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MADRAS RECORD OFFICE.

Government of Madras.

Public Works **DEPARTMENT.**

Cons. 20-5-57

G.O. No. 1462 Press Mis.

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Dated 20 — 5 — 18 57

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13-8-37

No. 71. Read the following Reports from Colonel C. E. FABER, Chief Engineer; to H. FORBES, Esq., Acting Secretary to Government, dated 6th December 1856, No. 8662.

Report T, on an estimate prepared by Lieutenant Blagrave, late 1st Assistant Civil Engineer 3rd Division, for constructing Bridges and Tunnels between Auloor and Madavaram on the road from Bellary to Hydrabad, in the Bellary District.

Amount of estimate Rupees (44,100) forty-four thousand and one hundred, as follows.

		Rs.
Constructing	two Bridges of 7 and 3 arches each of 8 feet span and a Causeway for the Bareemanoo Vagoo	2,810
Do.	two bridges one of 2 arches of 30 feet and one of 1 arch of 12 feet span, and a Causeway for the Gurgee Vagoo.	5,310
Do.	a bridge of 3 arches of 20 feet span for the Gaduthay Vagoo	2,580
Do.	two bridges of 3 arches and 1 arch, each of 20 feet span, and a Causeway for the Chemata Vagoo...	3,740
Do.	a bridge of 5 arches of 20 feet span, for the Mokah Vagoo	3,960
Do.	do. of 3 arches of 15 feet span for the Bungaroo Vagoo	1,880
Do.	do. of 3 arches of 15 feet span for the Modaloo Vunka	630
Constructing	a Bridge of 1 arch of 12 feet span for the Modaloo Vunka	1,304
Do.	five tunnels each of 3 flat vents of 6 feet span	540
Do.	a bridge of 1 arch of 12 feet span for the Obely Thavaravagoo	786
Do.	two tunnels each of 4 flat vents of 6 feet span	1,100
Do.	a bridge of 5 arches of 6 feet span for the Corunjama Vagoo	2,400
Do.	do. of 7 arches of 12 feet span for do. do.	1,270
Do.	do. of 3 arches of 12 feet span for the Banoocoppah Vagoo... ...	1,327
Do.	three tunnels, two of 5 flat vents, and one of 4 flat vents each of 6 feet span...	3,703
Do.	a bridge of 11 arches of 12 feet span for the Nursintha Vompoo Vagoo ...	2,200
Do.	two bridges each of 5 arches of 6 feet span for the Cooroobah Vompoo Vagoo...	930
Do.	a bridge of 1 arch of 20 feet span for the Caythega Vompoo Vagoo ...	36,470
	Rupees...	
Superintendence		1,780
Contingent charges		1,780
	Rupees...	40,030

The estimate also includes a sum as follows for altering the line of road.

Raising road in the bed of a tank.

				Rs.	A.	P.	
5,965	Cubic yards earth work	@ 1 anna	₱ cubic yard	372	13	0	
5,965	do. gravel	@ 2-8	₱ do.	994	2	8	
11,930	do. tamping	@ 0-4	₱ do.	248	8	8	
			Rupees...	1,615	8	4	
Constructing 8 tunnels varying in size from 1 vent of $4\frac{1}{2} \times 3$ feet to 3 vents of $6 \times 3\frac{1}{2}$ feet				1,555	0	0	
Do. a bridge of 1 arch of 15 feet span.....				708	1	6	
Superintendence.....				191	6	2	
							4,070
					Total estimate...		44,100

1. An estimate for these works was forwarded to Government with the Chief Engineer's Report No. 6716, dated 26th January 1856, and returned with Extract Minutes of Consultation No. 362, dated 10th March 1856 to be re-submitted in time for consideration and entry in the Budget of 1857-58.

2. The whole of the earth work on the line as stated in the accompanying letter No. 257, dated 23rd September 1856, from the Acting Civil Engineer 3rd Division was completed during the Famine year 1854.

3. The line is of great importance as completing the communication from Bellary via Adony, with the Nizam's country, in the direction of Hydrabad, and as the estimate has been prepared on moderate and sufficient data, the Chief Engineer recommends it for entry in the Budget of 1857-58.

Letter from Lieutenant J. F. FISHER, Acting Civil Engineer 3rd Division; to Colonel C. E. FABER, Chief Engineer, dated Bellary, 23rd September 1857, No. 257.

SIR,

I have the honor to forward two estimates for bridges and drains on two lines of roads in this District, one amounting to Rupees 43,550 for bridges and drains between Auloor and Madavaram on the high road from Bellary to Hydrabad, the other, amounting to Rupees 18,800 for bridges and drains on the road from Ghooty to Putty Kondah, the whole earth work on both these lines of road was completed by Famine Coolies and they only require these masonry works to make them efficient means of communications. I beg therefore they may be entered in the Budget of 1857-58.

No. 72. Report U, on an estimate prepared by Lieutenant Blagrave, late 1st Assistant Civil Engineer 3rd Division for constructing Bridges and Tunnels on the road from Ghooty to Puttykondah in the Bellary District.

Amount of estimate Rupees (18,770) eighteen thousand, seven hundred and seventy, as follows.

		Rs.	
Constructing	a Tunnel of 5 flat vents of 6 feet span	400	
Do.	a Bridge of 2 arches of 30 feet span for the Penoogoola Vunka ...	2,630	
Do.	do. of 4 arches of 10 feet span for the Basimpully Vunka... ...	1,180	
Do.	do. of 3 arches of 8 feet span for the Ramacuta Coontah ...	666	
Do.	do. of 5 arches of 12 feet span for the Oorah Vunka	2,010	
Do.	do. of 5 arches of 8 feet span for the Yerragoonta Vunka ...	1,120	
Do.	do. of 2 arches of 30 feet span for the Singala Vagoo ...	2,230	
Do.	do. of 2 arches of 12 feet span for a drainage channel ...	980	
Do.	do. of 5 arches of 12 feet span for the Nullapah Coontah Vunka	2,010	
Do.	do. of 5 arches of 6 feet span for the Copagunta Vunka	1,100	
Do.	do. of 5 arches of 8 feet span for the Mathigaroo Vunka.....	1,120	
Do.	a Tunnel of 7 flat Vents of 6 feet span...	570	
Do.	a bridge of 5 arches of 8 feet span for the Denkanee Vagoo.....	1,120	
		17,136	
Superintendence.....		858	11
Contingent Charges.....		775	5
	Total estimate...	18,770	

1. This estimate was forwarded to Government with the Chief Engineer's Report No. 6716, dated 26th January 1856, and returned with Extract Minutes of Consultation No. 362 dated 10th March 1856, to be re-submitted in time for consideration and entry in the Budget of 1857-58.

* Vide accompanying letter No. 257 dated 23rd September 1856, from the Acting Civil Engineer 3rd Dvn.

2. The line on which the whole of the earth work was completed* in the Famine year 1854, is part of an important one from the Cuddapah District, and country South of Ghooty via, Adony and Madavarum on the Toombuddra river into the Nizam's country towards Hydrabad estimates for completing which have been prepared.

3. The estimate now submitted, in which the data are moderate and sufficient, is recommended by the Chief Engineer for entry in the Budget of 1857-58.

No. 73. Reports from Colonel C. E. FABER, Chief Engineer; to H. FORBES, Esq., Acting Secretary to Government, dated 17th December 1856, No. 8932.

Report N, on an estimate prepared by the 1st Assistant Civil Engineer 3rd Division, Lieutenant Blagrave, for constructing Bridges and Tunnels on the road from Ghooty to the Kurnool frontier.

		Rs.
The estimate provides for	1 Bridge of 1 arch of 30 feet for a drainage channel.....	2,700
1	do. do. do. do. do. do. for the Ghooty Maravah Vunkah...	2,700
1	do. of 3 do. of 12 feet and 1 Tunnel of 4 vents of 6 feet for the Caradicondah Vunka	1,420
1	Bridge of 1 arch of 12 feet for the Bogumvaull Vunkah	470
1	Do. of 2 do. of 12 feet for the Pothiathodi Vunkah...	940
1	Do. of 5 do. of 8 feet for the Mickara Vunkah...	1,040
1	Do. of do. do. for the Voolavaloo Vunkah...	1,040
1	Do. of 2 do. of 20 feet for the Vaulaporam Pokoo Vunkah ...	2,050
1	Do. of 7 do. of 8 feet for the Euthala Vagoo	1,730
1	Do. of 2 do. of 12 feet for a drainage channel...	910
1	Do. of 3 do. of 15 feet for the Curthummanah Vagoo	1,600
		16,630
Contingent charges...		813
Superintendence		817
	Total Rupees...	18,260

eighteen thousand two hundred and sixty.

1. The road from Kurnool to Ghooty, was also one of those undertaken in the season of scarcity of 1854, and the estimate for its construction formed item No. 120 of Statement No. 2 of the Budget for 1856-57.

2. The estimate now submitted provides for the masonry works required on it, within the limits of the Bellary District, and which as observed in para. 3 of my Report No. 8662 dated 6th December 1856, have been carefully designed by Lieutenant Blagrave.

3. The rates allowed for the work are moderate and sufficient, and the estimate is recommended by the Chief Engineer for entry in the Budget of 1857-58.

Letter from Lieutenant G. W. WALKER, Civil Engineer 3rd Division; to Colonel C. E. FABER, Chief Engineer, dated Canara, 22nd December 1855, No. 594.

The accompanying Plans and Estimates for bridging the Bellary portion of the road from Kurnool to Ghooty, originally included in my list of the 15th Instant as No. 5, having this day been received from Lieutenant Blagrave, I take the liberty of forwarding them in the hope of their arriving at Madras in time for entry in the Budget 1856-57, it being most desirable to obtain sanction for works in every part of the District of Bellary that works may progress simultaneously wherever labour is available.

No. 74. Report O, on an estimate prepared by the 1st Assistant Civil Engineer, 3rd Division for constructing Bridges and Tunnels between Auloor and Kodamoor, on the road from Bellary to Kurnool.

	Rs.	A.	P.
The estimate provides for 1 Bridge of 5 arches of 8 feet span for the Eathala Vunkah	1,010	0	0
1 Do. of 2 do. of 12 feet do. for the Eathamanoo Vunkah	785	0	0
1 Do. of 3 do. of 12 feet do. for the Barrecka mola	1,040	0	0
1 Do. of 3 do. of 6 feet do. for the Eadega Vunkah	660	0	0
1 Do. of 3 do. of 12 feet do. for the Mariamah Goody Vunkah	1,040	0	0
1 Do. of 5 do. of 8 feet do. for the Bungy Comtah Vunkah	1,040	0	0
1 Do. of 1 do. of 8 feet do. for a drainage channel	457	0	0
1 Do. of 3 do. of 12 feet do. for do. do.	1,040	0	0
1 Do. of 3 do. of 12 feet do. for the Lunkapah Coonta Vunkah	1,040	0	0
1 Do. of 7 do. of 12 feet do. for the Bogapah Boyee Vunkah	2,080	0	0
1 Do. of 5 do. of 8 feet do. for the Curnum Chaun Vunkah	1,040	0	0
1 Do. of 3 do. of 6 feet do. for the Dakachama Chaun Vunkah	660	0	0
1 Tunnel of 9 vents of 6 feet span for the Reddy Cheroovoo Vunkah	1,030	0	0
2 Bridges one of 7 and one of 5 arches of 30 feet for the Hindree river	17,020	0	0
1 Do. of 3 do. of 20 feet do. for the Carrydee Condah Bundavagoo	2,480	0	0
1 Do. of 3 do. of 12 feet do. for the Eathalavagoo	1,040	0	0
1 Do. of 1 do. of 12 feet for the Masapoor Vunkah	574	0	0
1 Do. of 13 do. of 45 feet for the Hindee river	39,200	0	0
1 Do. of 3 do. of 20 feet for the Mundicottah Vagoo	2,480	0	0
	75,746	0	0
Contingent Charges	3,866	8	0
Superintendence	3,787	8	0
Total Rupees	83,400	0	0

eighty-three thousand and four hundred.

1. The road from Auloor to Kurnool was undertaken to give employment to the poor, in the season of scarcity of 1854, and the estimate now submitted, provides for the masonry work required to complete it, within the limits of the Bellary District.

2. The late Civil Engineer Captain Walker states in his letter No. 584, dated 15th December 1855, that the Bridges have been designed by Lieutenant Blagrave, "on a very careful "consideration of the peculiarities of each Nullah and that the rates and amounts of the esti- "mates have been fixed as accurately as it is possible to do."

3. On the line from Bellary to Kurnool, as also to Madaveram on the Hydrabad frontier, Auloor instead of Bellary was taken as the starting points, in consequence of the intention of carrying the road from that place to cross the Huggry river, in common with the Cuddapah and Bellary road and Trunk road No. 12, by a Bridge proposed to be constructed at Permadavenhully.

4. The road from Auloor to Kurnool, formed Item No. 119, in Statement No. 2 of the Budget for 1856-57. The estimate on account of it, and five other lines, being entered at Rupees 1,07,520, sanctioned by the Government of India on the 26th January 1855.

5. It being very desirable to complete this, among other important lines or communication in the Bellary District, the Chief Engineer recommends the estimate, in which the rates allowed are moderate and sufficient for entry in the Budget of 1857-58.

Letter from Lieutenant G. W. WALKER, Civil Engineer 3rd Division; to Colonel C. E. FABER, Chief Engineer, dated Canara, 15th December 1855, No. 584.

SIR,

1. I have the honor to submit the final monthly list of estimates for new works in the 3rd Division intended for insertion in the Budget of 1856-57. From non-receipt of your Circular of the 29th November No. 3099, until yesterday, I have been unable to avail myself of the permission therein granted to send in separately such estimates as were previously in my possession; and others have been included in the present list, although not yet received, being either known to have been despatched, or to be near completion. These latter I hope will be allowed to enter into the Budget if they reach Madras within a reasonable time as their omission would greatly contract the sphere of operations in the 3rd Division during the ensuing official year.

2. Nos. 1 to 5 (Bellary) of the list now submitted, and 9, 10 (Kurnool) provide for Bridging the following portions of the Bellary and Kurnool Famine roads, viz:—

1. From Auloor to Madavaram, of the direct Bellary and Hydrabad road. Set No. 1.
2. From Auloor to Kurnool, of the Bellary and Kurnool road. Sets Nos. 2 and 9.
3. From Kurnool to Ghooty, of the Kurnool and Bangalore road. Sets Nos. 5 and 10.

Set No. 5 must be excluded, as it cannot be prepared in time.

3. From Ghooty to Adony, of the direct Bangalore and Hydrabad road. Sets Nos. 3 and 4.

All have been, or are being prepared by Lieutenant Blagrave, 1st Assistant Civil Engineer 3rd Division, from actual, and in some cases repeated, observation of the sites, and the details of the larger works frequently discussed between him and myself, both personally and by letter. And I have reason to believe that the bridges have been designed on a very careful consideration of the peculiarities of each Nullah; that all contingencies have been well provided for; and that the rates and amounts of the estimates have been fixed as accurately as it is possible to do.

3. Nos. 1 and 3 are the only sets that have actually reached me on this date, and those after inexplicable delays in transit by post. No. 2, though despatched from Kurnool on the 3rd

Instant, has not yet come to hand; two other sets (No. 9 and Nos. 4 and 10) were to leave positively by the 12th at latest; and I hope the remaining set, would soon follow. It is certainly an object that as many of them as possible should arrive in time for entry in the Budget, in order to admit of a wide distribution of the work, sanction being obtained for only such an amount of each set of estimates as can be carried out in the course of one year.

4. On the lines from Bellary to Madavaram and Kurnool, Auloor and not Bellary has been taken as the starting point in consequence of the determination arrived at to alter the course of the road between the two latter places so as to cross the Huggry River in common with the Cuddapah and Bellary road, and Trunk road No. 12, by a bridge at Permadevanhully. A larger amount of bridge work can be got through in one season, by the Officer in executive charge of the more Northern lines of Bellary District, than elsewhere, from their traversing the dry Talooks of that District where there will be less variety of works requiring his attention.

5. It was my intention to have submitted estimates for completing the Bellary and Cuddapah road within the limits of the former District, for which duty Assistant Surveyor Blacker was detailed in September last; but hitherto he has only been able to forward the Survey and estimate for completing the earth works and minor bridges of the single stage between Royelcherroo and Ghooty, (No. 6 of List). It will be remembered that a considerable outlay was incurred on the line in the Famine year, and that the continuation of the work in the current year was objected to by the Supreme Government solely on the ground of a Railway being projected along the same line. The road has another rival in Colonel Cotton's proposed Canal, and the question has to be decided whether so large an outlay as Rupees 2,000 per mile is to be incurred in completing the former under such adverse circumstances. Considering the unfavorable nature of the soil, I am of opinion that less than that rate will not suffice to execute the work in the substantial style adopted on the Famine roads, the earthworks of which I valued at Rupees 1,760 per mile in a letter to the Revenue Board dated the 10th August 1854, No. 433; and I would strongly deprecate the adoption of an inferior style of execution.

6. The single stage for which an estimate is now submitted, may not inaptly be taken in hand first, (although I regret not having others equally provided for,) as it is in continuation of the 2nd Class road (No. 2 of my list of 15th November) proposed between Royelcherroo and Podatoor in the Cuddapah District; and the labours of the Famine Coolies were chiefly bestowed on the stages between Ghooty and Bellary. Accordingly I trust that we may be allowed to carry on the completion of the line by perfecting that portion for which alone I have been able to obtain estimates. The minor Bridges being so small, is apparently the cause of Mr. Blacker's not furnishing detailed Plans and Estimates of them, but such will be supplied to the Executive Officer by whom they will be constructed.

7. No. 7 of the list is one of proposed Main Roads of the Bellary District whereof the 1st stage out of Bellary itself has been mainly constructed by the Famine Coolies; and the rest nearly to Cumbadoor, has been partially opened by the Famine Coolies, and from the Discretionary Funds, under the careful superintendence of the Marahmut Superintendent and his Deputy on Traces which I have personally assisted in laying out. The line is a most valuable one for the District, and especially for the supply of Bellary with produce of Raidroog and Dhurmaveram Talooks, and great stress is laid upon it by the Collector. In connection with Trunk Road No. 12, it will supply the place of the old road from Bellary to Bangalore now thrown out by the Heerioor line in Mysore; the abandonment of which, though right on general grounds, causes local inconvenience which the new roads obviate crossing the Huggry River at the site of the proposed Annicut at Yaparaul the Cullian Droog line can be worked by the same Executive that is charged with the former work, to which it will be auxiliary for the carriage of produce from the tracts to be irrigated therefrom.

8. I am sorry that from lack of time, and the delay in receipt of estimates, I am obliged to submit those of the 3 new Moonsiff's Courthouses proposed at Ghooty, Purghee, and

Cullian Droog, without the countersignature of the Civil and Sessions Judge of Bellary. The old buildings have however been inspected by this Department at the request of the Judicial Authorities; and with reference to the 2 former it seems decidedly advisable, from Mr. Blacker's Diaries, to substitute entirely new structures for them on account of the bad materials originally used, their state of dilapidation, and their unsuitableness of plan. Should the further inquiry that I have ordered, shew that the present Cullian Droog Court is worth the cost of extensive repairs, it will be easy to substitute another estimate for that now submitted, the exclusion of which from the Budget might, under the other contingency, prove a great inconvenience.

9. For so important a work as that entered in No. 11 of the list, I am ashamed to submit such defective Surveys and Estimates, as have been prepared by Assistant Surveyor Laskey, whose shortcomings in this matter I trust are attributable to inexperience in the Department and not to carelessness and neglect. He shall complete the papers for this and the other approach to Sedasheghur by the Kygah ghaut, under my personal instructions, for entry in the Budget of 1857-58; in the mean time, it is essential to the progress of the District, and especially of the trade connected with Sedasheghur, that we should next year have the means of carrying out the earthworks and Drainage of the Singawarree line to the extent provided for in the estimates now submitted and amounting to Rs. 48,600 whereby carts will be enabled to approach the Northern Bank of Sedasheghur river from the open country of Dharwar, during the dry season.

10. The new Gairsappah ghaut will be thrown open for dry weather Cart traffic after next monsoon, when the bridges for which sanction has been solicited will be undertaken; and already the eastern extremity of the line is accessible by wheeled vehicles from the Nuggur District of Mysore, under these circumstances next season will present a favorable opportunity for completing the chain of Bungalows from Bangalore to the West Coast at Honore, by the construction of the only 2 now wanting, at Mullaymunny and Gairsappah. A hut at the latter place, which originally cost less than Rupees 100, is dignified with the name of Bungalow, but it is a single room built of mud and thatch, without verandah or any decent accommodations; and being most inconveniently situated on the wrong side of the river cannot be generally resorted to, now that the new ghaut has diverted all traffic to the North bank.

11. These buildings being on what has become from the attraction of the Gairsappah Falls, the line of road most frequented by European Travellers, of any in Canara, might on the plea of usefulness be estimated for of Puckah materials, but as they will be serviceable merely as rest-houses en route to the Falls which people generally are eager to reach and where alone they care to make a prolonged stay, it is thought that cheap structures like those at Sumpakhund, Kuttegaul, Eckumby and Moondagode, will answer every purpose. For the construction and repair of each, the adjacent jungle furnishes materials, and considering that the Falls' Bungalows, public and private, and all between the Falls and Shemogah are similar structures, the cheaper manner of building is preferable in this case. The Plan and Estimate requiring the Collector's countersignature, will be transmitted to you by him.

12. At the risk of committing an irregularity, I have appended to the list of estimates now forwarded, a list of the sums which it is proposed to enter in Statement No. 3 of the Budget list for Canara on account of maintenance of made roads not already provided for. For 815 miles of such roads in the Executive Circles noted in my letter of the 9th July 1855, No. 279, the existing annual sanctions amount only to Rupees 24,675, confined to Trunk roads Nos. 2 and 3, the Dharwar and Coomptah road, and 3 ghauts; and a grant of Rupees 63,350 is urgently required not only for the maintenance but for the gradual improvement of the remainder of the Canara roads, now kept up in a kind of way by a discretionary outlay, but not improving in condition. The principle of such a grant was approved of and adapted in the case of the Yellapoor, Sircy, and Agoomby road circuits for which a grant of Rupees 39,500 was made in the Budget of 1854-55, and repeated in that of the current year; and which grant will for the future be absorbed in the sanction now proposed to be solicited.

13. The deficiences of the Engineer Department having precluded the planning of any new works in several of the Executive Circles of the Canara District, a great extension of the grants for road maintenance is the more urgently required (if only as a temporary measure) in order that funds may be generally available throughout the District for the progressive improvement of the communications in all parts of the District. And Rupees 100 a mile will enable much to be done in the way of widening and clearing the lines, and providing the minor drains required on them. I would therefore solicit permission for the entry of such additional grants in each Canara road Circuit as are appended to the accompanying list of estimates, in Statement No. 3 of the Budget for next year.

No. 75.

ORDER THEREON, No. 1962; dated 20th October 1857.

With these Reports, the Chief Engineer forwards estimates for constructing bridges and tunnels on the undermentioned roads in the Bellary District which were undertaken during the scarcity in 1854.

	Estimated cost. Rs.
Auloor to Madaveram.....	44,100
Ghooty to Puttykondah.....	18,770
Ghooty to the Kurnool frontier.....	18,260
Auloor to Kodamoor.....	83,400
Total.....	1,64,530

The three first of the above roads are portions respectively of the lines from Bellary to Madaveram, Ghooty to Adony, and Ghooty to Kurnool; and it is observed from the Bugets of 1854-55 and 1855-56,* that a sum of Rupees 1,07,520 has already received the sanction† of the Government of India, for completing those lines, with that from Auloor to Kodamoor above referred to, and one other; as also for "providing the necessary drains and bridges." The Government therefore request the Chief Engineer will report the nature and amount of the provision thus made for masonry works on the four lines in question; and he will also explain the circumstances which have led to a second application being now submitted for the large outlay of Rupees 1,64,530 apparently for the same works. Colonel Faber will further ascertain and report the amount spent in the original formation of these four roads, as also the outlay incurred under the sanction of the Government of India above referred to.

* Statement No. 1 Item No. 17
do. „ 2 do. „ 60

† Extract Minutes Consultation 10th February 1855 No. 64.

2. The portion of the roads from Auloor to Bellary and from Puttykondah to Adony, it is observed, are not provided with any masonry works in the estimates forwarded with the Reports T, and U, nor is there any provision for the portion of the road from Ghooty to Kurnool within the limits of the Kurnool District; that sent with Report N, being only for the portion in the Bellary District. In respect to the first of these roads, the Government observe from para. 3 of the Chief Engineer's Report C, that its original line is to be abandoned, and the road connected with the Bellary and Cuddapah line and Trunk road No. 12, in order that the bridge proposed to be constructed over the Huggry at Permadavenhully may answer for all three communications.

An estimate for this connecting line does not appear to have been as yet submitted, and the Government are of opinion that provision for it should properly be made in the estimate forwarded with the Report T. As regards the two other portions of road referred to above, viz. from Puttykondah to Adony, and the road from Ghooty to Kurnool within the limits of the Kurnool District, it is observed that estimates for bridging these communications were forwarded with Chief Engineer's Reports AA, and GG, dated 26th January 1856, but these having been returned with many others with Extract Minutes Consultation dated 10th March 1856 No. 362, do not appear to have been re-submitted. If considered unobjectionable, they should respectively be incorporated with the estimates sent with the present Reports U, and N. The three estimates here noticed will therefore be returned to the Chief Engineer in view to revised estimates being prepared in conformity with the views of Government as above expressed. These estimates, as well as that for the Auloor and Kodamoor road, which also will be returned to the Chief Engineer, should be drawn up according to the form laid down in Appendix E[1], of the second Report of the Madras Public Works Commissioners, and submitted for the consideration of Government with full information on the several points noticed in this order.

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

Bellary District

Public Road

No 8662.

Report on an Estimate prepared by Lieutenant Blagrave late 1st Assistant Civil Engineer 3d Division for constructing Bridges and Tunnels between Autoor and Madavaram on the road from Bellary to Hydrabad in the Bellary District.

Amount of Estimate Rupees (44,100) Forty four thousand and one hundred as follows.

Constructing two Bridges of 7 and 3 Arches each of 8 feet span and a Causeway for the Vaimeenaroo Vagoo ——— Rs 2810-0-0

Do — two Bridges one of 2 Arches of 30 feet and one of 1 Arch of 12 feet span and a Causeway for the Gurgee Vagoo — 5310-0-0

Do — a Bridge of 3 Arches of 20 feet span for the Gadutthay Vagoo ——— 2580-0-0

Do — two Bridges of 3 Arches and 1 Arch each of 20 ft span and a Causeway for the Chenata Vagoo — 3740-0-0

Do — a Bridge of 5 Arches of 20 feet span for the Mokah Vagoo ——— 3960-0-0

Do — Do — of 3 Arches of 15 feet span for the Bungaroo Vagoo ——— 1850-0-0

Rs 20280-0-0

Constructing

Rs 20280-

Constructing a Bridge of 1 arch of 12 feet span for the Modaloo Vunka Rs 630-..

Do — five tunnels each of 3 flat Vents of 6 ft. span 1304-..

Do — a Bridge of 1 arch of 12 feet span for the Obely Thavara Vagoo ——— 540-..

Do — two tunnels each of 4 flat vents of 6 ft span 786-..

Do — a Bridge of 5 arches of 6 feet span for the Conniyama Vagoo ——— 1100-..

Do — Do — of 7 arches of 12 ft span for — do — do ——— 2460-..

Do — Do — of 3 arches of 12 ft span for the Banna Cippah Vagoo ——— 1270-..

Do — three tunnels two of 5 flat Vents and one of 4 flat Vents each of 6 ft span ——— 1327-..

Do — a Bridge of 11 Arches of 12 feet span for the Inna Vuntha Vompoo Vagoo 3703-..

Do — two Bridges each of 5 Arches of 6 feet span for the Coorobah Vompoo Vagoo ——— 2260-..

Do — a Bridge of 1 arch of 20 feet span for the Caythega Vompoo Vagoo ——— 930-..

Rs 36470-..

Superintendence

Rs 36470-..

Superintendence ——— 1780-..

Contingent Charges ——— 1780-..

Rupees 40030-..

The Estimate also includes a sum as follows for altering the line of road..

Raising road in the bed of a tank..

3965 Cub: Yds earth work @ 1 anna p Cub: Yd Rs 372-13-..

5965 — do — gravel @ 2 annas p do — 994-3-8

11930 — do — tamping @ 1 anna p do — 248-8-8

Rs 1615-8-4

Constructing 8 tunnels varying in size from 1 Vent of 4½ × 3½ ft to 3 Vents of 6 × 3½ ft ——— 1533-..

Do a Bridge of 1 Arch of 15 feet span 708-1-6

Superintendence — 191-6-2

4070-..

Total Estimate Rupees 44100-..

1. An Estimate for these works was forwarded to Government with the Chief Engineers report No 6716 dated 26 January 1856 and returned with Extract Minutes of Consultation No 362 dated 10 March 1856 to be resubmitted in this for consideration and entry in the Budget of 1857/58..

2. The whole of the Earthwork on the line as stated in the accompanying letter No 257 dated 23d September 1856 from the Acting Civil Engineer 3d Division was completed during the Famine year 1854..

3. The lines of great importance as

Completing

And

completing the communication from Bellary via Adony, with the Nizam's Country, in the direction of Hydrabad, and as the Estimate has been prepared on moderate and sufficient data, the Chief Engineer recommends it for entry in the Budget of 1857/58.

Central Office of P.W.
Fort Saint George
6th Dec.r/56

A.C. Fisher Colonel
Chief Engineer

To The Secretary to Government
P.W. Department.

List of Inclosures

1 Letter from the Actg Comb. Engr 3rd Div.n
dated 23rd Sept.r 1856 No. 257 ..... T1
1 Abstract Estimate T2
14 Plans, Elevation, & Section of Bridges T3.4.5.6.7.8.9.10.11.12.13.14.15.&16

P.W.C. 11th March 1856 No 89

Public Works Dept. Cons 20th Octr 57. T

No 2780

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

Dated 6th Sept 1856.
Desp'd 9th Sept 1856.

16 Enclosures Returned 13/11/57.

No 8662

V

No 71.

Forwards for entry in the Budget of 1857/58 an Estimate of Rupees 44,100 for constructing Bridges and tunnels between Anloor and Madavaram on the road from Bellary to Hydrabad in the Bellary District

Recd 29th Nov 10th Oct 57

No 8662 17

Bellary District

Public Road

Report on an Estimate prepared by Lieutenant Blagrave late 4th Assistant Civil Engineer 3d Division for constructing Bridges and Tunnels on the road from Ghooty to Putty-Kondah in the Bellary District Amount of Estimate Rupees (18,770) Eighteen thousand seven hundred and seventy as follows.

Constructing a Tunnel of 5 flat vents of 6 ft span Rs 400 ...
Do a Bridge of 2 Arches of 30 feet span for the Penagoola Vunka ——— 2,630 ...
Do Do of 4 Arches of 10 feet span for the Basavanpully Vunka ——— 1180 ...
Do Do of 3 Arches of 8 feet span for the Ramacuta Coontah ——— 660 ...
Do Do of 5 Arches of 12 ft span for the Dorah Vunka. 2010 ...
Do Do of 5 Arches of 8 ft span for the Gerragonta Vunka ——— 1120 ...
Do Do of 2 Arches of 30 ft span for the Lingala Vagos ——— 2230 ...
Do Do of 2 Arches of 12 ft span for a drainage Channel ——— 980 ...
Do Do of 5 Arches of 12 ft span for the Mullapah Coontah Vunka ——— 2010 ...

Rs 13230 ...

Constructing

and

Rs 13226-

Constructing a Bridge of
5 Arches of 6 feet span
for the Copalgunta Vunka - 1100-- -
Do — Do — of 5 Arches of
8 feet span for the Ma-
higaroo Vunka — - 1120- - -
Do — a Tunnel of 7 Flat
Vents of 6 feet span — - 570- - -
Do — a Bridge of 5 Arches
of 8 feet span for the
Dentiamee Vagoo — - 1120- - -
Rupees 17136- - -
Superintendence — 858-11-
Contingent Charges — 775-5-
Total Estimate Rupees 18770- - -

1.- This Estimate was forwarded to Government with the Chief Engineers report No 6716 dated 26th January 1836 and returned with Extract Minutes of Consultation No 362 dated 10th March 1836, to be resubmitted in time for consideration and entry in the Budget of 1837/38.-

2.- The line on which the whole of the earth work* was completed in the Famine year 1834. is part of an important one from the Cuddapah District and Country South of Ghooty via Adony and Madavaram on the Toombudra river into the Nizams Country towards Hydrabad. Estimates for completing which have been prepared.-

* Vide accompanying letter No 257 dated 23d Sept/56 from the Actg Civil Engr 3d Dn.

3.- The Estimate now submitted in which the data are moderate, and sufficient

12

sufficient, is recommended by the Chief Engineer for entry in the Budget of 1857/58.

Central Office of Rd
Fort Saint George.
6th Decr/56

A. Fraser Colonel
Chief Engineer

To
The Secretary to Government
Rd Department.

List of Inclosures

1 Letter from the Actg Civil Engr 3d Dn dated 23d Sept 1856 No 257. Vide Letter T.
1 Abstract Estimate - - - - - - - - - - - - - U1
7 Plans, Elevations & Section of Bridges - - U2 3 4 5 6 7 8.

Read

Cons. 11th March 56 No. 89

Public Works 1856 Dept.
Cons 20th October 1857. U
No 2782

From the Chief Engineer
To the Secretary to Government
Rev Department

Dated 6th
Recd 9th Oct. 1856.

8 Enclosures Rec'd. 13/11/57

No 8662

No 72.

Forward for entry in the Budget of 1857/58 an Estimate of Rupees 18,770 — for constructing Bridges and Tunnels on the Road from Choolgy to Pulliykondah in the Bellary District.

cy 4/Nov/57 cro 6th/57

No 8932

Bellary District

Public Bridges.

Report on an Estimate prepared by the 1st Assistant Civil Engineer 3d Division Lieutenant Blagrave for constructing Bridges and Tunnels on the road from Choolgy to the Kurnool frontier.

The Estimate provides for.

1 Bridge of 1 Arch of 30 feet for a drainage Channel Rs	2700--
1 — Do — Do — do — for the Choolgy Maravah Vunkah	2700--
1 — Do — of 3 do — of 12 feet and 1 Tunnel of 4 vents of 6 feet for the Caradicondah Vunkah	1420--
1 Bridge of 1 Arch of 12 feet for the Bogumvaulli Vunkah	470--
1 — Do — of 2 do — of 12 feet for the Pothiabis de Vunkah	940--
1 — Do — of 5 do — of 8 feet for the Inuckara Vunkah	1040--
1 — Do — of — Do — do — for the Voolcavaloo Vunkah	1040--
1 — Do — of 2 — Do — of 20 feet for the Vaulaporam Pothoo Vunkah	2050--
1 — Do — of 7 do — of 8 feet for the Cuthala Nagoo	1730--
1 — Do — of 2 do — of 12 feet for a drainage Channel	940--
1 — Do — of 3 do — of 15 feet for the Curthummanan Nagoo	1600--
	16630--
Contingent Charges	513--
Superintendence	817--
Total Rupees	18260--

Eighteen thousand two hundred and Sixty.

The

And

1.- The road from Hurnool to Gooty was also one of those undertaken in the season of scarcity of 1834. and the Estimate for its construction formed item No. 120 of Statement No. 2 of the Budget for 1856/57.

2.- The Estimate now submitted provides for the Masonry works required on it, within the limits of the Bellary District, and which, as observed in para 3 of my report No. 8662 dated 6th December 1856, have been carefully designed by Lieutenant Blagrave.-

3.- The rates allowed for the work are moderate and sufficient, and the Estimate is recommended by the Chief Engineer for entry in the Budget of 1857/58.

Central Office of PWD
Fort St George
17 December 1856.

Lt Colonel
Chief Engineer

To
The Secretary to Government
P.W. Department

List of Enclosures

1 Letter from the Comb Engr 3rd Div dated 12th Decr/55 No 594 .. N1
1 Abstract Estimate N2
6 Plans ..... N3,4,5,6,7&8

Pub. Works. N 1836 Deptt.
Cons 20th Octr 1857.

No 2993

From the Chief Engineer
To the Secretary to Government
Rw Department

Dated 17th December 1836.
Read 19th

Enclosures 8. Read 13/11/57

No 8932

No 73.

Forwarded for entry in the Budget of 1837/58 an Estimate of Rupees 18263 for constructing Bridges and Tunnels on the road from Gooty to the Kurnool Frontier in the Bellary District.

Cy Mem Cto Octr/57

No 8932

Bellary District

Public Bridges

Report on an Estimate prepared by the 1st Assistant Civil Engineer 3d Division for constructing Bridges and Tunnels between Anloor and Kodamoor on the road from Bellary to Kurnool.

The Estimate provides for.

1 Bridge of 5 arches of 8 ft. span for the Eathala Vemkal	1040
1 Do. of 2 do. of 10 ft. do. for the Eathamanoor Vemkal	765
1 Do. of 3 do. of 12 ft. do. for the Bareeka Mo[illegible]	1040
1 do. of 3 do. of 6 ft. for the Cadega Vemkal	660
1 do. of 3 do. of 12 ft. for the Maricumah Goody Vemkal	1040
1 do. of 5 do. of 8 ft. for the Comtah Vemkal	1040
1 do. of 1 do. of 8 ft. for a drainage Channel	457
1 do. of 3 do. of 12 ft. for do. do.	1040
1 do. of 3 do. of 12 for the Lumkapah Coonta Vemkal	1040
1 do. of 7 do. of 12 ft. for the Bogapah Bogee Vemkal	2080
1 do. of 3 do. of 8 ft. for the Cummum Chanty Vemkal	1040
1 do. of 3 do. of 6 ft. for the Dahachamma Channy Vemkal	660
1 Tunnel of 9 Vents of 6 ft. span for the Reddy Cherroo Vemkal	1830
2 Bridges one of 7 and one of 5 arches of 20 ft. for the Hindree river	17020
1 do. of 3 do. of 20 ft. for the Cumydee Condah Bundal Vagos	2480
1 do. of 3 do. of 12 ft. for the Cathala Vagos	1040
1 do. of 1 do. of 12 for the Masapoor Vemkal	574
1 do. of 13 do. of 45 ft. for the Hindree river	39200
1 do. of 3 do. of 20 ft. for the Mum dicottah Vagos	2480
Carried over Rs	75746

And

Brought Over Rs 75746...
Contingent Charges ——— 3866-8..
Superintendence ——— 3787-8..
Total Rupees 83400...

Eighty three thousand and four hundred..

1.. The road from Aulloor to Kurnool was undertaken to give employment to the poor in the season of scarcity of 1834, and the Estimate now submitted provides for the Masonry work required to complete it within the limits of the Bellary District..

2.. The late Civil Engineer Captain Walker states in his letter No 584 dated 15 December 1835 that the Bridges have been designed by Lieutenant Blagrave "on a very careful consideration of the peculiarities of each Nullah and that the rates and amounts of the Estimates have been fixed as accurately as it is possible to do"..

3.. On the line from Bellary to Kurnool as also to Madaveram on the Hydrabad frontier Aulloor instead of Bellary was taken as the starting point, in consiquence of the intention of carrying the road from that place to cross the Huggry river in common with the Cuddapah and Bellary road and Trunk Road No 12. by a Bridge proposed to be constructed at Permadavenhully..

4.. The road from Aulloor to Kurnool formed Item No 119 in Statement No 2 of the Budget for 1836/57.- The Estimate on account of it and five other lines being entered at

at Rupees 107520.... Sanctioned by the Government of India on the 26 January 1835..

5.. It being very desirable to complete this among other important lines of communication in the Bellary District the Chief Engineer recommends the Estimate in which the rates allowed are moderate and sufficient for entry in the Budget of 1837/58..

Central Offices of C.E.W.C
Fort St George
17 December 1836.

W.L. Scott Colonel
Chief Engineer

To
The Secretary to Government
P.W. Department

List of Enclosures.
1 Letter from the Civil Engr 3rd Divn dated 15th Decr 1835 No 584 ---- 01
1 Abstract Estimate ---------- 02
11 Plans ---------- 03,4,5,6,7,8,9,10,11,12&13.

Brought Over Rs 75746...
Contingent Charges ——— 3866-8..
Superintendence ——— 3787-8..
Total Rupees 83400...

Eighty three thousand and four hundred..

1.. The road from Aulloor to Kurnool was undertaken to give employment to the poor in the season of scarcity of 1834, and the Estimate now submitted provides for the Masonry work required to complete it within the limits of the Bellary District..

2.. The late Civil Engineer Captain Walker states in his letter No 584 dated 15 December 1835 that the Bridges have been designed by Lieutenant Blagrave "on a very careful consideration of the peculiarities of each Nullah and that the rates and amounts of the Estimates have been fixed as accurately as it is possible to do"..

3.. On the line from Bellary to Kurnool as also to Madaveram on the Hydrabad frontier Aulloor instead of Bellary was taken as the starting point, in consiquence of the intention of carrying the road from that place to cross the Huggry river in common with the Cuddapah and Bellary road and Trunk Road No 12. by a Bridge proposed to be constructed at Permadavenhully..

4.. The road from Aulloor to Kurnool formed Item No 119 in Statement No 2 of the Budget for 1836/57.- The Estimate on account of it and five other lines being entered at

at Rupees 107520.... Sanctioned by the Government of India on the 26 January 1835..

5.. It being very desirable to complete this among other important lines of communication in the Bellary District the Chief Engineer recommends the Estimate in which the rates allowed are moderate and sufficient for entry in the Budget of 1837/58..

Central Offices of C.E.W.C
Fort St George
17 December 1836.

W.L. Scott Colonel
Chief Engineer

To
The Secretary to Government
P.W. Department

List of Enclosures.
1 Letter from the Civil Engr 3rd Divn dated 15th Decr 1835 No 584 ---- 01
1 Abstract Estimate ---------- 02
11 Plans ---------- 03,4,5,6,7,8,9,10,11,12&13.

Pub. Works Dept.

No 1962

Extract from the Minutes of Consultation

Under date the 20th October 1857.

Read the following Reports from the Chief Engr. (Vide entries T and U dated 6th Decr 1836 No 8662 and V and O dated 17th idem No 8932).

With these Reports the Chief Engr. forwards Estimates for constructing bridges and tunnels on the undermentioned roads in the Bellary District to which were undertaken during the season of 1854.

		Estimated Cost Rs
Anloor to	Madaveram	44,100
Shoshy to	Putty Kadah	18,770
Shoshy to	the Kurnool frontier	18,260
Anloor to	Kodamoor	83,400
	Total	1,64,530

The three first of the above roads are portions respectively of the lines from Bellary to Madaveram, Shosh to Adony and Shosh to Kurnool,

and

Pub. Works Dept.

No 1962. Dated 17th December 1836.

Read 19th December 1836.

Enclosures 13. Returned 13/11/57

No 8932

No 1962. 20th October

Forwards for entry in the Budget of 1837/58 an Estimate of Rupees 83,400. for constructing Bridges and Tunnels between Anloor and Kodamoor on the road from Bellary to Kurnool in the Bellary District

0
0

1574.

Pub. Works Dept. 1836 Septr.
Comr 20th Octr 57.
No 2994

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

Dated 17th December 1836.
Read 19th December 1836.

Enclosures 13. Returned 13/11/57

No 8932

No 1962. 20th October

Forwards for entry in the Budget of 1837/58 an Estimate of Rupees 83,400. for constructing Bridges and Tunnels between Anloor and Kodamoor on the road from Bellary to Kurnool in the Bellary District

0
0

1574.

R 13 Jany 54 Nos 39-40

29 Annx C10 C8

and it is observed from the Budgets of 1854/55 and 1855/56 that a sum of Rs 107520 has already received the sanction of the Govt of India for completing those lines with that from Anbore to Kodamoor above referred to and one other; as also for "providing the necessary drains and bridges." The Govt therefore request the Chief Engr will report the nature and amount of the provision thus made for masonry work on the four lines in question; and he will also explain the circumstances which have led to a second application being now submitted for the large outlay of Rs 164530 apparently for the same work. Col Baker will further ascertain and report the amount spent in the original formation of these four roads, as also

*Statement No 1 Dumbo 17.
do " 2 do - 60.

* Encl 10 Feby 1855 No 66

also the outlay incurred under the sanction of the Govt of India above referred to.

The portion of the roads from Anbore to Bellary and from Cuttykondah to Addoy, it is observed are not provided with any masonry works in the Estimates forwarded, with the Reports Y and U, nor is any provision for the portion of the road from Sholy to Kurnool within the limits of the Kurnool Dist; that sent with Report V being only for the portion in the Bellary Dist. In respect to the first of these roads, the first observe from para 3 of the Chief Engrs Report O, that its original line is to be abandoned, and the road connected with the Bellary and Cuddapah line and Trunk Road No 12, in order that the Bridge proposed to be constructed over the

Huggry

Huggry at Permadavenhully
may ~~might~~ answer for all three
Communications. An Esto.
mate for this connecting line
does not appear to have
been as yet submitted and
the Govt are of opinion that
provision for it should properly
be made in the Estimate for-
warded with the Report I. As
regards the two other portions
of roads referred to above,
viz from Puttyknidah to Adony,
and the road from Shoorg to
Kurnool within the limits
of the Kurnool Dist, it is observed
that Estimates for bridging these
Communications were forwarded
with the Chief Engrs Reports 11
and 66 dated 26 Jany 1856, but
these having been returned with
many letters with Chief. dated 10th
March 1856 No 362, do not appear
to have been resubmitted. If
considered unobjectionable, they
should respectively be incorpora-
-ted with the Estimates sent
with the present Reports IV and V.
The three Estimates here
noticed will therefore be
returned to the
Chief

Chief Engineer in order
to ~~revised~~ estimates being pre-
pared in conformity with
the views of Govt as above
expressed. These Estimates
as well as that for the
Cudoor and Nidamoor road,
which also will be re-
turned to the Chief Engr,
should be drawn up
according to the form
laid down in Appendix
E 1, of the second Report
of the Madras P.W. Com-
Commissioners, and
submitted for the consi-
deration of Govt with
full information on
the several points no-
ticed in this order.

Dispatch

9 Copies to the Chief Engr.

Public Works 1857 Dep.t
Cons: 20th October.

No. 1962.

Extract Mins of Cons:
Of 20th October 57.
From the Offg Chief Engr 21st Oct.
1581 2513 in Cons 23 Inst

Calling upon the Chief Engr to report the amount spent in the original formation of certain lines of roads in the Ballarat District, and also to explain the circumstances which have led to a second applic=cation for £1,164.535, ap=parently for the same works.

No 1 at 7/-

C20