaloos, Lingabuljees and Banians average of them about 100 per day but not continually. The articles from west are going to Venketaghery Bungaroopett, Naidoopett, Goodoor, Madras and Nellore, &c. places.	1	Salt garces.....	150	These articles were taken by the Lumbadies, Yarooeala and Lingabuljees &c., to Goorumcondah, Cuddapah, Chitwail, Bellary, Raujumpett and Podatoor &c, places.
2	Pepper do....	1000		2	Palmyrah Jahery..... Maunds.	400	
3	Dry cocoanut do....	1000		3	Date Taddy Jahery do	1000	
4	Cumin seed do....	4000		4	Salt fish, do.	200	
5	Mustard do....	500		5	Gee do	400	
6	Sugar do....	100					
7	Good jaghery do....	1000					
8	Tabacco do...	1000					
9	Gram candies...	200					
10	Green gram Maunds...	50					
11	Black gram do....	50					
12	Red gram do....	50					
13	Wheat do....	40					
14	Bengal gram do....	20					
15	Rice do...	200					
16	Alchenda gram do....	50					
17	Aunoomooloo do ..	50					
18	Garlick do....	200					
19	Onions do...	500					

The above is the present condition, but as soon as the pass is made available for bandy passage, bandies with cotton loads and gruff goods &c., may become about 110 per day and Lumbadies &c., may increase their trade double than at present. By this the articles may come extensively and people may enjoy happiness.

18th August 1855.

(Signed) S. VENKETROW, *Tashildar.*
(Signed) JOHN MULLINS,
1st Assistant Civil Engineer 2nd Division.

1st Assistant Civil Engineer's office, 2nd Division, 4th December 1855.

(Signed) A. BOILEAU,
Civil Engineer 2nd Division.

Civil Engineer's office, Cuddapah District, 27th November 1856.

(A true Copy.)

(Signed) E. HEMERY, Lieut.,
Civil Engineer of Cuddapah District.

Specification for a Bridge across the Pothamadoogoo on the Raupoor Ghaut in the Goondavole Talook of the Nellore District, dated Cuddapah, 27th November 1856.

The Mountain torrent, over which the bridge is to be built, rushes with great velocity, and in a considerable body, along its bed at the point where the nature of the ground obliges the road to cross from one side of its course to the other.

The soil is composed of hard Mica state and at this point the strata are nearly perpendicular affording an admirably firm foundation for the pier and abutment.

On the east bank a large mass of rock renders an abutment on this side unnecessary.

Stone adapted for building purposes and requiring no dressing can be readily obtained and the whole of the bridge with the exception of the arches, the string course and the Parapets, are to be built of stone, and lime mortar, lime will however have to be brought from near Raupoor a distance of nearly 10 miles. The bridge will have one large and one small arch, the former being of 45 feet span, elliptical with a rise of 9 feet 9 inches a thickness at the crown of 2½ feet and at the piers of 4 feet.

The smaller arch is also elliptical 25 feet span with a rise of 8 feet 4 inches, 1½ feet thick at the crown and 3 feet at the springing.

The Pier is 10 feet thick and 8½ feet high resting on foundations 12 feet wide at the top increasing by 3 steps, each 1 foot deep, to 16 feet in width at the base.

The foundations of the abutment are 2½ feet deep, 7 feet wide, at the top, and 9 at the bottom; above the foundations the abutment is 5½ feet to the springing.

The Wing walls are two in number each 40 feet long, and 5½ feet high, and 5 feet broad at the base, diminishing to 2 feet at the string course, the foundations are in every respect similar to those of the abutment. A small wall is to be built at the end of each wing, and at right angles to it, to retain the road embankment and prevent its being washed away by heavy freshes, these walls will be each 10 feet long.

The Spandril between the large and small arch will be carried to a height of 3¼ feet above the pier.

The facing walls will be 2 feet thick and parallel to them will be two intermediate walls, the intervals being filled up with broken stone (well packed) to the crown of the arches, above which the road way, 17 feet in the clear, will be formed of gravel or fire stone chippings mixed with a little gravel from the river and 2 feet in thickness.

The blocking course will be 2 feet deep, and surmounted by parapets 1½ feet thick, and 3 feet high.

(Signed) E. HEMERY, Lieutenant,
Civil Engineer of Cuddaph District.

Specification of a Bridge across the Goonjana River near Chitwail in the Cuddapah District, dated 27th November 1856.

This Bridge is to be constructed of bricks with lime mortar, the earth on the east bank of the river is good, brick earth and limestone are procurable in many parts of the Talook.

The bed of the river is composed of a very firm clay and the foundations of the piers and abutments will be 12 feet deep the former being 11½ feet broad at top and 17½ at bottom and the latter 14 at top and 20 at the base.

Above the foundations the piers and abutments will be 22 feet to the springing of the arches and 7½ and 10 feet thick respectively, the latter being strengthened with a counterfoot 15 feet long.

The Wing walls will be 40 feet long, and 34 feet in height, above the foundations with a thickness at bottom of 10 feet and at top of 2 feet.

The foundations will be 8 feet deep, 12 feet broad at top and 16 feet at their base.

The arches are to be elliptical.

They will be 6 in number each with a span of 46 feet and a rise of 11 feet 3 inches.

The thickness of the arch at the crown will be 2′ 3″ and 3½ feet at the Piers. The outside arches at their springing from the abutments will have a thickness of 5′.

The String course is to be 2 feet deep and the parapet wall 1½ feet thick and 4 feet high.

The Road-way which will be 18 feet in the clear will be formed with good gravel which must be 2¼ feet thick and well rammed.

(Signed) E. HEMERY, Lieutenant,
Civil Engineer of Cuddapah District.

Specification of a Bridge across the Poollongair River near Rampoorpully in the Chitwail Talook of the Cuddapah District, dated 27th November 1856.

This Bridge is to be constructed of bricks with lime mortar, the earth on both banks of the river is good brick earth, and lime stone is procurable in many parts of the Talook.

The bed of the river is composed of a very firm clay and the foundations of the piers and abutments will be 10 feet deep, the former being 8½ feet broad at top and 12 feet at bottom, and the latter 11½ feet at top and 15½ at the base.

Above the foundation the Piers and abutments will be 8 feet to the springing of the arches, and 7 and 10 feet thick respectively.

The wing Walls will be 30 feet long, and 19 feet in height, above the foundations, with a thickness at bottom of 6 feet and at top of 2 feet.

The foundations will be 8 feet deep, 8 feet broad at top and 11 feet at their base.

The arches are to be elliptical.

They will be 3 in number each with a span of 40 feet and a rise of 9 feet.

The thickness of the arch at the crown will be 2 and 3 feet at the piers.

The Spandrils are to be raised to a height of 6 feet above the junction of extrados of the arches.

The String course is to be 2 feet deep and the parapet wall 1½ feet thick and 3 feet deep.

The Soad way which will be 18 feet in the clear will be formed with good gravel which must be 2¼ feet thick and well rammed.

(Signed) E. HEMERY, Lieutenant,
Civil Engineer of Cuddapah District.

No. 99. Report LLLLL, No. 8662 on an estimate for the restoration of the Mullapah Tank, situated near the Village of Gunganapully in the Chennoor Talook, Cuddapah District, submitted by the District Engineer, and amounting to Rupees (3,800) three thousand and eight hundred.

This Tank was breached about 57 years ago, but about 1838, the Sons of the late Curnum Mullapah (from whom it derives its name) partially restored it, by which means land to the extent of 100 Rupees Assessment, was brought under wet cultivation and enjoyed for the three subsequent years. The bund was however again breached in the year 1842, from which time no attempt has been made to repair it, and consequently the Tank has fallen into disuse.

2. The lands situated under this reservoir are classed as dry, as at the time of the Pymash they had lost their usual means of irrigation. They now yield a revenue of Rupees 139, but by their conversion into Nunjah, it is stated that they are capable of yielding a revenue of Rupees 1,121, or an increase of Rupees 982 over the present income, being at the rate of 26 per cent on the amount of the estimate. Under these circumstances, the Chief Engineer recommends the project for the sanction of Government and for its inclusion in the Budjet of 1857-58, at the proposed expenditure of Rupees 3,800 for the repair of the bund, and the construction of one new sluice and one new Calingulah.

The rates are moderate and sufficient.

Report to accompanying the estimate for the restoration of the Mullapah Tank in the Chennoor Talook Cuddapah District, dated 29th November 1856, No. 731.

1. Repairing the bund of the Mullapah Tank and constructing 1 Sluice and 1 Calingulah.

2. Amount of estimate Rupees (3,800) three thousand, and eight hundred comprising the folllowing items.

		Rs.	A.	P.
20,468	cubic yards of earthwork at 1 anna per cubic yard ...	1,279	4	0
4,954	do. new stone at 6 annas per cubic yard	1,857	12	0
1	Sluice...	140	0	0
1	Calingulah	350	0	0
	Sundries at 5 per cent	173	0	0
	Total estimate Rupees...	3,800	0	0

	Rs.	As.	P.
3. Present cultivation under the tank.....	0	0	0
4. Poonjah land 199 acres 4 Coontahs yielding a Revenue of Rupees...	139	2	11
The same if converted into Nunjah would yield a Revenue of Rupees...	1,121	0	0
Total increase...	981	13	1

The Collector in his Statement attached to the estimate makes the result 881-13-1 but this I think is a clerical error.

5. Expected increase of Revenue 26 per cent on proposed expenditure.

6. This Tank is of the 2nd Class and Government property.

(Signed) E. HEMERY, *Lieutenant,*
Civil Engineer of Cuddapah District.

CUDDAPAH DISTRICT.

Chennoor Talook.

Gunganapully Mullappah Tank.

Ayacut &c., none.

The Tahsildar reports that this Tank was originally built by one Mullappah, a village Curnum, during the Mahomedan Government, that in Fusly 1,209, it was destroyed by an inundation after which no notice was taken of it, that during the Pymaish, the lands under it were classed as dry, that in Fusly 1248, the Sons of the late Mullappah partially restored it by which, land assessed at 100 Rupees annually was brought under wet cultivation in Fuslies 1249-50 and 51, that by the inundation of Fusly 1252, this Tank having been again injured, no wet cultivation was carried on and that in the event of its being repaired agreeably to the estimate now framed by the Civil Engineer the following will be the result.

Dry land now under cultivation.

	A.	C.	A.	Rs.	A.	P.
Cirkar	148	5	3½	86	12	0
Kuttoogootta	15	10	6	11	1	11
Enamaty	35	28	7½	41	5	0
Total...	199	4	1	139	2	11

The above extent will be converted into wet and supposing an average of 5 Rupees per acre charged, the Bariz would be in the aggregate Rupees 1,121, from which the above assessment of dry land Rupees 139-2-11, being deducted, the net result to Government would be Rupees* 981-13-1.

* 1,121
139 2 11
981 13 1

Cuddapah, Collector's Office, 26th November 1856.

(Signed) M. MURRAY,
Collector.

No. 100. Report OOOO, on an estimate prepared by the District Engineer of Kurnool for constructing a first Class road from Bairlooty at the foot of the Munteral Cunnama Pass, via Atcoor and Nundicootcoor to Gardemudugoo miles 41-7 and for completing the road from the latter place to Jolapoor or Kurnool, miles 6-7 Total distance miles 48¾.

The estimate provides for 1st road from Bairlooty to Atcoor.

	Rs.	
Earth work	2,732	
Gravelling 6 yards wide and 4½ inches thick	1,135	
Tamping...	1,039	
Rough stone	33	
3 Tunnels varying in size from 1 to 3 vents of 3 feet square	448	
Marking out line, Superintendence and sundries	613	
		6,000
2nd from Atcoor to Nundicootcoor earth work	4,255	
Gravelling 6 yards wide and 4½ inches thick	3,648	
Tamping	2,026	
40 Tunnels varying in size from 1 vent of 3×3 feet 6 vents of 4×3 ...	7,127	
Marking out line Superintendence and sundries	1,744	
		18,800
3rd. From Nundicootcoor to Gardemudugoo earth work	3,538	
Gravelling 6 yards wide and 4½ inches thick	1,530	
Tamping	1,363	
Removing rock	14	
26 Tunnels varying in size from 1 vent of 3×3 feet to 6 vents of 4×6 feet ...	5,548	
Marking out line Superintendence and sundries	1,207	
		13,200
4th. Completing road from Gardemudugoo to Kurnool earth work ...	319	
Gravelling	1,661	
Tamping	383	
Stone revetment	18	
1 Bridge of one arch of 15 feet span	830	
Superintendence and sundries	289	
		3,500
Total Rupees...	41,500	

forty-one thousand, and five hundred.

1. The estimate is for opening an important line of communication from Kurnool via the Munteral Cunnama Pass to the Cuddapah District, but the Item of Rupees 22,500 for a 2nd Class road from Atcoor round by Masselmadagoo to Nundicootcoor a distance of 25 miles, irregularly entered in the same estimate has been struck out, as also the Items of Rupees 6,500 and Rupees 8,000 respectively for the 8¼ miles of road from Nundicootcoor to Sattanpoor, and for improving the District road from Pratacoota to Moorumconda a distance of some 6 or 7 miles.

These being merely branches from the main line, the estimates for them should be submitted separately, and this the District Engineer will be required to do, when they can be entered in the Budget for 1858-59 as they cannot now be prepared in time for the outgoing Budget the necessity for them however is not pressing.

2. The District Engineer states his intention of forwarding hereafter, estimates for the few large bridges required on the main line, for which no provision is made in the estimate now submitted.

3. The manner in which the repair estimates have been applied for is also irregular, and before recommending the only one at present required, viz. for the portion of road between Gardemadagoo and Kurnool, the District Engineer will be requested to furnish a return of the traffic.

4. The District Engineer has further omitted to obtain the opinion of the Government Agent in support of his estimate, which he will now be directed to do, and to forward it with the least practicable delay. In the mean time as it is very desirable that the very important line of

road in question should find a place in the outgoing Budget, the estimate amounting to Rupees (41,500) forty-one thousand and five hundred, in which the rates allowed are moderate and sufficient, is submitted by the Chief Engineer for the consideration of Government.

Letter from Lieutenant E. R. BLAGRAVE, District Engineer of Kurnool; to Colonel C. E. FABER, Chief Engineer, dated Camp at Sirwell, 12th November 1857, No. 307.

SIR,

I have the honor herewith to forward the accompanying estimates for road from Kurnool in conjunction with the proposed Munteral Cunnama Pass, included in the estimate is a branch from Atcoor round by Musselmudagoo to Nundycootcoor (a distance of 25 miles) the estimated cost for which is 22,500 Rupees* as a second Class road, but with minor drains suited to a 1st Class line; this line is not necessary as *a part* of the main line but as it passes through country yeilding large and valuable crops the transmission of the produce of which to a market it would materially assist, I have included it in the present estimate and when the waters of the Boonassee river are turned to account it will I consider prove a valuable addition but its sanction might be deferred; in which case the amount remaining and required to be sanctioned would be, for construction 48,000 Rupees with 100 Rupees a mile for maintenance of 1st Class Rupees 5,075* and 50 Rupees a mile for 2nd Class. Rupees 412 (not including road by Musslemuddoogoo) making a total of Rupees 53,487 or 54,500 for present sanction.

*Including drains of sizes.

*Including 2 miles from Ziraboor to the new Bridge across the Hindree.

2. The estimates for the large bridges (of which there are not many on this line) will be sent in at some future period.

3. In the event of the above branch by Musselmudagoo being sanctioned either now or at a further period; sanction also will be required for improving the District road from Pratakota to Moorumconda a distance of some 6 or 7 miles for completing the communication of the Hydrabad country with the Coast: "carried on principally on bullocks &c, owing to the difficulty of wheeled conveyances crossing the Kistnah." The Branch from Nundicootcoor to Allumpoor completes the communication with the Raichoor Doab.

A village on the river Kistnah.

4. The Distance from Gaurdymuddoogoo to Kurnool or Jolapoor on South bank of Hindree is already constructed (including Bridges) but owing to there being no sum up to now allowed for its maintenance and the severe injuries caused by the heavy rains of the past monsoon extensive repairs are required nearly the entire length requiring to be fresh gravelled and one additional bridge of 1 arch of 12 feet span added near Cadrabad where an extensive breach has occurred owing to the existing bridge at Cadrabad not having sufficient breadth of Waterway.

No. 101. Report EEEEE, on an estimate prepared by the District Engineer of Kurnool for repairing the Calwah tank in the Pauniem Talook.

	Rs.	As.	P.
1. The estimate provides for re-building rear stone facing, backing with earth, tamping &c....	530	11	0
Repairing the sluice channel bank	75	15	0
Raising bund	183	6	0
Re-building Calingulah	1,306	3	0
Embankment above and below the Calingulah	327	6	0
Raising Pyol of sluice	84	6	0
Uneven item	2	1	0
Total Rupees...	2,510	0	0

two thousand, five hundred and ten.

2. By improving the tank as proposed, the additional water it will be capable of holding will be sufficient to enable the Ryots to raise a second crop in their lands under it.

3. The spread of water in the tank is ⅔ of a mile long and averaging ⅛ of a mile broad, gives an area of about ¼ of a square mile. The quantity of land under its influence, as shewn in the accompanying Statement furnished by the Officiating Commissioner is 187 acres, including Enam lands, yielding a present Revenue of Rupees 405-8-0.

4. The probable amount of Revenue that will be realized if the tank is repaired and the lands under it watered is given at Rupees 920-8, or an increase of Rupees 515 being nearly 20 per cent. on the proposed outlay. The rates allowed for the work are moderate and sufficient, and the Chief Engineer recommends the estimate for entry in the Budget of 1857-58.

Letter from Lieutenant E. R. BLAGRAVE, District Engineer of Kurnool; to Colonel C. E. FABER, Chief Engineer, dated Chagulmurry Talook, 20th November 1856, No. 315.

SIR,

I have the honor herewith to forward an estimate for improving the existing Calway Tank (a natural Lake nearly) and construction of a lower one, on a lower level (by 18 feet) by daming up the *gorge* in the lower range *(66 feet long at bottom with rocky sides sloping up at an angle of* 45°.*)*

2. The estimate for the upper Tank amounting to Company's Rupees 2,508, includes repair to channel now existing also to sluice Rupees 160-5; re-building rear stone revetment near sluice and raising the bund in front of same Rupees 714-1; Re-building and raising (by 1½ yard) the Calingulah (at present constructed of loose stone) Rupees 1,306-3; and earth embankments on either side Rupees 327-6; This extra amount of water will ensure a double crop for which it is more than ample, the area of this Tank is about ¼ square mile (¾ mile long ⅓ broad) The quantity of land under its influence as per accompanying Statement from the Officiating Commissioner is 187 acres including Enam lands yielding at present 405½ Rupees probable revenue for one crop 920½ Rupees an increase of 515 Rupees; add ½ for second crop ($\frac{9}{2}\frac{0}{2}\frac{1}{2}=460\frac{1}{2}$) if one crop only be raised the return will be at the rate of 20 per cent, if two at 55 per cent.

3. The estimate for the lower Tank amounts Rupees 3,822-1 and includes the following Items bunding the gap (earth with stone facing) Rupees 1,900, an Irrigation sluice 30 yards long Rupees 1203-6; and a Calingulah 20 yards in length with wing walls 2 yards in height Rupees 718-11.

4. The channels are not included in the present estimate but as the lands to be cultivated are immediately adjoining, this will not prove an expensive item.

5. The amount of land is 536 acres now yielding a revenue of 327 Rupees and if brought under wet cultivation likely to yield 2852½ an increase of 2525½ Rupees for one crop a second crop being uncertain I have not allowed for it. This Tank would collect a large amount of water from the upper Tank now running waste and in addition receive the drainage of 8 square miles. The section of the Bund is 54 feet in height and proposed depth of water in front 48 feet the sill of sluice being 13 yards or 39 feet below surface and its probable area would be 800 yards length × 400 breadth=320,000 and mean depth from 8 to 10 yards. Its shape being very irregular and there being several knolls that would become islands, the calculation of cubic content is rendered uncertain but it would probably contain not less than 2½ million cubic yards allowing 3,000 Rupees as about the cost for construction of channels including sluices &c. the probable return on the outlay is likely to be at the rate of 36 per cent. for one crop.

Calingulah.

Total cost including 3,000 Rupees for channel.

6. The accompanying rough sketch plan will shew the relative positions of the two Tanks and site where new work and additions are proposed.

7. The upper Tank receives the drainage of upwards of 60 Square miles and Lower one in addition to surplus from the upper of 8 square miles.

Source of supply.

8. The channels to the upper Tank are in existence and only require small repairs and slight addition which have been allowed for.

9. The Proximity of these Tanks to Kurnool would prove highly beneficial not only in supplying grain to the Town without difficulty but also as likely to afford occupation to a large proportion of the inhabitants it being but 20 miles from Kurnool and a made road (the Minor drains of which are completed) the entire distance.

10. These cistimates although not sent in by the 15th I trust may be in time for this next Budget as this is the only new Irrigation work proposed.

Probable amount of increase of Beriz to be realized in the event of a tank at Calwah being repaired so as to retain a full supply of water.

Number.	Names of the Villages.	Grand Total. Extent of lands.	Grand Total. Amount of revenue now realized on dry land.	Circar lands. Extent of lands.	Circar lands. Amount of revenue now realized on dry land.	Circar lands. Probable amount which may be realized if the tank be repaired and the lands under it watered.	Circar lands. Total.	Circar lands. Average per acre.	Enam lands. Extent of lands.	Enam lands. Amount of revenue now collected on dry land.	Enam lands. Probable amount which may be realized if the tank be repaired and the lands under it watered.	Enam lands. Average per acre.	Remarks.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
		Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.
1	Calwah.....	102 8	405 8	410 8	816 0	920 8	8	0 8	510 0	6 0	187 0	405 8	The total amount in acres in the village is 102 of which 15 acres though entered as dry are already assessed as wet, on the remainder viz. acres 87 Teerwajastee was been calculated at the rate of 2 Pagodas an acre.
2	Cottalah.....	79 0	65 0	411 0	476 0	411 0	6 6	0 8	0 0	0 0	79 0	65 0	0 No remark.
3	Bramanapilly.....	184 0	162 0	941 8	1,103 8	2,411 8	6 273	0 8	1,500 0	5 6	457 0	162 0	8 The Circar lands may be divided into 1st and 2nd Classes and assessed respectively 7 and 5 Rupees per acre.
	Total.....	365 632	8	1,763 0	2,395 8	3,773 0	0 358	0 21 14	2,010 0	6	723 632	0	2. The Enam lands are liable to an average deduction from this Assessment of 8 Anuas per acre payable to the Enamdar. In the rate of the above Assessment Teerwajastee of one crop is included. In the bed of the above tank there are 3 numbers of Enam lands which were for a considerable time not cultivated but however these were brought under cultivation last year, acres 29-33-10.

(Signed) J. G. RUSSELL,
Offg. Ayent to the Governor.

(Signed) E. R. BLAGRAVE, Lieutenant,
District Engineer of Kurnool.

(True Copy.)

Kurnool District,
Government Agent's office,
On the Circuit Sirvell,
12th November 1856.

No. 102. Report UUU, No. 8662 upon the proposed Stone facing to the Chinnumbadoo Tank, in the Talook of Peddapollium in the Chingleput District.

	Rs.	A.	P.
Ayacut of the Tank	18,186	4	9
Enam	844	4	0
Highest Collection during the last 5 years	8,720	10	10

1. This Tank is a very large one with a supply from the River Corteliar, but from having a very imperfect stone facing and from the bank being of very inferior earth, it is incapable of holding a proper supply of water. The late Civil Engineer estimated for repairing this Tank, but from the difficulty of procuring stone at the rate he allowed, the work was postponed.

The repairs consist of.

	Rs.
Stone facing	6,883
Earth work	1,322
Re-building old facing	203
Repairing Calingulah	409
Sundries	483
Total Rupees.....	9,300

nine thousand, and three hundred.

The rate for stone work is high, from the great distance from which it has to be brought, and the height of the bund.

The Collector approves of the estimate, and as it is really very necessary and will doubtless be attended with a considerable increase upon the present Collections, I recommend it for sanction and entry in the Budget of 1857-58.

Letter from C. J. SHUBRICK, Esq., Collector of Chingleput to Lieutenant Colonel C. E. FABER, Chief Engineer dated Sydapet, 12th November 1856, No. 284.

SIR,

1 Estimate for Rupees 9,300 for repairing old stone revetment and Building new stone revetment &c. to the Chinnumbadoo Tank in the Peddapolliem Talook.
2 Estimates amounting to Rupees 920 for Calingulahs in the Porel Channel in Peddapolliem Talook
1 Estimate for Rupees 1,200 for a new stone revetment to the Vathattoor Tank in the above Talook.
1 Estimate for Rupees 680 for a Calingulah to the Panagenjary Tank do.

I have the honor to forward, with my Countersignature, the accompanying estimates as per margin framed by the District Engineer of Chingleput for certain works in the Peddapolliem Talook amounting in the aggregate to Company's Rupees 12,100 and request that they may be inlcuded in the Budget of 1857-58,

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Letter from Lieutenant A. S. MOBERLY, District Engineer of Chingleput; to Colonel C. E. FABER, Chief Engineer, dated Camp at Guindy, 11th November 1856, No. 1200.

SIR,

1 Estimate for Rupees 9,300 for repairing old stone Revetment and building new stone Revetment &c., to the Chinnumbadoo tank in the Peddapollium Talook.
2 Estimates amounting to Rupees 920 for Calingulahs in the Porel channel in Peddapollium Talook.
1 Estimate for Rupees 1,200 for a new stone Revetment to the Vathaloor tank in the above Talook.
1 Estimate for Rupees 680 for a Calingulah to the Panayenjary tank in do.

In forwarding the accompanying estimates as per margin I would beg to be allowed to make the following remarks regarding them.

2. Some years ago Captain Collyer, I think, prepared an Ordinary estimate for part of the stone work of this tank but upto this time it has not been done and on enquiry I find that there was a complaint about the insufficiency of the rate and I therefore ordered Assistant Overseer Goodchap to prepare a revised estimate, which I have now the honor to submit amounting to Rupees 9,300, this is a large tank, the yearly Revenue of which as you will observe from the list attached is about Rupees 8,000.

3. The next two estimates are for Calingulahs in the Porel channel two estimates for these Calingulahs amounting respectively to Rupees 412-6-8 and Rupees 151-13-4 were sanctioned by Government in 25th March 1854 but the rates being insufficient. I have had revised estimates prepared.

4. The fourth estimate is for Rupees 1,200 for building a new stone Revetment for the Vathaloor tank in the Peddapollium Talook.

5. The last estimate is for a Calingulah in the Penayenjary tank an estimate of Rupees 428-10-6 was sanctioned by Government in 25th March 1854, but the rate for stone in Chunam being insufficient, the Quarry being 7 miles off I have had it revised and entered brick in Chunam for the body and put stone for the Apron only.

6. All these estimates amounting together to Rupees 12,100 I would beg to be allowed to recommend strongly for sanction.

No. 103. ORDER THEREON, No. 2021; dated 28th October 1857.

1. The Right Honorable the Governor in Council sanctions the undermentioned estimates, and directs that they be entered in Statement No. 2 of the Budget for 1858-59.

Letter and date of Report.	Work.	Amount.
		Rs.
	NELLORE.	
VV, dated 6th Dec. 1856	Improving the line of road from Nellore to Gungapatam.....	4,000
RRR, do. 6th do. 1856	Improving and increasing the capacity of the Nellore tank.....	17,100
SSS, do. 6th do. 1856	Constructing a second class road from Nellore to Todairoo, the Cusbah of Toommulthalpor Talook, a distance of 14 miles.....	8,000
	CUDDAPAH.	
W, do. 6th do. 1856	Repairing the portion of the road from Cumbum to Vinakondah, lying immediately north of the former place.....	3,900
YYYYY, do. 6th do. 1856	Constructing a new Tank with Sluices, and Calingulah at Mauchpully in the Sidhout Talook.....	6,300
	BELLARY.	
E, do. 1st April 1857	Constructing a second class road from Kumply to Hospett viâ Camalapoor, a distance of 18¼ miles....	23,000
	CHINGLEPUT.	
B, do. 17th Dec. 1856	Constructing a Peishcar's Cutcherry at Streehurricottah.....	2,020

Report VV *on estimate for Rupees* 4,000.

2. An estimate of Rupees 47,230 for opening a road between Nellore and Gungapatam, a Salt station on the coast was laid before Government with the Chief Engineer's Report R. dated 22nd December 1855, and the work was recommended mainly as affording the shortest communication between the East Coast Canal and Nellore. But the Government declined* to sanction the estimate, as the Canal had not reached Gungapatam, and was not likely to do so for some time, and because Kistnapatam appeared to be a preferable point of junction with the Canal.

* Extract Minutes Consultation 5th February 1856 No. 157 para. 12.

3. The outlay contemplated in the present estimate is moderate, and is to be laid out in improving the line, with the view of facilitating traffic, of which that carried on in the salt obtained from the pans at Gungapatam is stated to be considerable.

Report RRR *on estimate for Rupees* 17,100

4. The estimate forwarded with this Report is for improving and increasing the capacity of the Nellore Tank in the District of Nellore. This object it is proposed to effect, by raising the bund of the tank one yard, so that it may hold a larger supply of water, and by constructing a new Calingulah, in supersession of the three defective Calingulahs now existing, with several sluice vents for the better regulation of the irrigation, and supplies to the tanks below, as well as to afford additional vent to the tank in case of extraordinary floods. The project has the support of the Collector and the Chief Engineer; and the increase of Revenue expected from it is reckoned by the former Officer at Rupees 12,539, while Colonel Faber is of opinion that only Rupees 7,728 can be taken as the gain that will result from the improvements now proposed; the latter sum is however 45 per cent. on the proposed outlay.

5. The Government observe from the last para. of the Chief Engineer's Report, that that Officer purposes to point out to the District Engineer certain alterations which he considers necessary in the plan of the Calingulah.

Report SSS *on estimate for Rupees* 8,000.

6. The road referred to in this Report appears to be a very desirable work. The traffic on the present tortuous track is stated to be considerable, and it is believed that it will be still

greatly augmented by the construction of the proposed road, which will run through the jungles which supply Nellore with firewood, and will be carried to Todairoo where extensive beds of Nodular Limestone are stated to exist.

Report W *on estimate for Rupees* 3,900.

7. The portion of road referred to in this Report is stated to be very stony and uneven, so that carts traverse it with difficulty. The traffic on the line is also said to be considerable.

8. An estimate to the amount of Rupees 1,28,700 was submitted by the Chief Engineer with his Report F. dated 26th January 1856, for the entire line from Cumbum to Vinakondah, for entry in the Budget of 1856-57, but it was returned to that Officer with several others with Extract Minutes Consultation dated 10th March 1856 No. 362, as having been received too late for that Budget. The Government now observe that the District Engineer proposes to postpone the consideration of the line last referred to until the roads now in progress are brought to completion.

Report YYYYY *on estimate for Rupees* 6,300.

9. The construction of a new Tank at Mauchpully in the Cuddapah District referred to in this Report appears to be a very desirable work. A large extent of Cirkar and Enam land now classed as Poonjah, would, by means of the proposed tank, be converted into Nunjah, and thus yield a higher amount of Revenue. Besides, lands now lying waste will be brought under cultivation, and the expected increase of Revenue is on the whole assumed at Rupees 1,874, or 29 per cent. on the proposed outlay.

10. The statement furnished by the Collector is of inconvenient size, and that officer should be requested to cause his statements to be prepared in future on foolscap-paper and in the Book-form.

Report E *on estimate for Rupees* 23,000.

11. The road referred to in this Report is stated to be very much needed "both as connecting the commercial towns of Kumply, Hospett, and Chitwadighy with one another, and with the main roads from Bellary to the two former, and as giving free outlet for the produce of the lands in several large villages lying between those roads." No traffic returns are submitted, but the Chief Engineer observes that there is little doubt of the road being much frequented. The project has the approval of the Collector, who fully admits the importance of the communication.

12. The Camalapoor tank surplus channel crosses the line of road, but no provision has been made in the estimate for bridging it, in consequence of a proposal said to have been made by the Superintending Engineer Central Circle, in connection with the Toomboodra projects generally, for raising the bund of the tank. It does not appear that the project here referred to was ever laid before Government in a definite shape, and they therefore request the Chief Engineer will furnish further information on the subject.

Report B *on estimate for Rupees* 2,020.

13. An estimate of Rupees 1,730 was sanctioned so far back as the 26th August 1854, for constructing a Peishcar's Cutcherry at Streehurricottah in the Chingleput District; but the work has not yet been commenced in consequence of the low rates allowed in that estimate. The revised estimate now submitted, and amounting to Rupees 2,020 having been in para. 1 of these Proceedings ordered for entry in the Budget of 1858-59, the former sanction of 26th August 1854 is hereby cancelled.

14. The undermentioned estimates are approved for entry in Statement No. 1 of the Budget, for the orders of the Government of India.

Letter and date of Report.	Work.	Amount.
	NELLORE.	Rs.
MMMMM, dated 6th Decr. 1856.	Completing the road from the top of the Raupoor Ghaut at the boundary of the Cuddapah and Nellore Districts to Goodoor.....	74,000
	CUDDAPAH.	
Do.	Completing the road from Venketramrazpett to the Raupoor Ghaut at the boundary of the Nellore District.....	73,900

Report MMMMM *on estimate for Rupees* 1,47,900.

15. With his Report XX dated 26th January 1856, the Chief Engineer submitted estimates from the Civil Engineer amounting to Rupees 1,94,000 for completing the road from Venketramrazpett in Cuddapah, through the Raupoor Ghaut to Goodoor in the Nellore District. This line, it was ordered by Government in the early part of 1854, should be undertaken on its own merits, as well as for the relief of the population in that part of the country suffering from the then prevailing scarcity; and on the 20th May of that year they sanctioned a sum of Rupees 65,000 for the road and Ghaut.

16. The Chief Engineer reduced the Civil Engineer's estimates from Rupees 1,94,000 to Rupees 1,00,800 by striking out the metalling, reducing the rates in some instances, and by excluding a large bridge proposed for the Goonjana river, and he recommended the last mentioned sum for entry in the Budget of 1856-57. In Extract Minutes Consultation of the 26th February 1856, No. 288, the Government declined to accede to this recommendation, as the estimate did not appear to them to have been prepared with care. Subsequently* they desired that Lieutenant Hemery, District Engineer of Cuddapah, should inspect and estimate for both sides of the pass, in Nellore as well as in Cuddapah, and, with respect to the road eastward of the pass to Goodoor, they left it to the Chief Engineer's discretion to cause the estimate to be revised, by either Lieutenant Hemery or Lieutenant Mullins, the District Engineer of Nellore, as he might consider most convenient.

* Extract Minutes Consultation 11th August 1856, No. 1404.

17. The two estimates forwarded with the present Report, and amounting together to Rupees 1,47,900, have been prepared by Lieutenant Hemery, and the Chief Engineer is apparently satisfied with the manner in which they have been got up. Colonel Faber however considers the rates charged in some instances rather high, but on the assurance of Lieutenant Hemery that they had been fixed after actual observation and enquiry, he does not object to them. The road, it is observed, is to be metalled six yards wide and six inches deep, and provision to the amount of Rupees 26,493 has been made for a bridge of six arches over the Goonjana river. Lieutenant Hemery reports that the length of the portions of the road in the Cuddapah and Nellore Districts is respectively 20 miles, 4 furlongs, 30 yards and 37 miles, 1 furlong, 126 yards, making together 57 miles, 5 furlongs, 156 yards or nearly 58 miles. The expenditure on the entire line up to the 30th April 1856, is said to have amounted to Rupees 65,128, to which being added the sum of Rupees 1,47,900 now required to complete the road, there results a total of Rupees 2,13,028, or an average per mile of Rupees 3,670; an expenditure not very heavy, the Chief Engineer observes "when it is considered that there are two high Mountain "ranges, one near Chitwail with a Ghaut of 4 miles, and the other the Raupoor 12 miles in "length."

18. The Government defer granting sanction to the undermentioned estimates.

Report LLLLL *on estimate for Rupees* 3,800.

19. The estimate forwarded with this Report is for restoring the Mullapah Tank in the Chennoor Talook of the Cuddapah District. The tank is stated to have fallen into disuse in consequence of a breach in the bund which happened in 1812, and which has been left unrepaired up to the present time. By the proposed improvements to the tank, an increase of Revenue to the extent of Rupees 982 over the present income is expected; being at the rate of 26 per cent. on the proposed outlay.

20. It is observed from the Collector's Report (LLLLL^2,) that the tank was originally built by one Mullapah a village Curnum, during the Mahomedan Government and that in Fusly 1248, the sons of that individual partially restored it. The Government therefore request to be informed, before sanctioning the estimate, under what circumstances the tank in question is now considered* to be "Government property." Information is also requested whether any remission is allowed to the Proprietor of the tank on the lands cultivated under it.

* District Engineer's Report LLLLL1.

Report OOOO *on estimate for Rupees* 41,500.

21. In Extract Minutes Consultation of the 17th September 1856 No. 1680, the Government sanctioned an estimate of Rupees 13,300 for opening a trace through the Munteral Ghaut

in the Kurnool District; and desired that preparations might be made for continuing the road on both sides of the Pass, towards Guntoor on the east, and Kurnool on the west. The estimate forwarded with the above Report, and amounting to Rupees 41,500, is for constructing a first class road from Bairlooty at the foot of the Munteral Canama Pass via Atcoor and Nundicoot-coor, to Gardimudugoo, and for completing the road from the latter place to Jolapoor or Kurnool; the distances of these two portions of road being respectively 41 miles 7 furlongs and 6 miles 7 furlongs, or together 48¾ miles.

22. The District Engineer, it is stated, intends to forward hereafter estimates for the large bridges required on this line; but the Government would wish to have these works also included in the estimate for the road. In the order of 17th September 1856 above referred to, it was especially requested that the opinion of the Agent at Kurnool might be obtained as to the line to be taken, preparatory to the preparation of an estimate; but this Officer, it is observed, has not been consulted in respect to the proposal now submitted. The road from Gardimudugoo to Jolapoor or Kurnool is reported by the District Engineer to have been already constructed, and the present estimate provides for completing it; but neither Lieutenant Blagrave nor the Chief Engineer gives the date of sanction under which this portion of road was originally undertaken.

23. The Right Honorable the Governor in Council therefore requests that the omissions now pointed out may be duly supplied, and he further resolves to return the estimate to the Chief Engineer, in view to a complete one, including the bridges, being prepared and submitted.

24. In respect to the continuation of the road on the eastern side of the Pass towards the Guntoor District, the Government, in their order of 17th September 1856, observed that an estimate† was sanctioned for improving the road from Guntoor by Junacondah to the Cuddapah frontier, and suggested that this road might be connected with the foot of the Pass. No estimate has yet been received for this connecting line, and the Government request the Chief Engineer's attention to the subject.

† Proposed for entry in the Budget of 1858-59, Ex. Mins. Cons. 12th March 1857, No. 461 para. 15.

Report EEEEE *on estimate for Rupees* 2,510.

25. With this Report the Chief Engineer submits an estimate amounting to Rupees 2,510, for repairing the Upper Calwah Tank in the Panniem Talook in the Kurnool District, as also for re-building a Calingulah and improving a Sluice. The work it appears would be remunerative; the increase of revenue expected being set down at 515 Rupees, or nearly 20 per cent. on the proposed outlay. Besides the above project, the District Engineer, it is observed, brings forward another for constructing a tank on a lower level, as promising also a large increase of revenue; but no mention is made of this in the Chief Engineer's Report. Lieutenant Blagrave states that this tank would collect a large quantity of water from the upper tank now running waste, and thus the two projects appear to be closely connected. The Government therefore resolve to return the present estimate to the Chief Engineer, in view to a revised one being prepared and submitted for the two tanks in question.

Report UUU *on estimate for Rupees* 9,300.

26. The estimate submitted with this Report is for repairing the old stone revetment, building a new one, and executing other repairs to the Chinnambadoo Tank in the Talook of Peddapolliem, in the Chingleput District.

27. The work is stated to be very necessary to increase the efficiency of the tank, which, in the present defective state of its stone facing and its embankments, is incapable of holding a proper supply of water. No information is given by either the District Engineer or Collector as to the revenue prospects of the project, and Colonel Faber merely observes that the proposed outlay "will doubtless be attended with a considerable increase upon the present collections." The Government would however wish to have before them definite information on this point before granting sanction to the estimate now submitted.

(Signed) H. FORBES,
Acting Secretary to Government.

Pub Works Dept.
Coimb 29 October
No 2021.

Extract Minutes of
Consultation

Dy 28 Oct 1859.

10

Passing orders
ordered and Extract

91 c 103.

Nellore

No 8662

Communication

Proposed improvement of
the line of road from Nellore
to Gungapatam

Amount of Estimate Rs 14,000
m 4 — 0s
distance - - 11 — 4 — 110 —

The traffic from the salt
pans at Gungapatam to Nellore, is very
considerable; being about 1,000 laden bullocks,
nearly 600 unladen bullocks per diem, as taken
in the month of July 1856 — persons carrying
loads 900, and unloaded 3,000 per diem — Laden
& unladen 5 per diem, and there
can be no reasonable doubt but that an im-
proved road would be very beneficial to the
trade in salt, as reported in the Collector's
letter. — Of the above distance of 11 miles
nearly two miles is a 1st Class road, and
from Nawabpettah to within a mile of
Ramireddy pettah a distance of 1½ mile — the
earthwork for a 2nd class road was done last
year to afford employment to the poor
This estimate provides for completing
the earthwork for the road 5 yards wide,
turfing side slopes — building a large number

iv

of tunnels, thus completing the road with the exception of metaling, which can be done hereafter when found to be necessary. As will doubtless be the case, and no outlay of one farthing more certainly or more rapidly repaid to Govt. than those incurred for the improvement of salt roads. The rates for the work are those usual in the District, and are moderate, and I recommend the work for sanction and entry in the Budget of 1857/58.—

Central Office of PW
Fort Saint George
6 Decr. 1856

Colonel
Chief Engr

To
The Secretary to Govt. D.P.W.

Documents accompanying
VV1 / Letter No 1272 d/ 11 Nov. 1856
VV2 / Do — 434 d/ 29th Oct.
VV3 / Do — 323 d/ 10 Novr
VV4 / Traffic return
VV5 / Abstract Estimate.
VV6 / Plan

Compd by [illegible]

Encs 5 Pcls 56 Nos 51-54

VV

Public Works 1856 Dept

Dd to Cons: 29th October 56

From No 2807.

The Chief Engineer

To The Sec to Govt PWD

Dated 6 } Dec 1856

Rec'd }

6 Encls. Returned 17/11/56.

No 8662

Cons No 2031. 28th October

Nellore.

Revenue
Nellore Tank. } No 52

Report upon the proposed enlargement of the Nellore tank.

Amount of Estimate Rupees (17,100) Seventeen thousand and one hundred.

Anticipated return given by Collector } 12539

Do as calculated by Chief Engineer } 7728. only.

No 8662

53

The Collector of Nellore in forwarding the District Engineer's Estimate, states that there are 13 villages under the Nellore tank, depending wholly, or in part, upon it for irrigation, and that the area of arable land is 8,995 acres, assessed at Rupees 37,583, but that, of this 5,184 acres only, having an assessment of Rupees 22,562 are cultivated, leaving a deficiency of 15,000; and of this 1,236 acres only, assessed at Rupees 7,126, are capable of cultivation. He states however that out of the Rupees 22,562, which ought to be realized from the land cultivated, the annual remissions for the last ten years, has been 8,119 Rupees, and he assumes that 2/3rds of this may be saved, in addition to the 1,236 acres to be brought

Honoured with the recommendation for sanction and entry in the Budget of 57/58 an Estimate for Rupees 4000 for improving the line of road from Nellore to Gingeylatam in the Nellore District.—

No 91.

Engineering 17th Oct 57 R 21st

brought under the plough, which are at present never cultivated thus making a total return of Rupees 12,539.

2. The District Engineer states that the area of the tank is 4 5/8 miles equal to 14,800,000 superficial yards, and that the tank averages 2 yards in depth; its contents is thus 29½ million Cubic yards of water, which is more than sufficient for irrigating 5,184 acres of land, but taking into consideration that only 3,368 are watered from the tank, on the average. I am disposed to think that either the tank is less deep than the District Engineer assumes it to be, or that the supply of water is defective; and I am confirmed in this opinion, from the fact of the great outlay of Rupees 18,900 having been sanctioned for the improvement of its supply channel from the Pennair river, and from a considerable affluent of the Pennair called the Gollakundacom Loodum having also been diverted into it.

3 The proposal of increasing the capacity of the tank ⅓ by adding to the height of its bank one yard will enable it to hold a further supply of 14,800,000 Cubic yards of water, sufficient for an additional 1,850 acres of land, which would give an increase of Rupees 7,728, and this is all that

that I am disposed to think should be assigned as the interest, on the outlay of 17,100 Rupees, or 45 per cent. The other increase should be, if it has not already been calculated, as interest on the 18,900 Rupees previously sanctioned.

4. The measures proposed by the District Engineer to effect the improvements, are to raise the bank of the tank throughout, so as to make it capable of containing this extra yard of water, to construct a new Calingulah at the southern end of the tank, in place of the existing defective one, and to give this Calingulah such a capacity as to ensure the discharge of two small Calingulahs at the north side, and which are not only troublesome, but cause a great loss, as they discharge the water back into the river.

5. By the proposed arrangement having but one instead of three Calingulahs, and that situated at the south side, the superfluous water can be let off to other tanks below it, and so none need be lost.

6. From the situation of the tank immediately above the town of Nellore, it is of the greatest importance that the tank should be protected from all possibility of breaching; and this will be ensured from the fact

fact of the tank being so situated that only 9½ miles of country besides its own bed of ½ miles can drain into it, by the new Calinguiah as it is to be of sufficient capacity to draw off 950,000 cubic yards per hour, which is ⅓ more than the quantity which would be required to be carried off, even on the unlikely supposition that the tank was full on the commencement of heavy rain, a contingency of no probable occurrence.

7. The Calinguiah requires some modification as to the shape of its wing walls; but this need not affect the grand total of the estimate and the requisite change will be pointed out to the District Engineer.- The rates are moderate and sufficient for the work. I recommend this project for sanction and entry in the Budget of 1855-56.

Central Office of P.W.
Fort Saint George
" December 1856.

Lieutenant Colonel
Chief Engineer.

To
The Secretary to Government
Public Works Department.

Documents accompanying

1 Letter No. 1295 dated 15th November 1856. RRR1
1 —9½— " — 300 dated 30th October 1856. RRR2
1 Plan - - - - - - - - - - - - - - - - - RRR3
1 Abstract Estimate - - - - - - - - - - RRR4

Comp. Calculations

Cons 29th January 1858 No. 55-56.

RRR

Pub. Works 1856 Dist. 1st Dist. Cons. 29th October 67.

No. 2530.

From

The Chief Engineer

To

The Secretary to Government
Public Works Department

Dated 6th December 1856.
Rec'd 9th

1 Enclos. Returned No. 8662
7th 11/57.

Communications
road. from Nellore
to Todavoo—

Nellore No. 8662

Report upon a proposed
2nd Class road from Nellore
to Todavoo Cubah of Thoomul
thalpoor Talook—

Distance - 14 miles.
Amount of Estimate 8000
Eight thousand.—
Cost per mile 571/2

The above road is to be 6 yards wide, and to have tunnels and road dams, where which no larger works will be required; and as the soil, is of gravel, it is not at present considered necessary to gravel or metal it— of the sum of 8000 Rupees— the items are,

for earthwork	Rupees	4061
clearing jungle	—— " ——	1161
tunnels	"	990
road dams	"	1788
Superintendence & Sundries	"	581

Total Rupees 8000— Eight thousand.—

2 The rates for the above works are moderate, but sufficient for the construction of the road; which seems to be judiciously laid out.—

3 The traffic is stated to be consider-

No. 2530. Dated 6th December 1856.

From The Chief Engineer

To The Secretary to Government Public Works Department

Recommends for sanction the proposed enlargement of the Nellore tank on, Estimate for Rupees 17,100 in Nellore District and for entry in the budget of 1857/58.

No. 92.

2nd Army 9th Oct/57 R21st

Cons 29th Jany 1858 No 55-56.

RRR

P.W.K. 10-L 6 14

:able, not withstanding the tortuous nature of the present track, which appears to be simply a jungle road.-

4 As this road runs directly through the Jungle from which firewood is cut for the supply of the town of Nellore, and moreover goes past extensive beds of nodular Limestone, it will considerably cheapen that article at Nellore, that at present used being brought a distance of 20 miles.- The Collector approves of the proposed road, and I recommend it for sanction and entry in the Budget of 1857/58.

Central Office of PWD
Fort St George
6th Dec 1856

I have the honor to be
Sir
Your most obedient Servant
(Signature illegible)
Colonel
Chief Engineer

To
The Secy to Govt (P.W.D.)

Documents accompanying.

1 Letter No 1286 dated 17th November 56. SSS1
1 Do " 326 dated 15th Do SSS2
1 Abstract Estimate SSS3

SSS.

Pub: Works — 1856 Dec 11

12½ to Cons: 29 October 57

No 2831

From

The Chief Engineer

To

The Sec to Govt Mdr

Dated 6.
Rec'd 9th } December 1856

No 8662

3 Enclosures Rec'd 17/11/56

S C No 7021. 28th Oct 57.

Forwards with recommendation for sanction & entry in the Budget of 57/58 the construction of a road from Nellore to Tadanoor a distance of 14 miles abt cost of 8000 Rupees in the District of Nellore.

193.

C 29 Nov C 17 Oct 57 R 21

Comp Thos Cumberlidge

1856

No 8662.

Cuddapah

Communications

Repair of part of the road from Cumbum to Vinakondahe.

Distance 1 Mile 5 Furlongs 160 Yards.

Amount of Estimate Rupees (3900—0)

Three thousand and nine hundred.

Amongst the estimates prepared for the Budget for the year 1856/57 was one amounting to Rupees 128700—0—0 for constructing a road from Cumbum in the Cuddapah District to Vinakondahe in Guntoor.—

2. This estimate was returned for revision.

The present District Engineer states that there are so many other Roads in an unfinished state that he wishes to postpone the consideration of the making of it until the half finished Roads have been completed.—

3 The Sub Collector has called his attention however to the very bad state of the road immediately to the North of Cumbum which is by far the most stony and uneven portion of the whole road from Cumbum and Vinakondahe and upon which carts are greatly shaken.—

4. The traffic upon this road is very considerable amounting to 320 a month for the nine months during which accounts have been made besides bullocks and laden Coolies.

The

Carried Over 180 21344

I The rates at which the work is calculated, are reasonable and sufficient for the purpose and the work being simply Repairs and the construction of a few tunnels requires no particular descriptions. And I recommend that sanction be granted for the sum of Rupees (3,700 — — Rs. A. P.) Three Thousand and Nine hundred for this portion of the Road to be entered in the Budget of 1857/58.

Central Office of P.W.
Fort-Saint-George,
6 Decr 1856

Alexr Goodwyn Colonel
Chief Engineer

Documents Accompanying

W1 1 Letter from Civil Engr. Cuddapah Dt.
W2 1 Abstract Estimate.
W3&4 2 Plans.
W5 1 Traffic Returns.

F.

The Secretary to Government P.W.D.

Com 25th April 56. No 86

Public Works Department
Dated Comm. 29th October 1856
No 2783-W

From.

The Chief Engineer.

To.

The Secretary to Government C.P.W.D.

Dated 6th
Received 9th } Dec. 1856.

No 8662

Enclosures. S Ord. 7/11/56

S 6th No. 2021. 28th Oct. 56

Nº 94.

Cuddapah

Revenue

Irrigation Works

No 8662

Report upon a proposed new tank at Nandalapally in the Sidhout Taluk of Cuddapah.

	Rs.
Amount of Estimate	6300
Six thousand three hundred.	
Estimated Revenue	1874-8-3
Revenue.	29 %

Forwards with recommendations for sanction and entry in the Budget of 1857/58 an Estimate amounting to Rupees (Sic. 5900 — A. 0 P.) Five thousand nine hundred for the repair of part of the Road from Cumbum to Vinukondah a distance of 1 Mile 5 Furlongs 1410 Yards in the District of Cuddapah.

This tank is proposed to be constructed across a fine hill stream near Nandalapally in the Sidhout Taluk. it is to be constructed on 2nd class section its area of bed is 360,00 superficial yards and will contain 720000 cubic yards of water.

The Estimate seems to be well considered, the rates are those usual in the District. — No Report No 14284 accompanying, given full information as to the capabilities of the tank. and the available

Carried Over — 180 — 01344

Nº 94.

Sent

29th May 17th Oct. 57 821

Superintending Engineer

available land below it.

3. The Collector recommends the project for sanction, and concurs with him, and forwards it for entry in the Budget of 1857/58.

Central Office of C.E.
Fort St. George,
6th December 1856.

Alex Taylor Colonel
Chief Engineer

Documents accompanying
Report from the Civil Engineer of Central Division
1. Letter No. 722 dated 28th November 1856. YYYYY
1 Abstract Estimate YYYYY.
1 Statement YYYYY.
1 Plan YYYYY.

To The Secretary to Government P.W.D.

Comptr's Office Genl

Comptr's Office Genl

YYYYY

Public Works Department
1856
Dated Camp 24th October

No. 2889

From

The Chief Engineer

To

The Secretary to Government
P.W.D.

Date 6th December 1856.
Received 9th

No. 862

4 Enclosures Dt. 17/10/56

Rec'd No. 2091. 28th Oct. 56.

Submitting for sanction and entry in the Budget of 1857/58 an Estimate Amounting to Rupees 6,300 for constructing a Tank in the Sidhout Taluk in the District of Cuddapah.

No. 195

Copy sent to Chief Engineer Madras

Copy sent to Collector Cuddapah

51

Public [roads] [New Work]

Abstract of Estimate No. of 185 /5

Road No.

District Bellary

Work Making a 2nd class Road from Kumsly to Hossputt

Quantities	Description of Work	Rate			Amount	Amount for each part
		Rs	as	P.	Rupees	Rupees
C. Yds.						
11880	Trenching Cotton soil 1 Cyd	"	1	"	743	
44805	Do Red Soil Do	"	1	"	2800	
13080	Do Stony Soil Do	"	1	6	1226	
13860	Metalling Cotton Soil Do	"	2	"	1733	
18660	Do Red Do Do	"	2	"	2332	
5060½	Do Do Do Do	"	1	6	475	
14040	Do Stony Soil Do	"	2	"	1755	
7200	Clearing Stones Do	"	1	"	450	
26160	Do Do Do	"	1	6	2452	
2640	Stone Revetment Do	"	4	"	660	
69360	Clearing Bushes Do	"	"	1	361	
67½	Blasting and removing Rocks Do	"	3	"	13	
173610	Tamping Do	"	"	1	904	
2160	Levelling Do	"	1	"	135	
						16039
	1 Drain of 3 Vents				240	
	2 Drains of 3 Vents Each	164	"	"	328	
	2 Drains of 5 Vents Each	231	"	"	462	
	15 Drains of 2 Vents Each	151	"	"	2265	
	1 Bridge of 1 Arch				2010	
						5305
	Superintendency					
	1 Maistry for 12 Months } ½ Month }	15	"	"	180	
	Carried Over				180	21344

Quantities	Description of Work	Rate			Amount	Amount for each part
C. Yds.		Rs	As	P.	Rupees	Rupees
	Brought forward				180	21344
	1 Goomastah for 12 Months @ 10 Rupees per Month	10	"	"	120	
	6 Peons for 12 Months @ 4 Rupees per Month	4	"	"	192	
	Avenue of trees for 1.8 Miles @ 50 Rupees per Mile	50	"	"	900	
	Sundries				264.	1656
	Grand Total Company's Rupees					23000

Central Office of P. W.
Fort Saint George
1st April 1857.

W. E. Baker Colonel
Chief Engineer P. W.

Enclosure
In a Report

From
The Chief Engineer
D. P. W.

To
The Secretary to Govt.
D. P. W.

Dated 1st }
Received } April/57

P.W. 681/57

No 11479

Abstract Estimate for
Making a 2nd Class Road
from Klumpoly to Holspett
in the District of Bellary

Amounting to Cs Rs 23000---

No 11479

Bellary
District

"Public"
Roads.

Report on an Estimate prepared
by the District Engineer of
Bellary for constructing a
2nd Class road from Klumpoly
to Hospett, via Canalapoor
a distance of 18¼ Miles—
Amount of Estimate Rupees
(23000) twenty three thousand
Comprising the following items.

56855	Cubic Yds	earth work	@ 1/16 p Yd	3543
13080	do	do	@ 1.6 p do	1226
46500	do	Metalling	@ 2/7 p do	5820
5000½	do	do	@ 1.6 p do	175
7200	do	Clearing Stones	@ 1/7 do	450
24140	do	do	@ 1.6 p do	2152
2640	do	Stone revetment	@ 4/7 do	660
		Clearing bushes and blasting and removing rock		374
		Levelling and romping		1039
		20 Culverts of varying in size from 2 to 5 Yards of 6 ft Span		3295
		1 Bridge of 1 arch 30 ft span		2010
		18¼ Miles of Avenue trees		900
		Superintendence and Sundries		756
		Total Rupees		23000

1. The top surface of the road is to be 9 yards in width and metalled where necessary. The Embankments to have side slopes of 3 to 1.
2. The Superintending Engineer Central Circle having

having recommended in connexion with the Tombudobra projects generally, that the bund of the Canal a portion should be greatly raised, the bridge over its Surplus Channel which crosses the line of road has been omitted from the Estimate.-

3.- The Collector of Bellary in his letter herein dated 5th instant observes that this line is an important one, and very much needed, both as connecting the commercial towns of Hunsply, Hospett, and Cottendighy, with one another, and with the main routes from Bellary to the two former, and as giving free outlet for the produce of the land amongst several large villages lying between these roads.-

4.- The District Engineer observes that the lands are watered by the Ryah's Poor, Ramsungen, and Hunsply Channels and that the Standing Crops on the land under them, is likely to be increased.-

5.- No traffic returns have hitherto been taken, but as the new Passes to Hunsply or Ramsungen, within immemorial memory, multitudes of people go to & fro annually, there is but little doubt of its being much frequented. From Canalapoor a road goes down to the Tombudra to the Anagoondy ferry, to Hunsply there is another ferry, and at Hospett the line

joins the Eastern road from Hunsply.-

6.- Sufficient has been advanced both by the Collector and District Engineer, to shew, that the proposed road will be one of great value, and the rates allowed for the work being moderate and sufficient, the Chief Engineer recommends the Estimate for entry in the Budget of 1858/59.-

Central Office of R.W.
Fort St. George
1st April 1857

Lt. Colonel
Chief Engineer.

To The Secretary to Government
R.W. Department.

List of Enclosures

1 Letter from the Distt Engineer Bellary dated 12th March 1857. No 207 with Estmt E1
1 Do. from the Collector of Bellary dated 5th March 18[illegible] No 221 ---------- E2
1 Abstract Estimate ---------- E3
1 Plan ---------- E4

Pub. Dis. Works 1857 Vol. 4 Pl. 11
2nd to Cons. 2nd Sept. 1856
No. 681

E

From the Chief Engineer
To the Secretary to Government
No. 2. Dated 17th April 1857

Rd 17th April 1857
Ans. 30th Do.

4 Enclosures
Mad. Sundry Dpt.

Rec. 20th April 1857

No. 11479

Chingleput District.

Revenue

Report on an Estimate for a Peishcar's Cutcherry at Streehurricottah in the District of Chingleput.

Amount of Estimate Rupees (2,020)
Two Thousand and twenty.

Peishcar's Cutcherry at Streehurricottah.

No. 8932

With reference to Extract from the Cons. of Consultation dated 1st July 1856 No. 1077 and to Extract from the Proceedings of the Chief Engineer No. 5280 dated 2d August last, a revised Estimate of Rupees (2,020 RV A G) Two thousand and twenty, for a new Peishcar's Cutcherry at Streehurricottah is now submitted, and as the rates appear sufficient, I beg to recommend its entry in the Budget of 1857/58.

Central Office of Public Works.
Fort Saint George 17th December 1856.

Alfd Fraser Colonel
Chief Engineer.

Documents Accompanying.

B1 1 Letter No. 1283 dated 29th November 1856.

B2 1 Abstract Estimate.

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

Dup. Rec'd

Carried forward 7408 "

No. 1096

Recommended a Sum of Rupees 23,080 proposed by the Chief Engineer in his Letter dated 29th November 1856 for the Construction of a Cutcherry and Choultry at Streehurricottah via Ramachandrapooram and Cannelapooram at the Station of Chingleput.

Recommended for entry in the Budget of 1857/58.

No. 11479

c 29 Plans c 17 Estr. 57 v 22.

B

Pub. Works 1856, Department
No. 6 Cons. 21st October 56
No. 2981.

From,
The Chief Engineer.

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

Dated 17th December 1856.
Received 19th

No. 8932

Enclosures - 2 Abstd
17/12/56

C. No. 2921. 28th Oct. 56.

Submitting for sanction and entry in the Budget of 1857/58 an Estimate Amounting to Rupees (2020) Two thousand and twenty for a Bridge Catchway at Sreeturricottah in the District of Chingleput.—

B

B

1097

C 29th Nov. C/7 Oct. 57 R 21

C 29th Nov. C/7 Oct. 57 R 22.

Public Works
Roads and Communications
Canals and Inland
Navigation

Work completing the road from Cuddapah as far as the Trunk Road No. 13 on the Rampur Ghaut to the boundary of the Nellore District.

Quantities	Description of Work	Rate	Amount of Rupees	Amount for each head Rs
42017/8	Cy.ds of Earthwork	" 1 "	2626-1-4	
2364½	do of Sand	" 2 "	295-9-"	
4973½	do of Gravel	" 4 "	1243-6-"	
2717/8	do of Metalling	" 8 "	13585-"	
681½	do of Turfing	" " 4	14-3-2	
98.3½	do of Metalling Pucka	1 " "	9833-8-"	
2335	do Pavetting	" 4 "	583-12-"	
2180	do Protecting Jungle	" " 3	327-"	
	Sundries &c		131-2-4	
				30891-"

Masonry Work

1 Drain of 1 Ring 3'×3' feet (No. 1)

517	Cft. of Stone in Cumanam work	" 1 "	32-5-"	
14	covering ledge	" 8 "	7-"	
234	Cft. Curbing with 2 coats of Cumam	2 " "	4-11-"	
	Excavating foundation and Cumam		2-"	46-"
15	Vide the above particulars for Nos. 3.4.7.8.10.17.22 28.38.39.41.45.46.49 and 60 each	46 " "	690-"	690-"

2 Drain of 2 Rings 6'×3' feet (No. 2)

486	Cft. of Stone in Cumanam work	" 1 "	47-4-"	
28	covering Curbs	" 8 "	14-"	
357	Cft. Curbing with 2 coats of Cumam	2 " "	7-2-"	
	Excavating foundation and Cumam		3-10-"	72-"
12	Vide the above particulars for Nos. 6.13.16.23 26.27.29.35.40.42.44. and 56 each	72 " "	864-"	864-"

Carried forward 7408 " "

Quantities	Description of Work	Rate	Amount Rupees	Amount of each part

1 Bridge of 3 Arches of 30 feet Clear each
Over the Coast Canal (No. 15)

5099½	Cft. of Brick in Chunam work	" 1	50-9-8	
7875	do of Arch work	" 3	170-4-"	
110	Sqre. Plastering with 2 Coats of Chunam	" 5	27-8-"	
2500	Cyds. of Earth Excavating foundation	" 2	32-8	
432	Running feet Parapet Wall	" 3	81-"	
4	Guard Stones	4-"	16-"	
3	Centerings	50-"	300-"	
	Ratna		410-"	
600	Cyds. Filling in with earth between Piers	" 1	600-8	
	Sundries and Superintendance		200-"	
			2150-"	

1 Drain of 3 Vents 3 feet (No. 23)

1736	Cft. Stone in Chunam work	" 1	173-8	
56	Covering Stones	" 8	28-"	
1550	Sqre. Plastering with 2 Coats of Chunam	2	31-"	
	Excavating foundation and Sundries		11-8	
				183-"

1 Road Drain of 1 Vent (No. 24)

190½	Cft. Stone in Chunam	" 1	8-2-6	
12	Cyds. Pitching	" 8	6-"	
6	do Rough Stone Apron	" 4	1-8-"	
	Excavating foundation and Sundries		2-5-6	18-"
9	Vide the Above particulars for Nos. 2. 8. 9. 20. 31. 32. 33. and 34 Each	15-"	135-"	135-"

1 Drain of 3 Vents 3 feet (No. 26)

1205½	Cft. Stone in Chunam	" 1	75-6	
42	Covering Stones	" 8	21-"	
900	Sqre. Plastering with 2 Coats of Chunam	2	15-"	
	Excavating foundation and Sundries		7-10	119-"
	Vide the Above particulars for No. 8			119-"
				1682

Carried forward

Quantities	Description of Work	Rate	Amount Rupees	Amount of each part

Brought forward 4116-2

1 Drain of 3 Vents 3 feet 4½ feet (No. 15)

1448½	Cft. Stone in Chunam	" 1	90-9	
42	Covering Flags	" 8	21-"	
1100	Sqre. Plastering with 2 Coats of Chunam	2	22-"	
	Excavating foundation and Sundries		8-7	
				142-"
	Vide the Above particulars for No. 54			142-"

1 Road Canal Culvert (No. 21

211½	Cft. of Stone in Chunam	" 1	13-3-6	
20	do of Pitching	" 8	10-"	
10	do of Roughstone Apron	" 4	2-8-"	
	Excavating foundation and Sundries		4-4-6	
				30-"

1 Drain of 3 Vents 3 to 4 feet (No. 24)

1367½	Cft. Stone in Chunam	" 1	85-8	
42	Covering Stones	" 8	21-"	
1030	Sqre. Plastering with 2 Coats of Chunam	2	20-8	
	Excavating foundation and Sundries		8-"	
				135-"

1 Drain of 1 Vents 3 to 3 feet (No. 25)

1438¼	Cft. of Stone in Chunam	" 1	89-14-"	
56	Covering Flags	" 8	28-"	
1050	Sqre. Plastering with 2 Coats of Chunam	2	21-"	
	Excavating foundation and Sundries		11-2	
				150-"

6 Arches of 45 feet Span over the Gonjanah River (No. 36)

1623885¾	Cft. Brick in Chunam	" 19	17815-15-3	
23436	Cft. Arch work	" 3	4392-12-"	
270	Sqre. Plastering with 2 Coats of Chunam	2 8	675-"	
831	Cyds. Parapet Wall Work	" 3	155-13-"	
1000	Cyds. Filling in loose Stone between intermediate Walls	125-"	125-"	
	3 Centerings Each	300-"	900-"	
				4761-"

Carried forward

Quantities | Description of Work | Rate | Amount of each part | Amount of Account

Brought forward 1119 61 - -

Bailing — 6 - - -

4200 Cyds Excavating foundation — 2 — 525 - -

24 Guard Stones — 5 - - — 20 - -

Sundries &c — 1283 - 5 9

2848 - -

A Road Stone Arch 40 x 24 Feet (No 37)

17½ Cyds of Masonry — 4 - — 3 - 10 - -

16 Coping Stones — 6 - — 6 - -

Excavating foundation Centering and Sundries — 3 - -

13 - -

A Bridge of 1 Arch 9 feet Span (No 43)

1118 Cft Stone in Chunam — 1 - — 69 - 10

2039½ Cft Brick in Chunam — 16 — 191 - 3

378 do Arch work — 2 - — 46 - 10

875 Sqr Ft Centering — 2 - - — 17 - 8

27 Cyds Road way — 8 - — 2 - 8 - -

4 Guard Stones — 1 - - — 4 - - -

Centering — 1 - 8 -

Excavating foundation and Sundries — 12 - 2 - 0

361 - 9

Vide the above particulars for (No 38) — 361 - -

Road Dam 60 Yards (No 41)

2520 Cfts Stone in Chunam — 1 - — 157 - 8 - -

120 Cyds Pitching — 8 - — 60 - - -

120 do Rough Stone Apron — 4 - - — 30 - - -

Excavating foundation and Sundries — 7 - 8 -

255 - - -

Road Dam 30 Yards (No 51)

492 Cfts Stone in Chunam — 1 - — 30 - 12 - -

40 Cyds Pitching — 8 - — 20 - - -

30 do Rough Stone Apron — 4 - — 7 - 8 - -

Excavating foundation and Sundries &c — 6 - 12 - -

65 - - -

693 - 5 - 8

Brought forward 6915 - -

Road Dam 20 Yards for (No 52, 54, 55 - (Back) — 65 - - — 195 - - - — 195 - -

A Bridge of 2 Arches of 18 feet span each

the Superficial Feet

4704 Cft Quarter Coursing in Chunam — - 1 - — 297 - 9

1920½ do Brick in Chunam — - 16 — 180 - 3

2268 do Arch work in Chunam — - 8 - — 425 - 4 - -

3958 Sqr Ft Plastering with 2 Coats of Chunam — - 8 - — 93 - 5 - 2

184 Running Ft Cornice Work — - 2 - — 23 - - -

60 Cyds Road way — - 8 - — 30 - - -

Centering — 60 - - -

Sundries &c — 49 - 11 - 10 — 1160 - -

One Arch 12 feet Span (No 57)

1126 Cft Stone in Chunam — - 1 - — 70 - 6 - -

2785 8 do Brick in Chunam — - 16 — 167 - - - -

576 Cft Arch work with Brick in Chunam — - 2 - — 64 - 15 - -

86 Running Ft Cornice Work — - 3 - — 16 - 2 - -

1365 Sqr Ft Plastering with 2 Coats of Chunam — 2 - - — 27 - 5 - -

4 Guard Stones — 1 - - — 4 - - -

27½ Sqr Yds Pitching over the Road — - 8 - — 13 - 12 - -

Centering — 15 - - -

Excavating foundation and Sundries &c — 21 - 8 - -

400 - - -

Vide the above particulars for (No 39) — 400 - - -

7147 - - -

Superintendence for 18 Months — 243 - - -

Grand Total Rupees 7390 - - -

Seventy three thousand and three hundred.

E Henvey Civil Engr

Civil Engrs Office Cuddapah
27th November 1836

Millers
Collector &c
Cuddapah

Civil Engineer Cuddapah

Tolw.to 6 Dec/56 No 86 c

MMMMM

Enclosure in a letter from the Civil Engineer Cuddapah Distt

Dated 27th November 1856 No 715

To

The Chief Engineer Dist.
Fort St. David

Dated
Received 1856.

P.W. 2877/56

Ch. Rec.
C.R.o. 2031 28th Oct 1857

Taken completing the road from Tirtabunnaroy pettah to the Trunk Road 5 miles in the Rumpoor Ghaut to the boundary of the Nellore District amounts to Rupees 3900 — (three thousand and nine hundred

Public Building
Abstract Estimate
of Tallooks Goondacotah Sydapoor and Surcapully
Distrct Nellore

Work completing the road from the top of the Rumpoor Ghaut at the boundary of the Cuddapah and Nellore Districts to Gurdoor on Trunk Road 5 m.s.

Quantities	Description of Work	Rate	Amount of Rupees	Amount Trunk part Rs
67284/6	Earth work	1	1205 4	
28431/3	Cubic yds of Hard Soil	2	3553 15	
3322	do Gravel	4	830 8	
35086	do Metalling	8	1754 3	
11057/2	do Turfing	4	230 6	
26652	do Cutting Rock	12	1998 9	
6766	do Revetting	4	1691 8	
122321	do Uprooting and clearing jungle	2	1274 3	
	Sundries &c		2462 4	
				51780
	Masonry work			
	Road Dam of 6 yards			
130 1/2	Cft. Stone in Chunam	1	8 2 6	
12	do Metalling	8	6	
6	do Rough Stone Apron	1	1 8	
	Excavating Foundation and Sundries		2 5 6	18
10	Vide the above particulars for 4 ft. 4 6 7.8. 11. 14. 30. 42. 45. & 61 — each	18		180
	A Bridge of 1 Arch 9 ft. Span 8			
1118	Cft. Stone in Chunam	1	67 14	
2037/8	do Brick in Chunam	1 6	191 3 3	
38	do Arch Work	2	46 10	
875	Sqre ft. Plastering with 2 Coats of Chunam	2	17 8	
27	Cyds Road way	8	13 8	
	Centering		10 8	
	Excavating Foundations and Sundries		16 12 7	360
	A Bridge of 2 Arches one is 15 feet and the other 25 ft. No 3			
1374 3/4	Cft. Stone in Chunam	2	1718 7	
2640	do Brick in Chunam	2 6	412 8	
5900	do Brick in Chunam	3 6	1290 10	
	Carried forwards		3421 9	52338

Quantities	Description of Work	Rate	Amount	Amount for each part
	Brought forward			52338
60	Sqrs ft. Plastering with 2 Coats of Chunam	3	18	
	Entering & excavating rock for foundation		48 6	
	Sundries and superintendence		150 2 6	
	A Bridge of 1 Arch of 12 feet Span Ft. 51			1440
1126	Cft. Stone in Chunam	" 1 "	70 6	
1781½	do Brick in Chunam	" 1 "	70 6	
519¾	do Arch Work Brick in Chunam	" 1 6	167	
86	Running feet Cornice Work	" 2 "	14 15	
1365	Sqrs ft. Plastering with 2 Coats of Chunam	" 3 "	16 2	
27½	Cyds. Gravelling over the road	" 2 "	27 5	
	Entering	" 8 "	13 12	
	Excavating foundation and Sundries		15	
4	Vide the above particulars for Nos. 9. 60, 68, and 86 — each		21 8	
	Road Dam 10 yards Ft. 10	396		396
211½	Cyds. Stone in Chunam	" 1 "	13 3 6	1584
20	do Metalling	" 8 "	10	
10	do Rough Stone apron	" 4 "	2 8	
	Excavating foundation and Sundries		11 11 6	
6	Vide the above particulars for Nos. 28, 29, 35, 39, 41, and 55 — each	30		180
	A Tunnel of 3 Cents Ft. 12			
816	Cft. Stone in Chunam	" 1 "	52 8	
42	Covering Stones — each	" 5 "	21	
903	Sqrs ft. Plastering with 2 Coats of Chunam	2 "	18	
	Excavating foundation & Sundries		8	
	Vide the above particulars for No. 32 each	100		111
	Road Dam 14 yards Ft. 13			100
1800	Cft. Stone in Chunam	" 1 "	112	
20	do Metalling	" 8 "	40	
60	do Apron	" 6 "	22 8	
	Excavating foundation and Sundries		7 8	
3	Vide the above particulars for No. 31 63, and 64 — each	182		182
	A Tunnel of 4 Cents 3×1½ ft. 15			546
1736	Cft. Stone in Chunam	" 1 "	109 8	
56	Covering Stones	" 8 "	28	
1550	Sqrs ft. Plastering with 2 Coats of Chunam	2 "	31	
	Excavating foundation and Sundries		11 8	
	Carried forward			150
				60036

Quantities	Description of Work	Rate	Amount	Amount for each part
	Brought forward			60036
	A Drain of 1 Arch ft. 16			
517	Cft. Stone in Chunam	" 1 "	32 5	
16	Covering flags	" 2 "	1 "	
284	Sqrs ft. Plastering with 2 Coats of Chunam	2 "	4 11	
	& excavating foundation and Sundries		2 "	46
9	Vide the above particulars for Nos. 17, 20, 21, 22, 23, 25, 26, 33, 37 — each	46		414
	Rough Stone Drain 1½ × 2½ ft. 18			
17½	Cyds. Rough Stone	" 1 "	3 14	
16	Covering Stones	" 8 "	6	
	Excavating foundation and Sundries		3 2	15
5	Vide the above particulars for Nos. 19, 43, 44, 46, and 47 — each	15		75
	A Tunnel of 2 Cents 3×3 ft. 24			
756	Cft. Stone in Chunam work	" 1 "	47 4	
25	Covering Flags	" 3 "	14	
357	Sqrs ft. Plastering with 2 Coats of Chunam	2 "	7 2	
	& excavating foundation and Sundries		3 10	72
	Vide the above particulars for Nos. 34, 36 — each	72		144
	A Bridge of 3 Arches 12 feet Span each ft. 27			
1754¾	Cft. Rough Stone in Chunam	" 1 "	297 2 9	
1929½	do Brick in Chunam	" 1 6	180 14 3	
2268	do Arch Work	" 3 "	425 4	
3758	Sqrs ft. Plastering with 2 Coats of Chunam	2 8	93 15 2	
154	Running feet Cornice work	" 2 "	23	
60	Road Way	" 8 "	30	
	Entering		60	
	Sundries &c.		49 11 10	1160
1	Vide the above particulars for No. 62 — each			1160
	A Tunnel of 3 Cents 3×4½ ft. 38			
1414½	Cft. Stone in Chunam	" 1 "	90 9	
112	Covering Flags	" 8 "	21	
1100	Sqrs ft. Plastering with 2 Coats of Chunam	2 "	22	
	& excavating foundation and Sundries		7 7	141
	Carried forward			63263

Quantities	Description of Work	Rate	Amount	Amount of each part
	Brought forward			6326 " "
	A Tunnel of 4 Vents 3 x 3'			
	No. 40.			
1438¼	Cft. Stone in Chunam	" 1 "	89 14 "	
56	Covering flags	" 8 "	28 " "	
1050	Sqre ft. Plastering with 2 Coats of Chunam	2 " "	21 " "	
	Excavating foundation and Sundries		11 2 "	
				150 " "
	A Tunnel of 1½ feet Span			
	No. 48.			
258	Cft. Brick in Chunam	" 2 "	32 4 "	
783¼	do Arch Work	" 3 "	14 12 3	
2¼	Sqre Plastering with 2 Coats of Chunam	2 " "	4 8 "	
8	Cyd. Excavating foundation		1 8 "	
	Sundries		2 15 9	
6	Vide the above particulars for No.			56 "
5	50, 51, 65, 71, 74, and 84 each	56 " "	" " "	336 "
	A Tunnel of 3 Vents each			
	No. 49			
2003½	Brick in Chunam	" 1 9	219 7 2	
487½	Cft. Arch Work	" 2 6	76 2 9	
8	Sqre Plastering with 2 Coats of Chunam	2 " "	16 " "	
16	Cyd. Excavating foundation	" 3 "	3 " "	
	Sundries do		15 11 1	
				336 "
8	Vide the above particulars for No. 52			
5	53, 55, 56, 57, 66, 76 and 95 each	330 " "	" " "	2640 "
	A Tunnel of 2 Vents 4' Span each,			
	No. 51			
1143¼	Cft. Brick in Chunam	" 2 "	178 15 6	
330	do Arch Work	" 2 6	51 9 "	
6	Sqre Plastering with 2 Coats of Chunam	2 " "	12 " "	
15	Cyd. Earth work	" 3 "	2 13 "	
	Sundries		14 10 6	
				260 "
4	Vide the above particulars for No. 9			
5	59, 69, 83, 85. each	260 " "	" " "	1040 "
	A Tunnel of 1 Vent 3' Span			
	No. 67			
488	Cft. Brick in Chunam	" 2 "	61 " "	
12.5	do Arch Work	" 3 "	23 7 "	
3½	Sqre Plastering with 2 Coats of Chunam	2 " "	7 " "	
	Carried forward		917 " "	6075 " "

No. 81 & 80

Quantities	Description of Work	Rate	Amount	Amount of each part
	Brought forward		917 "	6075 " "
12	Cyd. Earth work	" 3 "	2 1 "	
	Sundries	" " "	6 5 "	100 " "
15	Vide the above particulars for 70, 72, 73, 75 and 100 each	100 " "	" " "	1800 " "
	77, 78, 79, 80, 81-82, 87, 88, 89, 90, 91, 92, 93 & 94 each			
	Road Dam 30 yards			
	No. 96			
192	Cft. Stone in Chunam	" 1 "	30 12 "	
40	do Metalling	" 2 "	20 " "	
30	do Rough Stone Apron	" 4 "	7 8 "	
	Excavating foundation and Sundries		6 12 "	65 " "
				7040 " "
				3960 " "
	Superintendence			1000 " "
	Grand Total Rupees			11000 " "

Seventy four thousand.

Civil Engr's Office
Cuddapah 27th
25th November 1856

Henery Lyn b: E
Civil Engineer Cuddapah 27th

Collector

To Land 6 Dec./56 No 8662

MMMMM2

Enclosure in a Letter from the Civil Engineer Cuddapah District
Dated 27th November 1856 - No 715

To The Chief Engineer Depart. of Pub. Works
Fort St. Georg

Dated
Received } 1856.

Q. in Con.

P.W. 2877/56
Con. No 2091. 28th Oct. 56.

Abstract Estimate for work completing the road from the top of the Rayapoor Ghaut to the Boundary of the Cuddapah and Nellore Districts to Goodoor on Trunk Road No 6 amounting to Rupees (74000 - - -) Seventy four Thousands -

No 8662

Cuddapah

Communications

Report upon an Estimate for Completing the Road from Venkatarama razpett on Trunk road No 13 in the Cuddapah District, by the Umbalacunty and Rampoor Ghauts to Goodoor in the Nellore District -

Portion of the above road in the Cuddapah District -

	M	F	yds
Length	20	4	30 -

Amount of Estimate Rupees 73,900

Rupees Seventy three thousand and nine hundred -

The expenditure on the whole distance from Venkatarama razpett to Goodoor a distance of

M	F	yds
57	5	156 up to

30th April last was Rs 65,128 Rupees Sixty five thousand one hundred and twenty eight

The amount required to Complete the line is Rupees 147,900 One hundred and forty Seven thousand and nine hundred, & the road when finished will thus have cost 3,670 Rupees ~~Eight~~ Thousand Six hundred and Seventy a mile

no very heavy expenditure, when it is Consi-
=dered that there are two high Mountain
ranges, one near Chitraul with a ghat of
4 Miles, and the other the Ranpoor 12
Miles in length.-

2 The work required to the portion
of the road now under Consideration, Con
=sists in removing Rock, Cutting side drains
and building Bridges and tunnels.-

3 Of the Masonry works the only
two of importance and which require
individual Notice are the following.-
a Bridge of 6 elliptic arches of 45 feet
span each, over the Goonjanah river —
the rise of the arch being 11' 3" 1/4 of the
span. The section of the river gives an
area of 7467 square feet and the area of
the waterway of the bridge is
8322 feet, giving ample space for extraordi
=nary full floods. The bridge is 18 feet
wide between the parapets and is to be
built of brick in Chunam on clay and
gravel foundation, the Cost of the above
is Estimated Rs 26,500 Rupees Twenty
six thousand & five hundred.-

A

A bridge of 3 elliptic arches
of 40 feet span and 9 feet rise over
the Coolunga river. The sectional area
of the river is 1,520 square feet, and
that of the water-way of the Bridge
1776 square feet, the amount of Estri-
mate is rupees 9,150 Nine thousand
one hundred & fifty. The building is
to be of brick in Chunam and the
foundations are in a stiff Clay. width
of road way 18 feet between parapet.

4 The rates for the Bridges I
Consider rather high, but Lieut. Hannay
has pointed out that they have been
made with every view to economy and
I shall therefore pass them as he desires.
without reduction, but I shall point out
to him that I expect to find, hereafter,
a Considerable reduction in the item
of Brick work, in that district.-

5 The remaining portions of the
Estimate requiring Notice are the items
which Come in for the formation of
the road, the rates for which, earth
work, removing rock, metalling, turfing
revetting

revetting with stone ova seem to be mode
rate and have been Carefully Considered
The total of these items is Rs: 29,836 a P -- --
Masonry work ——— 41,634 -- --
Superintendence for 18 Months — 2,450 -- --

Total Rs. 73,900 -- --

Seventy three thousand & Nine hundred

6 The road is 7 yards wide &
the metalling 6 yards wide and 6
inches deep.-

7 The Commercial importance of
this road has already been brought be-
fore Government at the time Sanc-
tion was first granted for its Commence
ment.-

8 A separate report on the Nellore
portion accompanies this.-

9 I recommend the above for
sanction and entry in the budget of
1857/58.-

Nellore Report upon an Estimate
for completing the portion of
Communication road Venctaram Ruy-
poram by the Umbalainy
and

and Rampoor Ghauts to
Goodoor which is in the
Nellore district-
Rs
amount of Estimate 74,000
Seventy four thousand, dis-
tance 37-1-126 yards.-
The whole distance from Venca
tamarayporam to Goodoor is 57-5-156.
Rs
money spent up to last April was 65,128
Sixty five thousand one hundred & Twenty
eight. So that with the addition of the
Estimate for the portion in Cudelapah as
submitted in another Report amounting
to Rupees 73,900 Seventy three thousand
& Nine hundred and of this estimate 74,000
Seventy four thousand. The total Cost
per mile will be 3,670 Three thousand
Six hundred and Seventy.-

2. This Estimate though for work
in the Nellore district has been by orders
of Government prepared by Lieutenant
Henery who describes the work still to be
done as considerable before the road in
the Nellore limits will be passable. Even
for Bullocks that in some parts the line
is

is not even marked out, in others that there is a track 3 yards in width but that it is nearly obliterated by the jungle having grown over it since the work was stopped.

3 He remarks that he has allowed very largely for metalling in the Nellore District where it is absolutely required, on the Embankments and that without this metal which is 6 yards broad and 6 inches thick the road will always be impassable in Wet weather.

4 Upon the subject of rates Lieutenant Hemery observes that he has framed them on actual personal observation and enquiry and urges the impolicy of reducing them, they are rather high, but Considering the Country through which the road runs it perhaps is necessary to allow the rates to stand as now fixed by an officer of Lieutenant Hemery's tact and experience.

5 The Masonry works though numerous are small and require no particular attention, the abstract of the Estimate is as follows:-

Earth work, remaining	
Rock Jungle do.	31,780 — —
Masonry work	18,260 — —
Superintendence for 18 Months	3,960 — —
Total Rupees	74,000 — —

Seventy four thousand.

6 The Commercial value of the road was stated to Government when sanction was first granted.

I strongly recommend that the completion of the road be sanctioned and that a sum of rupees 74,000 Rs. Seventy four thousand be entered in the budget for 1857/58, and cannot too earnestly deprecate renewed delay in carrying to completion an undertaking on which the Country so much requires and upon which so much trouble, time and money have already been expended.

Central Office of Public Works,
& Fort Saint George, 6th December 1856.

A. H. Taber Colonel
Chief Engineer

(D) Documents

Documents accompanying
from Civil Engr. Cuddapah Dt.

1 Letter No. 715 dated 27th November 1856. MMMMM 1.

2 Abstract Estimates. MMMMM 2 & 3

1 Traffic Return —— MMMMM 4

3 Specifications ——— MMMMM 5, 6 & 7

18 Plans. MMMMM 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 & 25.

To,

The Secretary to Government,

C. W. D.

Comp. Mulleaux

Cons: 26 February 1/58 Nos 174-175
" — 25 April " — 90-91
" — 29 " " — 14-15
" — 12 August " " — 85-86
" — 27 January 1/54 " — 44

MMMMM

Public Works 1857 Department
No. to Cons: 29th October
No 2877

From
The Chief Engineer

To
The Secretary to Govert
C. P. W. D.

Dated 6th
Received 9th } December 1857

No 8662.

25 Enclosures. Return
C. Rs. 2021. 28th October/57 P. W.

Forwarded with his recommendation for Sanction and entry in the Budget of 1857/58 Estimates amounting in the aggregate to Rs. 7900/ One Lac forty Seven Thousand Nine hundred, for completing the road from Venkataramanapett on T. R. No. 13 in the Cuddapah Dt. by the Ambavaipa & Rampoor Ghauts to Goodoor in the Salem District.

No 98.

C 29 May/C 17 Oct./57 R 21 Nov.

No 8662

Cudalapah Districts

Revenue
Irrigation

Report on an Estimate for the restoration of the Mullapah Tank, situated near the Village of Gungunapully in the Cheunoor Talook, Cuddapah District, submitted by the District Engineer, and Amounting to Rupees 3809/ Three Thousand Eight hundred

This tank was breached about 57 years ago, but about 1835, the sons of the late Cheunoor Mul- -lapah (from whom it derives the name) partially re- -stored it, by which means lands to the extent of 100 Rupees assessment, was brought under wet Cultivation and enjoyed for the three subsequent years. The bund was however again breached in the year 1842, from which time no attempt has been made to repair it, and consequently the tank has fallen into disuse.

The lands situated under this reservoir are classed as dry, as at the time of the Survey they had lost their usual means of irrigation. They now yield a revenue of Rupees 159, but by their con- -version

version into Punjab. it is stated that they are
capable of yielding a revenue of Rupees 1121, or an
increase of Rupees 982 over the present income,
being at the rate of 26 per cent on the amount of the Esti-
mate. Under these circumstances, the Chief Engineer
recommends the project for the sanction of Government
and for its inclusion in the Budget of 1857/58.
at the proposed expenditure of Rupees 3800 for the re-
pair of the bund, and the construction of one new sluice
and one new Calingulah.

The rates are moderate and sufficient.

Central Office of S. W.
Fort Saint George
6th December 1856

H. Fisher Colonel
Chief Engineer D. S. W.

Papers accompanying

1. Report by District Engineer 29th Novr/56 ELLLL 1
1. do by the Collector ----------LLLLL 2
1. Abstract Estimate ----------LLLLL 3

To
The Secretary to Government
Pub: Works Department

2nd Inc. D.

Public Works 1856 Department
Dy. to Cons: 29th October /
No 2876 /

From,
The Chief Engineer.

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

Dated 6th 15
Recd. 9th December 1856.

No 8662

3 Enclosures Rec'd 11/12/56

S.E. No. 2021. 28th October/56.

Submitting for sanction and entry in the Budget of 1857/58 an Estimate amounting to Rupees 3,800 for altering the Mullapah Tank in the District of Cuddapah ——

No 99.

Cy Mun Cy Cal 1/57 R 21

87

Public (roads) (New Work)

Abstract of Estimate No of 185 /5

Road No

District Kurnool

Work. Constructing the Road from Banlooly to Alcoor, Nundicoteor to Gandicundgee Alcoor to Nundicoor Gandicundgee to Colapoor.

Quantities	Description of Work	Rate Rs	As	P.	Amount Rupees	Amount for each part Rupees
C. Yds.	8 Miles 7 Furlongs 225 yards of 1st Class Road from Banlooly to Alcoor ———					
35901 1/4	of Side Channels Excavating ——— 3 feet	"	1	"	2244	
1875 1/2	Do. ——— Do. ——— 10 feet	1	"	"	488	
9083 1/4	Gravelling ——— 3 feet	"	2	"	1135	
1986	Ramming ——— Do.	"	"	8	1039	
99	Rough Stone Floor ———	"	"	5	33	
	No 3 Flat Drains ———					4939
	1 Drain 2 3 yards 3×3 ——— @	211	"	"	211	
	1 Do. of 1 Do. 3×3 ——— "	87	"	"	87	
	1 Do. of 2 Do. 3×3 ——— "	150	"	"	150	
						448
	Superintendence Smoothing and Sine at about 10 per cent	8 per cent				613
		Total Rupees				6000
	22 Miles 1187 yards of 1st Class Road from Alcoor to Nundicoteor ———					
68087 3/4	Cubic yds. Side Channels Excavating ——— 3 feet	"	1	"	4255	
29180 1/4	——— Gravelling ——— "	"	2	"	3648	
97267	——— Ramming ——— "	"	"	4	2026	9929
	No 10 Flat drains ———					
	10 drains of 3 yards 3×3 ——— @	211	"	"	2110	
	Carried over Rupees ———				2110	9929

Quantities	Description of Work	Rate			Amount	Amount for each part
C. Yds.		Rs	As	P.	Rupees	Rupees
	Brought over Rupees				2110	9919
	11 Drains of 1 vent 3X3 — (Ca)	87	"	"	957	
	9 — Do — of 2 Do 3X3 — "	150	"	"	1350	
	2 — Do — of 3 Do 3X4 — "	234	"	"	468	
	1 — Do — of 4 Do 4X3 — "	275	"	"	275	
	1 — Do — of 6 Do 4X3 — "	410	"	"	410	
	1 — Do — of 4 Do 4X1 — "	300	"	"	300	
	3 — Do — of 4 Do 3X3 — "	285	"	"	855	
	1 — Do — of 3 Do 4X4 — "	251	"	"	250	
	1 — Do — of 2 Do 4X3 — "	152	"	"	152	
	Superintendence & making out lists &c. at about 10 p cent					7127
						1714
	Total Rupees					18800
—	10 Miles 7 Furlongs 97 yards of 1st Class Road from Nandicoorkoor to Gardamundigoo —					
1,74987/8	64[illegible] of Side Channels & Levelling Cyds	"	1	"	2969	
56897/8	Do — Do — 1098	1	"	"	569	
122433/4	" — Spreading — per Cyd	"	2	"	1530	
05431/2	" — Tamping — "	"	"	11	1363	
28	" — Removing rocks — "	"	8	"	14	
						6445
	No 2b Flat drains					
	5 Drains of 1 vent 3X3 — (a)	87	"	"	435	
	3 — Do — of 3 Do 3X3 — "	211	"	"	633	
	1 — Do — of 4 Do 4X3 — "	275	"	"	275	
	8 — Do — of 2 Do 3X3 — "	150	"	"	1200	
	1 — Do — of 3 Do 4X4 — "	250	"	"	250	
	1 — Do — of 3 Do 4X6 — "	350	"	"	350	
	1 — Do — of 6 Do 4X5 — "	520	"	"	520	
	Carried over Rupees				3663	6445

57

lies	Description of Work	Rate			Amount	Amount for each part
	Brought over Rupees				3663	6445
	1 Drain of 6 vents 3X3 — (a)	385	"	"	385	
	1 — Do — of 4 Do 4X4 — "	300	"	"	300	
	1 — Do — of 4 Do 3X3 — "	285	"	"	570	
	2 — Do — of 4 Do 3X3 — "	410	"	"	410	
	1 — Do — of 6 Do 4X3 — "	220	"	"	220	
	1 — Do — of 3 Do 4X3 — "					5548
	Superintendence and meeting out lines &c. at about 10 p cent					1207
	Total Rupees					13200
—	6 Miles 4 Furlongs of repairing the 1st Class Road from Gardamundigoo to Solapoor —					
	110 Cyds of Raising the earth — per Cyd	"	"	2	1661	
	90 — " — of Gravelling — "	"	"	4	383	
	00 — " — of Tamping — "	"	"	1	18	2381
	6 — " — of Stone in Chunam — "					
	Constructing an Arched Brick Gore arch 15 ft. Span					830
	Superintendence & Sundries at about 10 p cent					289
	Total Rupees					3500
	Grand Total Company Rupees Forty one thousand Five hundred					41,500

Chief Office of P.W.
1. N. George
December 1836

Lieut. Colonel
Chief Engineer D.P.W.

00002

Enclosure

In a report

From

The Chief Engineer
S.P.W.

To

The Secretary to Govt.
S.P.W.

Dated. 6th } December 1856
Received 9th }

O.W. 2853/56

No. 8662

Abstract Estimate of the expense of constructing a road from Bairlooty to Atcoor thence to Coetcoor to Gardemudugoo Atcoor to Nundicootcoor Gardemudugoo to Jolapoor in the District of Kurnool Amt. Rs. 41500—

No. 8662.

Kurnool District.

Public.

Roads.

Report on an Estimate prepared by the District Engineer of Kurnool for constructing a first class road from Bairlooty at the foot of the Munteral Cunnama Pass, via Atcoor and Nundicootcoor to Gardemudugoo Miles 41-7- and for completing the road from the latter place to Jolapoor or Kurnool, Miles 5-7. Total distance Miles 48 3/4-

The Estimate provides for—

1st Road from Bairlooty to Atcoor.

Earth work — Rs	2,782.		
Gravelling 6 yds. wide and 4½ Inches thick —	1,135.		
Tamping —	1039.		
Rough stone —	33.		
3 Tunnels varying in size from 4' to 8 Vents of 8 feet square —	448		
Marking out line, Superintendence and sundries —	613	6000	
2d From Atcoor to Nundicootcoor.			
Earth work — Rs	4255		
Gravelling 6 yds. wide & 4½ inches thick —	3,648.		

Tamping

Jamping ——— 2,026
40 tunnels varying in
size from 1 Vent of 3×3
feet to 6 Vents of 4×3 feet. 7,127
Marking out line Sup^ce
and Sundries ——— 1,744. 18,800
3½ From Nundicoolcoor
to Gardemudugoor
Earth work ——— Rs 3538.
Gravelling 6 yds. wide &
4½ inches thick ——— 1,538
Jamping ——— 1,363
Removing rock ——— 14
25 tunnels varying in size
from 1 Vent of 3×3 feet
to 6 Vents of 4×6 feet — 5,548
Marking out line Sup^ce
and Sundries ——— 1207 13,200.
4th Completing road from
Gardemudugoor to Kurnool.
Earth work ——— Rs 319.
Gravelling ——— 1,561
Jamping ——— 393
Stone revetment ——— 18
1 Bridge of one Arch of
15 feet span ——— 830
Sup^ce and Sundries — 289 3,500.

Total Rupees 41,500.

forty one thousand and five hundred.

1. The Estimate is for opening an important line of communication from Kurnool via the Gruntoor Gunnama Pass to the Cudalapah district, but the item of Rupees 22,500 for a 3rd class Road from Ateoor round by Nasselmadugoo to Nundicooloor a distance of 25 Miles, irregularly entered in the same Estimate has been struck out, as also the items of Rupees 6,500 and Rupees 3,000 respectively for the 8¼ Miles of Road from Nundicooloor to Lattanpoor, & for improving the District road from Pataccota to Moordemconda, a distance of some 6 or 7 Miles.

These being merely branches from the main line, the Estimates for them should be submitted separately, and this the District Engineer will be required to do, when they can be entered in the Budget for 1858/59, as they cannot now be prepared in time for the outgoing Budget. the necessity for them however is not pressing.

2. The District Engineer states his intention of forwarding hereafter, Estimates for the few large Bridges required on the main line, for which no provision is made in the estimate now submitted.

3. The manner in which the repair Estimates have been applied for is also irregular, and before recommending the only one at present required, viz. for the portion of road between Gardemadugoo and Kurnool, the District Engineer will be requested to furnish a return of the traffic.

4 The District Engineer has further omitted to obtain the opinion of the Government Agent in support of his Estimate, which he will now be directed to do, and to forward it with

with the least practicable delay. In the mean time as it is very desirable that the very important line of Road in question should find a place in the outgoing Budget, the Estimate amounting to Rupees (41,500) forty one thousand and five hundred, in which the rates allowed are moderate and sufficient, is submitted by the Chief Engineer for the consideration of Government.

Central Office of P. Works
Fort St. George 6th Decr. 1856.

A R Tabor Colonel
Chief Engineer

List of Enclosures

1 Letter from the Secretary Civil Department
dated 12 Nov 1856 No 307. ___ 00001

1 Abstract Estimate ___ ___ ___ ___ ___ 00002

0000 1856. Despatch.

Public Works Department
Dated to Cons: 9th October
Rec'd 2853

From the Chief Engineer
To the Secretary to Government
Public Works Departt.

Dated 6th December 1856
Rec'd 9

Enclosures 2 Rec'd 1. Encl 17/11/56
Cons 2021. 28th Oct 56.

No. 8662

Forwards, for entry in the Budget of 1857/58. an Estimate of Rs. (41,500) Forty One thousand and five hundred, for Constructing a 1st Class road from Dairlooty at the foot of the Munteral Cumnama Pass via Alcoor and Nundicoolcoor to Gardemudgoo, and for Completing the road from the latter place to Kurnool distance of 18¾ Miles in the Kurnool District.—

No 100

Cons 29th May 617 Act. 1/57 R 21st

(New Work)

Public (roads)

Abstract of Estimate No. of 185 /5

Road No.

District Kurnool.

Work. Repairing and improving the Irrigation works.

Quantities	Description of Work	Rate	Rs	as	P.	Amount Rupees	Amount for each part Rupees
C. Yds.	Repairing & Improving Colarook Tank. Upper Tank.						
	Rebuilding the pear stone facing above the sluice	75 yds	1	"	"	150	
750	6 Lps. Old stone	pC yd	"	6	4	217	
650	" New Stone	pC yd	1	"	"	131	
1575	" Earth backing	12 yds	"	"	4	33	
1575	" Tamping	pC yd	"	"	4		531
C.ft. 1215	Rebuilding the sluice channel bank	pC ft.	"	1	"	76	76
	Raising the bund near the gape.	12 yds	1	"	"	67	
800	C.yds. Earthwork	C.yd	"	"	4	17	
800	Tamping	"	"	5	4	100	
300	" Inner facing						184
12366	C.ft Rebuilding the Calingulah	pC ft	"	1	"	773	
		pC yd	"	5	4	533	
1600	C.yds Arrow						1306
	Embankment above & below the Calingulah.	12 yds	1	"	"	89	
1068	Earthwork	2 "	1	"	"	238	
715	Loose Stone					327	2097

Quantities	Description of Work	Rate			Amount	Amount for each part
C. Yds.		Rs	As	P.	Rupees	Rupees
	Brought over Rupees				327	2097
540	Cft. Raising the present Lyal of the sluice Brick in chunam including plastering—Rft	"	2	0	84	411
	Unseen Item					2
	Total Company Rupees					2510

Central Office of P. W.
Fat. St. Geage
6th December 1856

W. Fisher Colonel
Chief Engineer. D. P. W.

EEEEE2

Enclosure.

In a Report

From

The Chief Engineer
D. P. W.

To

The Secretary to Govt
D. P. W.

Dated 6th December/56
Received 9th

O.N 2869/56

No 8662

S & No. 2021. 28th October

Abstract Estimate of the
expense of repairing the
Calwah Upper Sanctuary the
District of Kurnool Rs
15 Cois Rs 2510—

No 8662

Kurnool District
Revenue
Tanks.

Report on an Estimate
prepared by the District Engineer
of Kurnool for repairing the Calwah
tank in the Sanctuary Taluk.

1. The Estimate provides for

Rebuilding rear stone facing backing with earth, tamping &c &c	530-11
Repairing the Sluice Channel bank	75-15
Raising bund	183-6
Rebuilding Calingulah	1306-3
Embankment above and below the Calingulah	327-6
Raising Jug of Sluice	84-6
uneven item	2-1
Total Rupees	2510-0

two thousand, five hundred and ten.

2. By improving the tank as proposed, the additional water it will be capable of holding, will be sufficient to enable the Ryots to raise a second crop in their lands under it.

3. The spread of water on the tank is 3/4 of a mile long and averaging 1/3 of a mile broad, gives an area of about 1/4 of a square mile. The quantity

D. December 1856.

Asst. Chief Engineer

Name

quantity of land under its influence, as shewn in the accompanying statement furnished by the Officiating Commissioner is 189 acres, including Enam lands, yielding a present Revenue of Rupees 405-8-0.

4. The probable amount of Revenue that will be realised if the tank is repaired and the lands under it watered is given at Rupees 920-8, or an increase of Rupees 515-0-0 being nearly 20 Percent on the proposed outlay. The rates allowed for the work are moderate and sufficient, and the Chief Engineer recommends the Estimate for entry in the Budget of 1857/58.

Central Office of P.W.
Fort Saint George
6th December 1856

A. Lester Colonel
A. Chief Engineer

To the Secretary to Government
P.W. Department

List of Enclosures
1 Letter from the Dy Engr - Thuvoor - dated 20 Novr 1856 No 315 ---------- EEEEE 1
1 abstract Estimate ---------- EEEEE 2
1 Sketch Plan ---------- EEEEE 3
1 Statement from the Offg Asst to the Govt, Thuvoor EEEEE 4

6 December 1856. 3

Offg Chief Engineer S.P.C.

Kane

EEEEE
Public Works. 1856 Despatch
Date Encr. 29th October
No 2869

From the Chief Engineer
To the Secretary to Government
P.W. Department

Dated 6th December 1856.
Recd 9th

Enclosures & Returned
3 Encr. 17/11/57

No 8662

S. E. No. 2021. 28th October

Towards forming in the Budget of 1857/58 an Estimate of Rupees 2570 for repairing the Calvark Tank in the Pannieur Taluk of the Kurnool District.

No 101.

C 29th Nov C 17th Oct/57 R 21st

105

Public. (roads) (New Work)
Abstract of Estimate No of 185 /5
Road No
District. Chunglepet.
Work. Repairing old stone revetment, building new stone &c and Earth work to Tank Bank at Chunumbacoos.

Quantities	Description of Work	Rate			Amount	Amount for each part
C. Yds.		Rs	as	P.	Rupees	Rupees
	Earth work.					
21,156	Earth to Bank ..... at	"	1	4	1322	
	Total for Earthwork					1322
	New stone Revetment.					
3496	New Half dressed Stones ..... @	1	15	6	6883	
	Total for New stone Revett					6883
	Rebuilding old stone Revetment					
1298	Rebuilding old stone ..... @	"	2	6	203	
	Total for Rebuilding old stone					203.
	Repairing apron to Calingulah.					
147	Rough stone in chunam @	2	12	6	409	
	Total for Repairing Calingulah					409.
						8817.
	Superintendence and Contingencies at 5 P.Cent					483
	Total Company Rupees					9300.

Central Office of P.W.
Fort St. George.
6th December 1856.

D Farrell Lieut.
for Chief Engineer P.W.

Sent

Quantities	Description of Work	Rate			Amount	Amount for each post
C. Yds.		Rs	As	P.	Rupees	Rupees

UUU/.

Enclosure.

In a report from

Chief Engineer.
D. P. W.

To

The Secretary to Govt.
D. P. W.

Dated. 6th } December 1856
Received. }

№ 8662

P. E. № 2031. 28th October /56

Abstract Estimate of the expense of Repairing old stone Revett, building new stone- Do. and Earth work to Tank Bank- at Chemmumbadoo in the District of Chingleput- Amounting to Company Rupees- 9,300-- --

P. W. in № 2834/56

Chingleput.
District.-

8662

Revenue

Stone facing
to Chimmum-
badoo Tank.-

Report upon the proposed Stone facing to the Chimmum badoo Tank in the Taluk of Poddapollium in the Chingleput District-

Ayacut of the Tank- 1,186-4-9
Cowle ——— 844-4--
Highest Collection during the last 5 years. ——— 872-10-10.

This Tank is a very large one with a supply from the River Cortelior but from having a very imperfect, Stone facing, and the bank being of very inferior earth, it is incapable of holding a proper supply of water. The late Civil Engineer Estimated for repairing this Tank, but from the difficulty of procuring Stone at the rate he allowed the work was postponed-

The repairs consist of

Stone facing	Rs.	6,883-- --
Earth work	"	1,322-- --
Rebuilding Old facing	"	203-- --
Repairing Sabing Tah	"	409-- --
Sundries	"	483-- --
Total Rupees		9,300-- --

Stone

Enclosure.

Nine thousand and three hundred

The rate for stone work is high, from the great distance from which it has to be brought, and the height of the bund.

The Collector approves of the Estimate, and as it is really very necessary, and will doubtless be attended with a considerable increase upon the present Collections, I recommend it for sanction and entry in the Budget of 1857/58.

Central Office of P. W.
Fort St. George.
6th December 1856

Lt. Colonel
Chief Engineer.

To

The Secretary to Government
P. W. Department.

Documents Accompanying.

1 / Abstract Estimate. UUU/.
1 / Letter ——— See UU/.

UUU

Pub. Works 1858 Dist.
Nos to Cons. 2824 Octobr.
No. 2834

From
The Chief Engineer
&
The Secretary to Government
P.W.D. Despatch.

Dated 6. Decr 1858
Rec'd 9-12-

No. 2831. 28th October 58.
No. 8662

Enclosure 2 Rec'd 11/11/58

Estimate and Plan for the Bridge and Causeway across the Kattamanaroo River on the line of New Road between Cuddapah and Nellore.

1858/58. Our Estimate for Rs. 9,860 for repairing and adding the Chennumdapoor Tank in Pedapollium Taluk of Cuddapah District

Nellore

Constructing Road from Nellore to Gangapatam — 4,000 — VV 6th December 58 No. 2807

Constructing a Bridge of 5 Arches across the Kattamanaroo River on the line of New Road between Cuddapah and Nellore — 9,860 — XX Do. No. 2810

Constructing a Bridge of 4 Arches over the Pullavole Vagoo on the Cuddapah and Nellore High road in the Woodiagherry Taluk. — 8,120 — RRR Do. No. 2830

Improving the Nellore Tank bunds — 17,100 — SSS Do. No. 2831

Constructing a Road from Nellore to Sodiarco — 8,000

List of a further portion of Estimates proposed for entry in the Budget of 1858-59 now sent in circulation —

District and description of work	Amount of Estimate	Letter, date and number of the Chief Engineer's Report	Orders of the Members of Government.
	Rs.		
Nellore			
Constructing Road from Nellore to Gangapatam	4,000	VV 6th December 58 No. 2807	
Constructing a Bridge of 5 Arches across the Kattamanaroo River on the line of New Road between Cuddapah and Nellore	9,860	XX Do. No. 2810	
Constructing a Bridge of 4 Arches over the Pullavole Vagoo on the Cuddapah and Nellore High road in the Woodiagherry Taluk.	8,120	RRR Do. No. 2830	
Improving the Nellore Tank bunds	17,100	SSS Do. No. 2831	
Constructing a Road from Nellore to Sodiarco	8,000		

Cuddapah

District and description of work	Amount of Estimate	Letter, date and number of the Chief Engineer's report	Orders of the Members of Government.
	Rs.		
Nellore Cont^{a}			
Completing road from Nellore to Madanelly paud 52 Miles 5 Furlongs 207 Yards.	81,800	KKKKK 6th December 1856 No 2875	Sanctioned accordingly
Completing the Road from the top of the Rauproor Ghaut at the boundary of the Cudolapah and Nellore District to Goodoor on Trunk Road No 6.	74,000	MMMMM Do No 2877	
Widening Jaffer Saib Channel and improving the Alliproor branch	34,000		
New Suvapully Channel	50,000		
Improving Poacoor Channel new Channel to Needamoosilly and Cut to Gengapatam Channel	15,500	UUUUU Do No 2885	
	143700		

The time submitted with the Report is for 74,000 Rupees 74,000 appertains to Nellore & the remainder to Cuddapah

District and description of work	Amount of Estimate	Letter, date and number of the Chief Engineer's report	Orders of the Members of Government.
	Rs.		
Kistnapatam Main Channel and branches to 8 Villages	44,200		
Constructing additional Masonry work and Cutting Rocks on the Trunk Road No 6 between 115 Mile Stone on Moodegoondahe Road 70 Miles and 3 furlongs.	20,440	I 17th December 1856 No 2988	
Cuddapah			
Repair of road from Cumbum to Vena Ronda a distance of 1 Mile 5 Furlongs and 40 Yards.	3,900	W 5th December 1856 No 2783	
Completing the road from Cudda: prah to the limits of the Dorinal pass.	42,900	YY Do No 2811	

District and description of work	Amount of Estimate	Letter, date and number of the Chief Engineer's report	Orders of the Members of Government.
	Rs.		
Cuddapah (Cont?)			
Restoring the Nullapah Tank in the Chennoor Taluk	3,800	LLLLL 6th December 1836 No. 2876	✓
Completing the road from Venkatarama-zapett on the Trunk Road No. 13 on Carnoor Ghaut to the boundary of the Nellore District	73,900	MMMMM Do. No. 2877	✓
Completing the part of the Road from Cuddapah to Bellary, which lies in Cuddapah Limits and is Nearly 6 Miles	107,580	NNNNN Do. No. 2878	
Constructing a New Tank near Munchpully in the Sidhout Taluk	6,900	YYYYY Do. No. 2889	

District and description of work	Amount of Estimate	Letter, date and number of the Chief Engineer's report	Orders of the Members of Government.
	Rs.		
Bellary			
Constructing 18 Drains and 19 Arched Bridges on line of Road from Allor to Madavaram on the road from Bellary to Hyderabad	44,100	T 1st December 1836 No. 2780	
Constructing 11 Arched Bridges and 2 Tunnels required to be built on the Gooty and Cully Rondah line of road via Adony & Madaveram in the District of Bellary	18,770	U Do. No. 2782	
Completing the road from Mysore Frontier to Bellary via Humbadoor Hulleyandroog, Japanal and Codehall Villages	36,000	F 17th December 1836 No. 2985	

District and description of work	Amount of Estimate	Letter, date and number of the Chief Engineer's report	Orders of the Members of Government.
	Rs.		
Bellary (Contd)			
Constructing 11 Arched Bridges on the Road from Gooty to the Hurnool Frontier	18,260	N. 17th December 1836 No 2993	
Constructing 19 Arched Bridges and 1 flat Drain along the line of Road from Bellary to Hurnool between Alloor and Kodamoor	83,400	O. Do. No 2994	
Making a second Class Road from Kumply to Hospett	23,000	E. 1st April 1807 No 681	

District and description of work	Amount of Estimate	Letter, date and number of the Chief Engineer's report	Orders of the Members of Government.
	Rs.		
Hurnool			
Constructing a Bridge of 3 Arches of 20 feet span across the Woora-Rul Nullah on the Road from Hurnool to Nundecummna	3,000	YYY 1st December 1836 No 2837	
Do. of 3 Arches of 13 feet span across Do. Do.	1,410		
Do. of 3 Arches 30 feet span across Bogaha River on the Do. Do.	4,800		
Sundries and Superintendence	490		
Constructing a Road from Bairlooty via Atcoor and Nundecootcoor to Gardemadugoo & completing the road from latter place to Jolapoor	41,500	0000 Do. No 2853	

District and description of work	Amount of Estimate	Letter, date and number of the Chief Engineer's report	Orders of the Members of Government.
	Rs.		
Kurnool (Contd)			
Repairing and improving the Calvaly upper Tank.	2,510	EEEEE 8th December 1856 No. 2869	
Chingleput			
Constructing Stone Revetment and repairing Calingulahs to the Chennumbaudoo Tank in the Pareapolium Taloog.	9,300	UUU Do. No. 2884	
Constructing a Peiokcar's Cutcherry at Streechurrie = Cottahs.	2,920	B 17th December 1856 No. 2981	

1857. Pub. Wks Dept.

To be kept with G.O. Nos. 2021 & 2022 dated 28 Oct. 1857.

List of a further portion of Estimates proposed for entry in the Budget of 1858-59 now sent in circulation.

No. 2024.

Extract from the Minutes of Council under date the 28th October 1857.

Read the following Reports from the Chief Engineer—

(Here entered VV, RRR, SSS, IV, and YYYY dated 6 Dec. 1856 No. 8862, E dated 1st April 1857 No. 11479, B dated 17 Dec. 1856 No. 8932, MMMMM, LLLLL, OOOO, EEEEE, and UUU, dated 6 Dec. 1856 No. 8862.)

The Right Honorable the Governor in Council sanctions the undermentioned Estimates, for works considered urgent necessary and desirable, and directs that they be entered in Statement No. 2 of the Budget for 1858/59.

Letter & date of Report—	Work	Amount Rs.
	Nellore	
VV d/ 6th Dec. 1856	Improving the line of road from Nellore to Gungapadam	4,000
RRR d/ do.	Improving and increasing the capacity of the Nellore Tank.	17,100
SSS d/ do.	Constructing a second class road from Nellore to Podairoo, the Curbah of Toorumulthal from Talook to distance of 14 miles.	8000

Sec No. 2021. 28th Oct 57.

Ar 7 Nov 57. C 17 Oct 57 R 21st

Letter and date of Report	Work	Amount Rs.
	Cuddalapaky	
W. d/ 6th Dec. 1856	Repairing the portion of the road from Cumbum to Venakondaky, lying immediately north of the former place.	3,900
yyyyy d/ 6th Dec. 1856	Constructing a new Tank with sluices & Calingulaky at Manchpully in the Dishcot Taloor.	6,800
	Bellary	
E. d/ 1st April 1857	Constructing a second class road from Kumply to Haspett via Camalapoor, a distance of 18½ miles	2,3000
	Chingleput	
B. d/ 17th Dec. 1856.	Constructing a Peishcar's Cutcherry at Streehurricottah.	2,020

Report- VV on Estimate for Rs. 4,000

2. An Estimate of Rs 47,230 for opening a road between Nellore and Gungapialam, a salt-station on the coast was laid before Government with the Chief Engineer's Report- R d/ 22d December 1855, and the work was

Encl. 6 to Feby 62 No 157 p. 12.

(12)

was recommended mainly as affording the shortest communication between the East Coast Canal and Nellore. But the Government declined to sanction the Estimate, as the Canal had not reached Gungapatam, and was not likely to do so for some time yet, and because Chintrapatam appeared to be a preferable point of junction with the Canal.

3 The outlay contemplated in the present Estimate is moderate, and is to be laid out in improving the line, with the view of facilitating the traffic, of which that carried on in the salt obtained from the pians at Gungapatam is stated to be considerable.

Report- RRR on Estimate for Rs 17,100

4. The Estimate forwarded with this Report is for improving and increasing the capacity of the Nellore tank in the District

of Nellore. This object it is proposed
to effect, by raising the bund of the tank
one yard, so that it may hold
a larger supply of water, and by
constructing a new Calingulahe,
en superseision of the three defective
Calingulahs now existing,
with several sluice vents for the
better regulation of
the irrigation, and supplies to the tanks
below, as well as to afford additional
vent to the tank in case of Extra-
ordenary floods. The project has
the support of the Collector and
the Chief Engineer, and the increase
of Revenue expected from it is
reckoned by the former Officer at
Rs. 19,509, while Colonel Fraser is
of opinion that only Rs. 7728
can be taken as
the gain that will result
from the improvements now proposed;
the latter sum is however 18 per cent on the proposed outlay.

5 The Government observe
from the last para of the Chief Engi-
neer's Report, that that Officer pro-
poses to point out to the Dist. Engineer certain alterations which
he considers necessary in the
plan of the Calingulahe.

(12)

Report 555 on Estimate
for Rupees 8000.

6 The road referred to
in this Report appears to be a
very desirable work. The traffic
on the present tortuous tract is
stated to be considerable, and
it is believed that it will be
still greatly augmented by
the construction of the proposed
road, which will pass through the
jungles which supply Nellore
with firewood, and will be car-
ried to Todaina where extensive
beds of Nodular Limestone are
stated to exist.

Report W on Estimate for Rupees 3,900.

7 The portion of road
referred to in this Report is
stated to be very stony and
uneven, so that even to travers
it with difficulty.
The traffic on the line is also
said to be considerable.

Agd

8. An Estimate to the amount of Rupees 28,700 was submitted by the Chief Engineer with his Report F. dated 26th January 1856 for the entire line from Cumbum to Venatcondah for entry in the Budget of 1856/57, but it was returned to that Officer with several others with Circulars Cons dated 10th March 1856 2362 as having been received too late for that Budget. The Government now observe that the District Engineer proposes to postpone the consideration of the last referred to line, until the roads now in progress are brought to completion.

Report V V V V on Estimate for Rupees 6,300

9. The construction of a new Tank at Ellamchelly in the Cuddapah District referred

Report E on Estimate for Rs. 2,000

11. The road referred to in this Report is stated to be very

referred to in this Report appears to be a very desirable work. A large extent of Circar and Enam lands now cleared as Poonjah, would, by means of the proposed tank, be converted into Nunjah, and thus yield a higher amount of Revenue. Besides, lands now lying waste will be brought under cultivation, and the expected increase of Revenue is on the whole assumed at Rupees 1874, or 29 Per cent on the proposed outlay.

10 The Statement furnished by the Collector is of inconvenient size, and that Officer should be required to cause his Statements to be prepared in future on foolscap paper and in the Book-form

very much needed" both as connecting the commercial towns of Chimpily, Mospett, and Chitwadighy with one another, and with the main roads from Bellary to the two former, and as giving free outlet for the produce of the lands in several large Villages lying between those roads." No traffic returns are submitted, but the Chief Engineer observes that there is little doubt of the road being much frequented. The project has the approval of the Collector, who fully admits the importance of the communication. 2. The Canala portion surplus Channel crosses the line of road, but no provision has been made in the Estimate for bridging it, in consequence of a proposal said to have been made by the

the Superintending Engineer Central Circle, in connection with the Toombadra projects generally, for raising the funds of the tank. It does not appear that the project here referred to was ever laid before Government in a definite shape, and they therefore regret the Chief Engineer will furnish further information on the subject.

Report B on Estimate for Rs. 2000

B. An Estimate of Rupees 1,780 was sanctioned so far back as the [illegible] 1854, for constructing a Pucka and Cutcherry at Streeharikottah in the Chingleput District, but the work has not yet been commenced in consequence of the low rates allowed in that Estimate. The revised Estimate now submitted

submitted, and amounting to Rupees 2,020, having been in para 1 of these Proceedings ordered for entry in the Budget of 1858/59, the former sanction of 26th August 1854 is hereby cancelled.

14 The undermentioned Estimates are approved for entry in Statement No. 1 of the Budget, for the orders of the Government of India.

Letter and date of Report	Work.	Amount Rs.
	Nellore	
MMMMM d/ 6th Dec 1856	Completing the road from the top of the Rampoor Ghaut at the boundary of the Cuddapah and Nellore Districts to Goodoor	14,000
	Cuddapah	
Do.	Do. the road from Venkatramrazpett to the Rampoor Ghaut at the boundary of the Nellore District.	7,900

Report MMMMM on Estimate for Rs. 1,47,900

15. With this Report XX dated 26th January 1856, the Chief Engineer submitted Estimates from the Civil Engineer amounting to Rupees 1,94,000, for completing the road from Venkatramrazpett in Cuddapah, through the Rampoor Ghaut, to Goodoor in the Nellore District. This line it was ordered by Government in the early part of 1854, should be undertaken on its own merits, as well as for the relief of the population in that part of the Country suffering from the then prevailing scarcity; and on the 9th May of that year they sanctioned a sum of Rs. 65,000 for the road and Ghaut.

16 The Chief Engineer Civil Engineer reduced the Estimates from Rs. 1,94,000 to Rs. 1,00,800 by striking out—

out the metalling, reducing the rates in some instances, and by excluding a large Bridge proposed for the Goonjana river, and he recommended the last-mentioned sum for entry in the Budget of 1856/57. In Extract Minutes Consultation of the 26th February 1856 No. 288, the Government declined to accede to this recommendation, as the Estimate did not appear to them to have been prepared with care. Subsequently they desired that Lieutenant Kennery, District Engineer of Cuddapah, should inspect and estimate for both sides of the pass, in Nellore as well as in Cuddapah, and with respect to the road eastward of the pass to Goodoor, they left it to the Chief Engineer's discretion to cause the Estimate to be revised by either Lt. Kennery or Lt. Mullins, the District Engineer of Nellore, as he might consider most convenient.

* Rem: to 11th August 1856. No. 1404.

17. The two Estimates forwarded with the present Report and amounting together to Rupees 1,47,900, have been prepared by Lieutenant Kennery, & the Chief Engineer is apparently satisfied with the manner in which they have been got up. Colonel Faber however considers the rates charged in some instances rather high, but on the assurance of Lt Kennery that they had been fixed after actual observation and enquiry he does not object to them.

The road, it is observed, is to be metalled six yards wide and six inches deep, and provision to the amount of Rs. 2,6,493 has been made for a Bridge of six arches over the Goonjana river.

Lt

Lt H Kennedy reports that the length of the portions of the road in the Quddapah and Nellore Districts is respectively 20:4 In Fs Jds 20 and 37. 1. 126, making together 57. 5. 156 or nearly 58 Miles. The expenditure on the entire line up to the 30th April 1856, is said to have amounted to Rs 65,138 to which being added the sum of Rs 14,7,900 now required to complete the road there results a total of Rs 2,13,038 or an average of Mile of Rs 3670; an expenditure not very heavy, the Chief Engineer observes when it is considered that there are two high Mountain ranges, one near Chittoor with a Ghaut of 4 Miles, and the other the Rampoor 12 Miles in length."

8 The Government defer granting sanction to the under mentioned Estimate.

Report LLLLL on Estimate for Rupees 3800

19 The Estimate forwarded with this Report is for restoring the Mullapah Tank in the Cheenoor Talook of the Quddapah District. The tank is stated to have fallen into disuse in consequence of a breach in the bund which happened in 1842, and which has been left unrepaired up to the present time. By the proposed improvement to the tank, an increase of Revenue to the extent of Rupees 982 on the present income is expected, being at the rate of 26 P Cent on the proposed outlay.

20 It is observed from the Collector's Report [illegible] that the tank was originally built by one Mullapah a village

Village Cummum, during the
Mahomedan Government
and that in Fasly 1248, the
sons of that individual par-
tially restored it. The
Government therefore request
to be informed, before sanc-
tioning the Estimate, under
what circumstances the
tank in question is now
considered to be "Government
Property." Information is also required
whether any remission is allowed to the Proprietor
of Lands from the Lands cultivates under it.

Report 0000 on Estimate for Rs. 41,500

21. In Erection Cons
of the 14th September 1856 —
№1680 the Government sanction-
-ed an Estimate of Rupees
13300 for opening a trace —
through the Mountenal Chauts
in the Rumnad District; and
desired that preparations
might be made for continu-
-ing the road on both sides
of

& District Engineer's Report
L.L.L.L.L.

of the Pass towards Gumbum
on the East and Rumnad
on the West. The Estimate
forwarded with the above
Report, and amounting to
Rupees 41,500, is for construct-
-ing a first class road from
Bourlooky at the foot of the
Mountenal Cumanna Pass,
near Attoor and Nundicoot
-coor to Gooduvungoor; and
for completing the road from
the latter place to Jolapoor,
or Rumnad; the distances
of these two portions of road,
being respectively 41-7 and
24-7 & 6-7; or together 48 3/4 miles.

22. The District Engineer
it is stated, intends to forward
hereafter Estimates for the
large Bridges required on
this line; but the Government
would wish to have these
works

works also included in the
~~second~~ Estimate for the road. Inthe
order of 17th September /56
above referred to, it was
especially requested that
the opinion of the Agent at
Rumool might be obtained
as to the line to be taken,
preparatory to the preparation
of our Estimate, but this officer,
it is observed, has not been
consulted in respect to the
proposal now submitted.
The road from Gpande-
-mudug to Jolaspur or
Rumool is reported by
the District Engineer to have
been already constructed,
and the present Estimate
provides for completing
it; but neither Lieut. Pla-
-yfair nor the Chief Engineer
give

gives the date of sanction
under which this portion
of road was originally un-
-dertaken:-

23. The Right Honble.
-able the Governor in Council
therefore requests that the
omissions now pointed out
may be duly supplied, and
he further resolves to return
the Estimate to the Chief
Engineer, in view to a complete
one, including the Bridges,
being prepared and submitted
24. In respect to the
continuation of the road on
the eastern side of the Pass
towards the Guntoor District,
the Government, in their order
of 17th September /56, observed
that an Estimate* was sanc-
-tioned for improving the road
from Guntoor by Sunacondah

&c

* Postponed for entry
in the Budget of
1858/59 - Encl 12th
March /57 Gold Pl 15.

to the Cuddapah frontier, and suggested that this road might be connected with the foot of the pass.

No Estimate has yet been received for this connecting line, and the Govt. request the Chief Engineer's attention to the subject.

Report E E E E E on Estimate for Rs. 2,510.

25. With this Report the Chief Engineer submits an Estimate amounting to Rupees 2,510, for repairing the upper Coleroon tank in the Trichinopoly District, as also for rebuilding a Calingulah and improving a sluice. The work is expected to be remunerative, the increase of revenue expected being

(142)

set down at 515 Rupees, or nearly 20 P Cent on the proposed outlay. Besides the above Project, the District Engineer is observed, brings forward another for constructing a Tank on a lower level, as promising also a large increase of revenue; but no mention is made of this in the Chief Engineers Report. Lieut. Blagrave states that this tank would collect a large quantity of water from the upper tank now running waste, and that the two projects appear to be closely connected. ~~with the project for the lower tank~~. The Govt. therefore resolve to return the

the present Estimate of the Chief Engineer, in view to a revised one being prepared and submitted for the two Tanks in question.

Report VVV on Estimate for Rupees 3300–

26 The Estimate submitted with this Report is for repairing the old stone revetment, building a new one, and executing other repairs to the Chinnambedoo Tank in the Tulook of Peddapollium, in the Chingleput District.

29. The work is stated to be very necessary to increase the efficiency of the Tank, which, in the present defective state of its stone facing and its embankments, is incapable of holding as a proper supply of water. No information is given by either the District Engineer or Collector, as to the revenue prospects of the Project, and Coll Faber merely observes that the proposed outlay "will "doubtless be attended "with a considerable increase "upon the present collection" The Govt would however wish to have before them definite information on this point, before granting sanction to the Estimate now submitted.–

Fort St George
28th Oct. 1857

17 Copies to the Chief Engr. Dist. 29
3 " Bd of Rev.

945

Public Works 1857 Despatches
Dft to Govt 29th October.

No 2021.

Extraordinaries of Govt.
Dy 28th Octr. 57.

From the Officer in charge of the
Central Office dy 13 April 58
No 799 in 11 May

From Offg. Ch Engr 24th Septr 1858
No 2247 in 1st Oct.
From the Ch. Engr dy
3d June 1861 Cer 1259

Sanctioning certain
Estimates therein mentioned for
entry in Statement No 2 of
the Budget for 1858/59.

From Do dy 21st Jany 62 No 1112.
From Do Dpy Sec. dy Cer 1862
Cer 3017 in Dec.

No 91 at 103.