

A.S.O. B.376
SELECTIONS

FROM

THE RECORDS

OF

THE MADRAS GOVERNMENT.

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No. VI.

GENERAL REPORT

OF

THE ROAD DEPARTMENT.

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1853-54

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1854



GENERAL REPORT

OF

THE ROAD DEPARTMENT,

TO THE 1ST MAY, 1854.

1. Since the transmission of my General Report on the operations of the Road Department to the 1st May 1853, some changes having taken place among the Assistants and Overseers, I proceed to notice them before detailing the progress of works made on the several Trunk Lines during the past official year.

2. Lieutenant Forlong's services having been called for by the Supreme Government for employment in Burmah, that Officer, who had been absent from the Department since September 1852, finally quitted it in December 1853, when Lieutenant Chauncy was permanently appointed to succeed him. Lieutenant Francis having applied for the Quarter-mastership of his Regiment, his services were placed at the disposal of His Excellency the Commander in Chief for Regimental duty, and on his leaving the Department in October 1853, Lieutenant Tireman took temporary charge of his office.

3. Captain Heathorn who had been absent on medical certificate since April 1852, returned to the country in April 54, and was reappointed to the Department, on the 12th; on the 18th of the same month Lieutenants Tireman, and Magrath, were removed to the Commissariat Department.

4. Mr. Addis having given great satisfaction while employed in assisting Lieutenant Chauncy, his qualifications to undertake an independent charge were duly reported to Government, and on the 27th September 1853, he was appointed an Assistant in the Department. Lieutenant Barber of the 33d Regiment Native Infantry, was appointed an Assistant of the Northern Trunk Road No. 6, and joined on the 28th February.

5. The changes among the Overseers have been as follows:

Overseer Downes appointed to the Revenue Department—Johnson, and Lawrence, dismissed for ill conduct, and McCarthy removed on account of ill health; Serjeant Johnston of the Artillery who had been lately appointed, died

of Cholera at Vellore on the 8th April, and on the 25th April, Corporal Brown of the Sappers and Miners, one of the best and most experienced Overseers in the Department, died at Carangooly.

The additional Overseers appointed are Kelly—Lever—Setkirk—Maenamarra—Catchpole—Keenan—Hines, and King.

6. In noticing the works executed on Estimates in force prior to the 1st May 1853, I shall omit particularizing the Minutes of Consultation sanctioning them, as the numbers, and dates, were all entered in the last Report, but merely refer to the amounts, and distinguishing letters.

NO. 1, TRUNK ROAD.

From Madras to the Mysore frontier beyond Oossoor, 189½ miles.

7. The balance of Estimate (J.) of Rupees 1,16,543-3, for repairs from Madras to the 129th mile, has been expended, and a good coating of metal placed on the road throughout, though from the failure of the rains during the last monsoon, the rollers were not sufficiently worked to consolidate it properly.

8. Parts of this road, and indeed nearly the entire distance from Streepmatoor to Wocherry, or between the 27th and 60th miles, was almost impassable for wheeled Conveyances after hard rain for 2 or 3 days. Even now from the impossibility of keeping the substratum in some places sufficiently dry, a slight subsidence occasionally takes place, and the road surface, though hard and passable in all weathers for quick traffic, becomes in consequence uneven, and requires the greatest attention to preserve its section.

9. Only 6 yards in width of metalling being allowed, and the bandy traffic which is extremely heavy, following in the same tracks on the sides of the road, ruts are quickly formed: on these being filled up with the reserve material carted for the annual repairs, the bandy-men, not liking to drive their bullocks over the rough stones, then take the centre of the road, especially during the nights when people are not on the alert to turn them off, and thus cut up the portion intended for quick traffic, which might otherwise, at all times be kept in good order. The result is that great complaints are made of the rough state of the surface, nor can I see any remedy for it, except that of allowing a greater width of metalling.

10. I am of opinion, taking generally, from the experience I have now had, that an increased width of metalling, even to the extent of 10 yards, where the traffic is so incessant as on this line, would be attended with great advantage, as always allowing a good surface to be preserved, without much, if, any additional cost eventually. The first outlay on this account would be considerable, but would not I conceive, exceed what would be required from

to keep up the condition of the narrower road. In the case however of the Western line I do not recommend such an outlay, as the Railway completed, will doubtless relieve it from a very great portion of the traffic.

From the repairs executed on the (J.) Estimate, the road, though that rough as before stated, is now in much better order than it ever has been, and I consider that the present annual Estimate will be sufficient to cover ordinary repairs, and to recoat occasionally those portions, which from the substratum being bad, are likely to get broken up.

12. During the past year, in the expenditure of the annual allowance (H.) of Rupees 39,178-11-0, great judgment has been exercised by Lieutenant Chauncy, ruts having been filled up as soon as formed, so that the proper transverse section of the road has seldom been lost, the drainage attended to, and the heaps of reserve material carefully distributed, where most required. Excepting where good granite has been procurable, experience has shewn that the other descriptions of stone used, such as sand-stone, and inferior granites, are not much stronger than laterite, and the latter from binding better, generally offers the best surface. The good granite, though undoubtedly a harder material, does not bind well, and from working loose in the dry weather, causes so much jolting to the traffic, that it tends very much to break up the surface of the road, and this being the case, I doubt whether it will be found in the end, to be better, or even more durable than laterite.

13. The quarry roads on Estimate (Q.) of Rupees 3,100, have been nearly completed, having been delayed in some instances, where cultivation had been carried on before the ground was made over to the Road Department. The advantages I anticipated in the construction of these roads are likely to be fully realized, as the carts will now have access to the Trunk Road at all seasons, and to travel over in the aggregate, summing up the distances of the several quarries, 62 miles, instead of as formerly some 90 or 100. The result being, from a calculation of the cost of cartage from the respective quarries, that for the same outlay, 32 per cent more material will now be carted to the road than formerly.

14. On the completion of these branch roads, I propose having the several surveys, which are now with the Overseers, plotted on one map, to shew their relative bearings to the Trunk Line, then it will be seen how far, by extending them, they are likely to be useful as feeder roads, and eventually they may be turned to account as feeders to the Railway.

15. On Estimate (A.) of Rupees 45,009-12-6, for improvements from the 129th mile to the Mysore frontier in the 193d mile, great progress has

been made, and the masonry works nearly completed during 1

The Kullaur	bridge of 1 arch of 15 yards s.
„ Nautrapilly	do. of 3 do. of 10 do.
„ Burgoor Malapaudy.	do. of 3 do. of 10 do.
„ Condacoopum	do. of 3 do. of 5 do.
and „ Cocroobahully	do. of 3 do. of 16 do.

The Neycoondy bridge of 4 arches of 8 yards span, has been open to traffic, and nearly all the tunnels and road-dams finished.

16. The road throughout this distance has been greatly improved by widening and raising over swampy ground, and by substituting road-dams, and tunnels, for the numerous paved inverted arches, which from their rough surfaces and steepness, offered great obstruction to the traffic. Further particulars of improvements which have been effected, were entered in my Report for the month of August.

17. An Estimate of Rupees 6,655-8-6, was sanctioned in Minutes of Consultation, No. 80, dated 24th February 1854, for the annual repairs of this portion of the road, to take effect from the commencement of the ensuing fiscal year.

18. On Estimates 1 (L.) and 5 (C.) of Rupees 3,400, and Rupees 5,600, respectively, which received sanction in Minutes of Consultation, No. 217, dated 26th October 1849, repairs have been executed from time to time in the Blem district, under the supervision of the local Tasildars, and on Estimate 3.) of Rupees 959-10-0 for widening the Beganhully tank bund, the work was done under the immediate directions of Mr. Phillips, the late Collector, at cost of Rupees 602-6-6.

19. Abstract of Estimates on No. 1 road.

	Rs.	A.	P.
Current Estimates	205,215	13	6
Adjusted do.	395,436	12	7
Total Estimates to 1st May 1854	600,652	10	1
Do. to 1st May 1853	540,759	13	2
Additional do. for 1853-54	59,892	12	11

Particulars of additional Estimates.

Annual Estimate (for 1853-54 H ^o)	39,178	11	0
Additional do. for 1851-52-53	29,714	1	11
Sanctioned in Minutes of Consultation, No. 271, dated 18th July 1851	59,892	12	11

“No. 2, TRUNK ROAD.”

From Frazerpett via the Sumpagee Ghaut, to Mangalore, 105 Miles.

20. The Feringypett bridge of one 15 yard arch noticed in my last Report as being under construction, was opened to traffic on the 7th July, its total cost including the rebuilding of the arch, was Rupees 5,620-3-9, being the amount of the original Estimate. The bridge has now been tried severely and received no injury. On the day it was opened to traffic, the water in the nullah was 18½ feet deep, or within 3 inches of the crown of the arch, and Mr. Maltby subsequently informed me that it had stood against the highest floods known for years.

21. In consequence of some dispute about the water course of the Huntiaur nullah, which has been referred to the Revenue authorities, the building of the bridge over this stream, on an Estimate of Rupees 1,455-1-0, has in accordance with the Collector's wish, been postponed till next year. In the mean time, to prevent the public from being subjected to inconvenience, a temporary timber platform has been erected.

22. On the 6th December, I submitted to Government an extract from a letter from Overseer Graham, in charge of Trunk Road No. 2, stating his opinion that the annual allowance of Rupees 50 per mile, was insufficient for the proper repairs of the Sumpagee ghaut and road, from Frazerpett to Buntwall, and that the line generally during the late severe south west monsoon, had sustained much more than the usual amount of injury. The opinion of the Overseer being supported by the Collector of Canara, and Superintendent of Coorg, and in consideration of the increasing traffic on this important line of communication, consequent upon the establishment of Salt Cotays at Pani Mangalore, Government were pleased to sanction an allowance of Rupees 100 per mile, the increased Estimate of Rupees 10,525-0-0, to take effect from the commencement of 1854-5.

23. Abstract of Estimates on No. 2 road.

	Rs.	A.	P.
Current Estimates	7,117	9	0
Adjusted do.	46,914	7	0
Total Estimates to 1st May 1854	54,032	0	0
Do. to do. 1853	48,569	8	0
Additional Estimate for 1853-54	5,462	8	0

Particulars of additional Estimates.

Annual Estimate for 1853-54 A ⁸	5,262	8	0
Do. do. R ²	200	0	0
	<u>5,462</u>	<u>8</u>	<u>0</u>

"No. 3, TRUNK ROAD."

From the North Western frontier of Mysore, via the Munzerabad Ghaut to Buntwall, 46 Miles.

24. The first work to notice on this road, is the Conchicar Cootle bridge of one arch of 49 feet span, the rebuilding of which was postponed until the Feringypett one had been tested. The original bridge was built at the head of the nullah which flows into the large Natravaty river, and the site was subsequently condemned by Lieutenant Walker, who selected one higher up the stream, where the bed is narrower, and the soil good for foundations, Overseer Graham reports that the bridge is now nearly completed, as also the construction of the new portion of road (on Estimate (C.) of Rupees 3,305-11-10), from Mangalore to Buntwall, between the 15th and 18th miles.

25. The annual repairs to the Munzerabad Ghaut, and the construction of bridges in the Canara District, have, as stated in my last Report, been conducted under the orders of the Board of Revenue, Department of Public Works; as also the annual repairs of the branch road from Oopinungaddy to Pootoor.

26. On the 11th June two projects were submitted to Government for the extension of the Munzerabad road towards Buntwall; one for converting into a first class road, the track now followed by bullocks from Oopinungaddy by Sirpandy to Buntwall, and the other to connect Oopinungaddy with the Sumpagee line at, or near Mauny.

27. On consideration of the reports from Mr. Maltby, Major's Green and Henderson, and Lieutenants Walker and Roberts, which accompanied these projects, preference was given to the latter as the line of Trunk Road, and a sum of Rupees 9,900-0-02 sanctioned for its construction in part, leaving the Estimates and plans to be completed at a future time, when an Engineer Officer may be available for the duty.

28. A sum of Rupees 8,081-0-0 was sanctioned at the same time for opening a 2d class road direct to Buntwall from Oopinungaddy on the first line proposed, the expenditure to be charged to the Public Works Department.

¹ The size of the arch being reduced to 24 feet.

² Minutes of Consultation, No. 277, 23d July 1853.

The works on the first of these Estimates have been undertaken by the Collector of Canara, under the superintendence of Mr. Huddleston, and 2½ miles of road formed. The expenditure to the 30th April having been Rupees 1,518-7-3, on the second Estimate no work has yet been commenced.

29. On Estimate (A⁸) of Rupees 13,589-13-7, for constructing bridges in the Canara District, Rupees 5,161-2-5, only were expended, under the directions of Lieutenant Roberts, when an Assistant Civil Engineer in the 3d Division, the works since the departure of that Officer having been suspended for want of efficient superintendence.

30. Mr. Maltby now suggests, in the event of no qualified Officer being available for these works, that Overseer Graham should be placed in charge of them, as well as of those on Estimate (E.1) another Overseer being appointed, to the Sumpagee line, this arrangement I shall be able to make on Corporal Campbell of the Sappers and Miners, (whose services Lieutenant Carpendale the Commanding Officer of the Corps, informs me will shortly be available,) being attached to my Department.

31. Abstract of Estimates on No. 3 road.

	Rs.	A.	P.
Current Estimates.....	31,705	6	5
Adjusted do.	13,277	0	0
Total Estimates to 1st May 1854.....	44,982	6	5
Do. do. 1853.....	27,872	9	5
Additional Estimates for 1853-54.....	17,109	13	0

Particulars of additional Estimates.

Annual Estimates for 1851-52 and 1852-53, not included in the last Statement no ac- counts having been received B ²⁻³	2,300	0	0
Annual Estimate for 1853-54, B ¹	1,150	0	0
Vide Statement No. 4, E.....	9,900	0	0
Sanctioned in the Revenue Department in 1845-46, and work now undertaken by Road Department G.....	3,759	13	0
	<u>17,109</u>	<u>13</u>	<u>0</u>

¹ Vide Statement No. 4.

"No. 4, TRUNK ROAD."

*From the Mysore frontier, via the Perambaddy Ghaut to Cannanore,
68 Miles.*

32. Plans and Estimates prepared by Captain Ludlow, Civil Engineer of the 7th Division, for the improvements of the Perambaddy Ghaut and road, together with an extract from that Officer's Diary for the month of June 1853, were submitted to Government on the 25th October. The Estimates amounting in the aggregate to Rupees 13,131-7-10, received sanction in Minutes of Consultation, No. 426, dated 2d December 1853, and were—

For metalling and draining certain portions of the Ghaut and road 11,024 10 11

For reconstructing two small bridges near Codally 2,109 7 11

And for building a truss bridge across the Oorettee Todu, near the foot of the Ghaut..... 1,395 10 0

Rupees... 14,529 12 10

from this deducting Rupees 1,398-15-0, previously sanctioned for a masonry bridge over the Oorettee Todu, gives the sum before shewn.

33. On the above Estimates Assistant Overseer Church reports, that, the side drains have been cut to some extent; of the Codally bridges, the abutments and piers of one of 3 arches of 15 feet span have been completed, and the other of 3 arches of 10 feet span, finished with the exception of the parapet walls. From the difficulty of procuring work people and materials, the truss bridge will not be completed till next season, but this is not a matter of consequence, as there is a good temporary bridge over the stream.

34. On the representation of Captain Ludlow the annual allowance for the repairs of this Ghaut and road was doubled, being now Rupees 6,800, which allows Rupees 100, per mile. In concluding his Report, Captain Ludlow states that the large Oorettee river is the only one which requires bridging to complete this line of communication, and "as it is liable during the monsoon to excessive floods, the stream at times being upwards of 350 feet broad, and "35 feet deep in parts," he recommends the construction of either a truss, or lattice bridge to consist of three bays of 100 feet each, and to be raised above the highest water mark. Captain Ludlow has taken the necessary sections, and promises to forward a plan and Estimate of the description of bridge he considers best adapted for crossing this river.

35. Abstract of Estimates on No. 4 road.

	Rs.	A.	P.
Current Estimates	20,436	2	0
Adjusted do.	200,385	6	4
Total do. to 1st May 1854.....	220,821	8	4
Do. to do 1853.....	201,774	5	0
Additional do. for 1853-54.....	19,047	3	4

Particulars of additional Estimates.

Annual for 1853-54 B ^c	6,800	0	0
Vide Statement No. 5 D	11,733	2	10
Recovered by sale of tools	514	0	6
Rupees... 19,047	3	4	

"No. 5, TRUNK ROAD."

From near Vaniembaddy on Trunk Road No. 1, to Ponany on the Western Coast, 279 Miles.

36. The works provided for in Estimate (II.) of Rupees 12,328-13-0, for improvements between Waliaur and Ponany 70 miles, have nearly all been completed, and the expenditure to the 30th April has been Rupees 11,233-0-2; Regarding this portion of the road Mr. Knox the Sub Collector of Malabar, wrote in February last.

37. "It is satisfactory to be able to state that this Trunk Road No. 5, is "in excellent condition, considering the peculiarly severe trial it is exposed to, "from the increasing number of carts, whose wheels cut as ploughs, against "the action of which the best jelly procurable offers little resistance. A "system of constant attention to small repairs is being introduced, and except- "ing in a few places, which have not yet been made smooth and over the river "at Tiriala, where a bridge is sadly wanted, a Gentleman's carriage can be "safely and speedily driven from Waliaur to Ponany in dry weather, and it is "hoped in the course of 1854, to be able to apply the funds, which have "hitherto been taken up considerably for small bridges, and water-ways, and "cuttings, to placing a very large amount of jelly on the road.

38. Mr. Thomas the Collector of Coimbatore, referring to the portion between that town and Waliaur states: "Though still susceptible of much "improvement, as every new road (through a bad black soil, a heavy jungle, "and the full force of the south west monsoon must be) is in very fair order. "Where bandies 2 years ago as I know from personal observation, got over 5 "miles per day, with excessive toil, difficulty, and breakage, they now with "heavier loads accomplish 16—and the rate of hire, the best test, is considera- "bly reduced."

39. "The first 9 miles out of Coimbatore are of better soil, and the road consequently easier of repair, the other 7, towards Waliaur are of the worst description, with no gravel or metal near. This has to be dug from a great depth, or carried for several miles. One good coat has been laid on, this will of course work into the black soil, and another be required, for which the annual Estimate will provide, and in one or two years, I have every hope of seeing this line, even in the wet season, a good and trafficable road. My own best endeavours will not be wanting to effect it."

40. Of the portion between Vaniembaddy and Bowany, I submitted a detailed Report to Government in January last, both by the Topoor and Munjewaddy lines, but it having been decided that no large amount of expenditure is to be incurred in the improvement of either, in consequence of the Railway, now in course of construction, taking an intermediate line between the two, I have addressed a letter ¹ to Mr. Brett the Collector of Salem, requesting him, with reference to a Report from Major Pears, Consulting Engineer for Railways, to favor me with his views as to their relative value to the district, when I propose recommending for sanction an annual allowance for the maintenance of whichever line may be considered the most important.

41. On Estimate (J.²) of Rupees 13,066-10-2 for the construction of the road between Palghaut and Mengara, 12½ miles, Rupees 12,416-3-1 have been expended, leaving a balance of Rupees 650-7-3, and Mr. Knox writes that: "The entire amount would have been expended, had not the total failure of the north-east monsoon in October, rendered the ground so hard, and water so scarce, that the price of raising jelly would have been doubled, and it would not have been as firmly spread. The road has been open for 6 months, and is in very fair order."

42. The Wottapollium bridge of 3 arches of 10 yards span, on Estimate (W.) of Rupees 4,781-10-9, will be completed in June next, and the enlarging of the Marroda bridge on Estimate (N.) of Rupees 653-15-5 in the course of the year.

43. Two bills referred to in my last Report as not having been received, have since been forwarded to my office, one of Rupees 6,518-0-4 for constructing the Nurgumpully bridge of 5 arches of 12 yards span, being Rupees 614-6-10 in excess of the Estimate, and the other of Rupees 33,698-11-9, for rebuilding the bridge of 26 arches of 47½ feet span over the Cauvery river at Bowany, being Rupees 15,090-15-3 less than the Estimate. The delay in the completion of this last bill, Captain Ouchterlony states to have been "in consequence of a sum due from the sale of surplus materials, not having been brought to the credit of the amount of expenditure."

¹ Since submitted to Government.

44. In a final Report on the Bowany bridge, Captain Smythe, the late Civil Engineer of the division, merely states that all the work has been done in a very satisfactory manner, but that, "the plan of ornamental parapet wall, recommended by late Superintendent of Roads, was found to be too intricate, and more costly than the Estimate permitted. Ovals 2' 7", in height, by 6" in width have been substituted, and produce a much lighter structure, with "freer ventilation, than a plain wall would afford."

45. The several Estimates (five in number) amounting in the aggregate to Rupees 13,746-12-9, for repairs between Perindoray and Bowany, Coimbatore and Avanashy, (metalling the same) and for repairing the Chinna Nowkurray bridge, and Muddakary road dam, have been placed at the disposal of the Collector of Coimbatore, and the greater portion of the works, I believe, executed, though no final report has yet been received in my office.

46. The Estimates sanctioned during the year are:

Rupees 2,200-0-0, ¹ for repairing 40 miles of road between Coimbatore and Bowany, from Cauncyoor to Chettode.
Rupees 653-15-0, ² for enlarging the Marroda bridge.
Rupees 131-11-6, ³ and:
Rupees 121, ⁴ for emergent repairs between Avanashy and Perindoray, and Rupees 615-0-0, ⁵ for additional metal between Coimbatore and Tennempolliem.

47. Abstract of Estimates on No. 5, road.

Current Estimates	126,566	13	10
Adjusted Do.	62,372	1	11
Total Estimates to 1st May 1854	188,938	15	9
Do. to do. 1853	175,375	13	3
Additional do. for 1853-54	13,563	2	6

Particulars of additional Estimates.

Annual for 1853-54	7,100	0	0
Do. for 1852-53 and 53-54	2,741	8	0
Vide Statement No. 6, L.	2,200	0	0
Do. N.	653	15	0
Do. Q.	252	11	6
Do. Y.	615	0	0
	13,563	2	6

1. Minutes of Consultation, No. 267, 11th July 1853. 3.4. Minutes of Consultation, No. 104, 5th November 1853.
2. Do. No. 373, 3d October 1853. 5. Do. No. 121, 14th March 1854.

"No. 6, TRUNK ROAD."

From Madras to the Bengal Frontier, 686½ Miles.

48. Of the works in progress on this road as entered in my last General Report—the following have been completed :

A bridge of 9 arches of 10 yards span over the Bimlipatam river.

Repairs between Senkaram and Ankapilly, 12 miles.

Do. do. Senkaram and Soobaram, 12 miles.

A bridge of 3 arches of 10 yards span, at the approach to the Bimlipatam river bridge—and

Repairs between Yellamanchelly and Cassimcottah, 12 miles.

49. The earth-work and metalling repairs between Yellamanchelly and Toonee, 25½ miles, have been completed with the exception of about 4 miles, and of the smaller masonry works, 6 tunnels of 1 yard span each, remain to be built—of the two bridges, each of 10 arches of 10 yards span over the Ankapilly and Toonee rivers, the former is finished with the exception of the parapet walls, and of the latter, the foundations of one abutment, and three piers have been laid.

50. In forwarding a progress Report of these works, Lieutenant Randall states that the accounts of expenditure have not yet been fully prepared, but that they will be furnished as soon as all necessary particulars are received, from the different Superintendents.

51. The Estimates sanctioned during the year are :

Rupees 1,456-0-0,¹ for constructing a cross road to the Palwa Chuttrum bungalow, which will shortly be completed.

Rupees 4,486-7-0,² for repairs to the portion of road between Rajah Nagarum and Durmaverum, in the Rajahmundry district.

Rupees 12,127-5-0,³ do. do. from Dunda Gedda near Itchapore, to the Hoomah Causeway ; of which work has been carried out, to the extent of about Rupees 3,000.

Rupees 27,439-11-8,⁴ for masonry works between do. do.

Rupees 1,200-0-0,⁵ additional annual Estimate between do. do.

Rupees 29,285-2-10,⁶ for constructing a bridge of 25 arches of 12 yards span, over the Naugoolia river at the town of Chicacole.

Rupees 10,000-0-0,⁷ in advance, for constructing in part the portion of new road between Covoar and the Moodegunda river, 3 miles north of Ongole.

1. Minutes of Consultation, No. 185, 18th May 1853.

2. Do. No. 388, 21st October 1853.

3. Do. No. 397, 3d November 1853.

4. Do. No. 397, 3d November 1853.

5. Minutes of Consultation, No. 397, 3d November 1853.

6. Do. No. 57, 7th February 1854.

7. Do. No. 61, 9th February 1854.

Rupees 68-13-8,¹ for repairing a plat-form bridge at Coorgoota, in the Guntoor district.

Rupees 15,709-9-6,² for earth-work and metalling from Soobaram to the Bimlipatam bridge.

Rupees 75,263-14-0,³ for earth-work from the Bimlipatam bridge to Itchapore, in advance, at Rupees 500 per mile—and

Rupees 68,812-13-9,⁴ for constructing portions of road between Goomidipoondy and Coorreliaur.

52. Captain Best in his General Report to the 1st October 1848, with reference to an Estimate then preparing for the portion of the road from Madras to Goomidipoondy, states in para 39 : "It is very much required—the present track being, during the monsoon, difficult even for foot passengers, and all but impassable for carts, which have been detained for 10 days or more, in attempting to move as many miles."

53. Again in para 41, mention is made of the difficult nature of the ground north of the Red Hills, and of the necessity of embanking the Ponairi river, to protect the road from its inundations, of building a bridge for this river, and providing a ferry boat for the Coorreliaur.

54. The first of these works has been carried out, the Ponairi bridge of 9 arches of 12 yards span nearly completed, a ferry boat provided for the Coorreliaur, smaller bridges, tunnels, and road dams have been built where required, and the road, which has been metalled throughout the distance, is now in first rate order.

55. The Estimate of Rupees 68,812-13-9, provides for completing the line from Madras to Covoar, 6 miles north of Nellore, between Goomidipoondy and the 7th mile, or 3 miles south of Sooborpett, leaving one mile of the Pungaradee back-water, as explained to Government in my Report for the month of March, for further consideration, up to the present time, improvements to this portion of the road have been made as far as possible, by straightening it, and putting it into section, but from being, with the exception of the back-water (and 1½ miles of raised metalled road, in excellent order near Bodelingampudi) sandy, and passable in all weathers, its final completion was postponed, until other more serious obstacles to traffic were first overcome.

56. From the 47th mile to Goodoor, very great improvements are in progress on the Estimates (G & R.) of Rupees 94,332-5-5, and as mentioned in my Report for the month of January, the alteration in the course of the

1. Minutes of Consultation, No. 151, 30th March 1854.

2. Do. No. 160, 10th April 1854.

3. Minutes of Consultation, No. 160, 10th April 1854.

4. Do. No. 197, 27th April 1854.

Kuntair river having been completed, on the construction of the head sluice to regulate the supply of water from that river to the Ootookalvah channel, this portion of the road, which in each succeeding monsoon has suffered much, will I have every reason to suppose be safe from further inundations.

57. By the end of the present season the Ootookalvah, and Woojolly head sluices will be completed, as also the abutments, wing-walls, and pier of the Pamia Kalvah, Kalinga Nudda, and Maumadi Kalva bridges, leaving the arches to be turned after the next monsoon.

58. All the raised portions of the road have been most carefully attended to—the side-slopes turfed, and the wing-walls of the several bridges and inverted arches carefully banked up, and I am happy to observe that during the last monsoon, not a single breach occurred in any part of the line, though I am not prepared to say, that such would not have happened, had the embankments been exposed to the same violent floods as during the monsoon of 52, however, the general improvements made during the last year are very marked, and reflect great credit on Lieutenant Marshall, and the Overseers under his orders, but more especially on Overseer Goodchap, who from longer experience in the Department, has been able to render more valuable assistance.

59. Abstract of Estimates on No. 6, road.

	Rs.	A.	P.
Current Estimates.....	516,563	5	8
Adjusted do.	90,524	4	2
Total Estimates to 1st May 1854.....	607,087	9	10
Do. to do. 1853.....	343,961	9	3
Additional do. for 1853-54.....	263,126	0	7

Particulars of additional Estimates.

Annual for 1853-54. A ^s	5,760	0	0
Do. D G ^r	3,600	0	0
Do. 2 R ^s	2,974	0	0
Do. 2 R ^s	3,210	0	0
Compensation for land.....	2,931	5	11
Vide Statement, No. 7—R.....	1,456	13	3
Do. O.....	4,486	7	0
Do. V.....	39,567	0	8
Do. Q.....	29,285	2	10
Do. W.....	10,000	0	0
Do. X.....	68	13	8
Do. Z.....	15,709	0	6
Do. H ^s	75,263	14	0
Do. H ^s	68,812	13	9
Rupees... ..	263,126	0	7

"No. 7, TRUNK ROAD."

From near Ongole on Trunk Road, No. 6, to the Hyderabad frontier at Pondigul on the South bank of the Kistna, 91 Miles.

60. In the month of February I inspected the country, through which it is proposed to carry Trunk Road No. 7, diverging from No. 6 at the Moodigunda river 2 miles north of Ongole, and extending to the Hyderabad frontier. The Estimates¹ for this road are now in course of preparation, and will shortly be submitted to Government.

61. As far as Datchapilly, 7½ miles south of the Kistna, as mentioned in my Report for the month of February, there is nothing in very dry weather to interrupt traffic, but in consequence of the rock in the vicinity of this village, and extending for three miles north of it; it is almost impossible for bandies to pass without some accident. In wet weather, from the nature of the soil generally, the road throughout may be said to be impracticable for wheeled conveyances, and almost so for travellers on horseback after a few days of continued rain.

62. At present therefore, between Ongole and the Kistna there is little or no traffic, but as stated by Captain Best, "the road is of importance as being on the route by which troops march from Madras to Hyderabad," and the greater portion of the road through the Nizam's country being in good order, there is reason to suppose that, if that to the south of the Kistna were properly constructed, there would in the course of time be a considerable amount of traffic—I am informed that great numbers of bandies from Hyderabad and the country round, travel south towards Pondigul nearly as far as the Kistna, when they turn off to the eastward, and cross the river as low down as Beirwarrah, to take advantage of the road leading south through Guntour. (Trunk Road, No. 6.)

"No. 8, TRUNK ROAD."

From Madras to Trichinopoly and the Salem boundary, 225 Miles.

63. Of the works in progress on this road, the bridge of 5 arches of 10 yards span, over the Chinnaur river, which was partially destroyed by a sudden fresh in the month of March 1853, before the centlings were removed, has been rebuilt: as also the 22 arches of the bridge (38 arches of 20 yards span) over the Coleroon river near Trichinopoly, on the Estimate of Rupees 42,099-5-9. The total saving on the Estimates for this bridge, amounting together to Rupees 152,538-0-9, has been Rupees 1,666-13-3, the work having been superintended by Major Lawford, Civil Engineer of the 6th

1. Rupees 1,34,020-12-0, have since been sanctioned.

Division. The embanking of the Gopaur river near Semiavaram, on the Estimate of Rupees 378-11-0, has also been carried out by the same Officer for the amount sanctioned.

64. Of the road between Semiavaram and Oolundoorpett, 65 miles, Lieutenant Tireman reports that the embankments with tunnels and road dams have been completed throughout, as also the bridges enumerated in my last General Report, with the exception of those over the Yeringee and Chepaukum rivers, the former of 8, and the latter of 7 arches, each of 10 yards span—for these bridges the abutments, wing-walls and piers, have been built, and for several miles a surface of pit-soil, stone, or gravel, has been placed on the road.

65. Between Oolundoorpett and Vickravandy, there remains 38½ the rebuilding of the Vickravandy bridge of 5 arches of 8 yards span, the building of the Allungal tunnel of five 2 yard vents and the metalling of some portions to complete the distance, 30 miles, and I shall hope by June 1853, to see the entire line from the Presidency to Trichinopoly open for quick traffic.

66. From Vickravandy to Chingleput the line generally is in excellent order, but from the latter place to Palaveram, where the traffic is very heavy the surface in some few miles is much worn, and will require in the course of next year to be remetalled. The preparation of bricks and chunam for the Palaur Causeway has been much delayed from the difficulty of procuring firewood, there being no jungles near, and the sinking of wells for the foundation will not in consequence, be commenced till next year.

67. The Estimates sanctioned during the year are :
Rupees 5,825-10-0,¹ for repairing, damages, &c., between the Palaur river and Vickravandy.

Rupees 2,000-6-0,² for building and rebuilding tunnels.

Rupees 4,903-7-0,³ for rebuilding the Vickravandy bridge.

Rupees 3,117-10-0,⁴ for do. the Chinnaur do.

Rupees 1,000-0-0,⁵ for extending and renewing rough stone flooring to the Cauvery bridge.

Rupees 400-12-0,⁶ for throwing out a rough stone groin on the north bank of the Cauvery river above the bridge—and

Rupees 850-0-0, were sanctioned in Minutes of Consultation, No. 161, dated 10th April 1854, for repairs between Semiavaram and Trichinopoly during 1854-55.

1. Minutes of Consultation, No. 248, 29th June 1853.

2. Do. No. 248, 29th June 1853.

3. Do. No. 284, 25th July 1853.

4. Minutes of Consultation, No. 284, 25th July 1853.

5. Do. No. 350, 8th September 1853.

6. Do. do. do.

68. The principal works to be executed on the first of these Estimates were the clearing out the beds, and strengthening the embankments at the sites of the several bridges of the Kullaur channel, and Autoor, Woongoor, Consairy Coopun, Tindevanum, Tondiaur, and Perreyaur rivers, for repairing breaches between the 44th and 47th miles, for metalling between the 44th and 80th miles, for rebuilding four tunnels in the 86th, 88th, and 90th miles, and for building a bridge of one 4 yard arch, in the 45th mile.

The second Estimate provided for rebuilding three, and building six additional tunnels between Vickravandy and Oolundoorpett.

69. The necessity for the fifth and sixth Estimates is explained as follows by Major Lawford.

"After the storm of the 27th March 1853, I observed the current of the Cauvery setting so strongly on the North bank as to deepen out the bed near the bridge, and I determined to throw out a stone groin to divert the stream—It was impossible then to frame an Estimate, as the work was likely to settle considerably in the freshes, and I advanced the money from the funds in my own hands."

70. "The work was constructed, and has been of the greatest service in rectifying the current during the highest fresh ever known, which occurred on the 17th July last." The cost up to the present time is Rupees 273, and I propose to increase the length and strength in the groin, so as to make the whole expense Rupees 400-12-0, I also think it advisable to provide for extending and renewing the rough-stone flooring of the bridge."

71. An extract from the Official Diary of the Proceedings of Major Lawford, during the month of August 1853, reporting on the road from Trichinopoly towards Salem, between Moosree and Wallaputty, was forwarded to Government with my letter No. 448, dated 26th August 1853, and Mr. Bird, the Collector of Trichinopoly, subsequently writes that the work has progressed with rapidity and energy, that a bridge of 3 arches of 35 feet span across the Condarny river has been opened for traffic, that of the 32 tunnels and smaller bridges provided for in the Estimate, 29 are completed, and that the road itself is well laid down, and raised, and is provided with side ditches throughout. The expenditure to the 30th April was Rupees 20,019-0-7.

72. Abstract of Estimates on No. 8 road.

	Rs.	A.	P.
Current Estimates.....	465,586	12	7
Adjusted do.	231,393	5	2
Total Estimates to 1st May 1854.....	696,980	1	9
Do. to 1st May 1853.....	666,259	6	0
Additional do. for 1853-54.....	30,720	11	9

Particulars of additional Estimates.

Annual Estimate for 1853-54 G ⁵	11,693	0	0
Compensation for land.....	1,779	14	9
Vide Statement No. 8 N ¹	7,826	0	0
Do. Q.....	4,903	7	0
Do. R.....	3,117	10	0
Do. N ²	1,000	0	0
	400	12	0
Rupees...	30,720	11	9

"No. 9, TRUNK ROAD."

From Pauprumpett on Trunk Road No. 8, to Combacorum, 75½ Miles.

73. Between Pauprumpett, and the Coleroon river 62½ miles, the embankments are nearly completed, and considerable progress has been made in the masonry works, but the same difficulty as on No. 8 road, having been experienced in procuring firewood, many of them have been delayed. The bridge of 5 arches of 10 yards span over the surplus channel from the Wal-lajah tank is finished, as also one of 2 arches of 5 yards over the old Vudda-vaur channel, and 1 of 1 arch of 20 yards at the head of the Vuddavaur, the supply channel from the Coleroon to the large Veeranum tank. The arch of this last bridge was turned on a very simple and elegant form of timber centring designed by Captain Best. The centring was very skilfully put up under the immediate direction of the late Assistant Overseer Brown, and the work successfully completed under the general control of Lieutenant Tireman. This line of road will also I hope, be open for quick traffic in June 1855.

74. The Estimates sanctioned during the year are :

Rupees 2,681-4-9, for emergent repairs in the 132d and 133d miles, and

¹ Minutes of Consultation, No. 243, 29th June 1853.

Rupees 80,000-0-0, for constructing a bridge over the Coleroon river, in front of the lower anicut.

75. In March 1853, as noticed in my last General Report, in consequence of the partial destruction of the Vellaur anicut, four arches of the bridge which had been constructed over it fell. In the month of May following four more gave way, and subsequently one, so that all that remains of this once fine bridge, are the abutments and wing walls, with two arches at the North, and eight at the South end, and its reconstruction or otherwise, must depend upon what measures are adopted by the Revenue Department for restoring the anicut.

76. Abstract of Estimates on No. 9 road.

	Rs.	A.	P.
Current Estimates.....	199,421	7	9
Adjusted do.	40,510	3	2
Total do. to 1st May 1854.....	239,931	10	11
Do. to 1st May 1853.....	153,891	9	2
Additional do. for 1853-54.....	86,040	1	9

Particulars of additional Estimates.

Annual Estimates for 1852-53 and 53-54 X ³ ...	601	0	0
Compensation for land.....	2,757	12	0
Vide Statement No. 9 H.....	2,681	4	9
Do. J.....	80,000	0	0
	86,040	1	9

"No. 10, TRUNK ROAD."

From Arcot on Trunk Road No. 1, to the Mysore frontier beyond Palmanair, 65 Miles.

77. The only additional sanction during the year was one of Rupees 2,644-2-0, for rebuilding the Eroowarum bridge of 5 arches of 8 yards span near Chittoor. The original Estimate for the work was Rupees 3,944-14-0, and the expenditure up to the time of its destruction Rupees 2,825-10-0, leaving an unexpended amount of Rupees 1,119-4-0, for which credit has been given in the new Estimate. The bridge is now completed with the exception of the parapet walls, and has been opened for traffic.

¹ Minutes of Consultation, No. 83, 9th March 1853.
Do. No. 183, 21st April 1854.
² Minutes of Consultation, No. 243, 29th June 1853.

78. The bridge across the Poinay river at Trivellum is to be built by the Railway Company, Government having approved of their proposed arrangement for providing for the ordinary traffic being carried on, so long as a single line of rails across the bridge is found to be sufficient.

79. The repairs of this road (on Estimate (R.) of Rupees 6,813-0-0) during the year have been very carefully attended to by Assistant Overseer Booth, who, with an occasional visit from Lieutenant Chauncy and myself, has had the entire charge of the line, and succeeded in keeping it in first rate order.

80. Abstract of Estimates on No. 10 road.

	Rs.	A.	P.
Current Estimates.....	90,312	7	3
Adjusted do.	1,543	1	1
Total Estimates to 1st May 1854.....	91,855	8	6
Do. do. 1853.....	80,855	5	5
Additional Estimates for 1853-54.....	11,000	3	1

Particulars of additional Estimates.

Annual for 1853-54.....	6,813	0	0
Mogly ghaut repairs in 1848, since brought on the accounts of the Road Department.....	1,543	1	1
Vide Statement No. 10 E.....	2,644	2	0
	11,000	3	1

"No. 11, TRUNK ROAD."

From Chittoor on No. 10, to Cuddapah, 99 Miles.

81. The works on this line have progressed most satisfactorily under the Superintendence of Mr. Addis, who has completed a survey of the country, and traced out the road between the Damulcherroo and Goolcherroo ghauts, 56 miles. The Estimate for earthwork and metalling from Culcudda to Goolcherroo 31 miles, will shortly be submitted, and those for the masonry works are in a forward state of preparation.

82. The Goolcherroo ghaut, on which there is at present but little cart traffic, though some six or seven hundred cattle pass up and down it daily, has been maintained in perfect order by the Annual Estimate (R.) of Rupees 600. Great progress has been made in the construction of the line from Damulcherroo to Kulloor, (on Estimate (E.) of Rupees 11,881-7-10), and an excellent road nearly completed up the Damulcherroo

ghaut; the steepest gradient, and that for only a short distance near the top of it, being 1 in 26, and the general rise under 1 in 30.

83. Between Bankrapett and the limits of the town of Cuddapah at the Ootoor channel, 6½ miles, the embankments (on the Estimate (B.) of Rupees 16,903-1-0) have been raised throughout, the metal collected at the sides of the road, and nearly all the masonry works completed. The only bridge of any size to be built is one of 3 arches of 13 yards span over the Moola Vunkah in the 191st mile, the foundation of which will shortly be commenced.

84. The Estimates sanctioned during the year are :

Rupees 3,056-9-9,1 for constructing in part, the portion of road between Chittoor and Poothulpett.

Rupees 31,954-12-6,2 for constructing the portion between Poothulpett and Yerulumpilly—and

Rupees 30,698-2-6,3 do. do. in part, between Kulloor and Culcudda.

85. Further Estimates are being prepared for the portion of the road between Chittoor and Poothulpett, on which work had been carried on to a considerable extent by the Civil Engineer of the 4th Division, before it was made over to this Department. The Estimates will provide for completing it as a first class line, with bridges over the Eroowarum river near Chittoor, and Poinay river at Poothulpett.

86. Sickness has prevailed so much throughout the season in the country below the ghaut, that but little work has been done on the second of these Estimates, and the Overseer, Maistries, and others employed, were nearly all obliged to leave. The embankments have however in some places been completed across the paddy lands.

87. On the 3d Estimate the earth-work has been commenced in parts, but the principal expenditure has been in tracing and lining out the road, and for clearing jungle.

88. Abstract of Estimates on No. 11 road.

	Rs.	A.	P.
Current Estimates.....	96,294	1	7
Adjusted Do.....	22,091	14	5
Total Estimates to 1st May 1854.....	118,386	0	0
Do. to 1st May 1853.....	52,076	7	3
Additional do. for 1853-54.....	66,309	8	9

1. Minutes of Consultation, No. 389, 21st October 1853.
2. Do. No. 16, 9th January 1854.
3. Minutes of Consultation No. 61, 9th February 1854.
4. Do. No. 195, 27th April 1854.

Particulars of additional Estimates.

Annual 1853-54 R.....	600	0	0
Vide Statement No. 11 A.....	3,056	9	9
Do. D.....	31,954	12	6
Do. G.....	30,698	2	6
Rupees....	66,309	8	9

"No. 12, TRUNK ROAD."

From Mahal on Trunk Road No. 11, to Bellary 119½ Miles.

89. The only Estimate sanctioned during the year is one of Rupees 4,300,¹ for a 2d class road between Bellary and Codairy, 45½ miles, which will complete the communication from the former town to the border of the Cuddapah district. On this Estimate, Rupees 1,174-12-1 have been expended in clearing jungle, removing rock, forming the road, and gravelling, and an Estimate (E.) of Rupees 3,154 for removing chief obstacles between Peelair and Codairy, the expenditure has been Rupees 843-4-7. An Estimate has since been sanctioned for completing a first class Trunk Road between the former places, particulars of which will be given in subsequent Reports.

90. Abstract of Estimates on No. 12 road.

	Rs.	A.	P.
Current Estimates to 1st May 1854	7,454	0	0
Do. to 1st May 1853	3,154	0	0
Additional do. for 1853-54 vide Statement No. 12, A	4,300	0	0

"No. 13, TRUNK ROAD." (2D CLASS.)

From Madras by Naggerry and Kurcumbaddy, to Cuddapah, 163 Miles.

91. In addition to the sum of Rupees 15,00-0-0 mentioned in my last Report as having been sanctioned for this line of road, two further sums have been allowed, viz., Rupees 6,102-2-10,² for constructing bridges and drains between Naggerry and Kurcumbaddy, a distance of 26 miles, and Rupees 1,300-0-0,³ for the Annual repair of the same, the latter to take effect during 1854-55.

92. A report from Captain Collyer on the improvements effected to this road on the original Estimate, or rather on the portion of it, two fifths, which was allotted for expenditure in the limits of the North Arcot District, was submitted to Government with my letter No. 98, dated the 7th February.

¹ Minutes of Consultation, No. 373, 3d October 1853.

² Do. No. 89, 27th February 1854.

³ Do. No. 181, 21st April 1854.

93. The masonry works provided for in the Estimate of Rupees 6,102-2-10, are:

1	Bridge of 3 Arches, of 20 feet span.
2	Do. of 1 do. of 20 do.
2	Do. of 3 do. of 15 do.
1	Do. of 2 do. of 15 do.,

five tunnels, each of 1 vent of 3 feet span, and 18 irrigation drains.

94. On the other portion of the Estimate Rupees 9,000, allotted for expenditure in the Cuddapah District, the disbursements to the 1st May have been Rupees 1,922-1-7, and Captain Boileau gives a very satisfactory account of the extent of work done, operations were commenced in February, and by the 30th April, the road was sufficiently cleared of all obstructions for a distance of 29 miles to Nundaloor, to allow of the traffic passing.

95. Captain Boileau writes of this part of the road, "It is necessary that I should inform you of the previous character of the road, which seems by report to have been next to impassable in dry weather, and wholly so in the rains. A pretty thick covering of round stones having impeded the traffic in the one season. The combination of these with mud having stopped it in the other." A limited width (from 4 to 6 yards) has been cleared of stones, and inequalities have been levelled," and though Captain Boileau objects to the line chosen in some parts, he states that "substantial benefit has resulted from the work already done" while the "Tahsildar of Sidhout through whose Talook several miles of the line pass, assures me of the vast advantage that has accrued to the traffic from the partial clearing of the line."

	Rs.	A.	P.
96. Abstract of Estimates on No. 13 road.			
Current Estimates to 1st May 1854.....	21,102	2	10
Do. to 1st May 1853.....	15,000	0	0

Additional for 1853-54 Vide Statement No.

13 A ²	6,102	2	10
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97. The Trunk Roads as now determined, comprise a distance of 2,049 miles, of which 702 are quite completed, 535½ will be completed in the course of this year, and 471½ have lately been commenced, leaving 340 miles for Estimates to be prepared, annual Estimates have been sanctioned for keeping up 927½ miles, and others are about to be submitted to Government. In these distances are not included the 2d class roads from Oopununguddy to Pootoor 7½ miles, and from Madras to Cuddapah, via Naggerry, 163 miles.

98. In the accompanying sketch plan, shewing the several stages, the roads which are completed are distinguished by a red line, those nearly completed by a brown line, those for which Estimates have been prepared, and which are in progress, or about to be commenced, by a yellow line, and those for which annual repairs are provided, by the addition of a dotted red line.

99. Finding the necessity of an increased Office Establishment, as the operations of the Department became more extended, I addressed a letter, (No. 321) to Government on the 4th July, pointing out that on each Assistant first joining, it was essential he should be immediately provided with a competent Accountant, to manage his office books, and prepare, in accordance with the department forms, his cash statements, bills, &c. and that hitherto in order to give this assistance, I had been under the necessity of detailing men from my own office, who I could ill spare, and whose absence entailed on those remaining an undue amount of work.

100. On this representation five additional Accountants, and one Writer as applied for, were added to the Establishment, and at the same time the pay of the Head and Deputy Accountants, Head Draftsman, Survey Maistry, and Moochy, was increased. The monthly additional charge to the Acquittance Roll being:

For 5 Accountants at Rupees 35 each.....	175	0	0
1 Writer.....	20	0	0
Increase to Head Accountants salary.....	30	0	0
Do. to Deputy do.	15	0	0
Do. to Head Draftsman's do.	20	0	0
Do. to Survey Maistry do.	15	0	0
Do. to Moochy's.....	2	0	0
Total Rupees	277	0	0

101. The Establishment for European Superintendence, when the additional Assistants and Overseers applied for, and sanctioned, have been appointed, will be 1 Superintendent, 10 Assistants, 1 Assistant Supervisor, 1 Overseer and 28 Assistant Overseers, in all 41 being an increase of 12 over the Establishment of last year.

102. The conduct of the Overseers generally, has been highly satisfactory, and now that some of the most deserving have been benefitted by the extension to this department, of the sanction for granting the 4th class travelling allowance of Rupees 50 per Month for special duties, the others will feel that an additional incentive exists for good behaviour, and attention to their duties.

103. I have referred incidentally in this report to the services of the several Assistants engaged during the year, viz. Lieutenants Chauncy, Tireman, Francis, Marshall, Magrath, and Barber, and Mr. Addis, all of whom I consider to possess great professional attainments. I brought prominently to the notice of Government, the Surveys executed by Lieutenant Magrath, and Mr. Addis, and the exertions of Lieutenant Chauncy and his subordinates on Trunk Road No. 1, in the cause of the Electric Telegraph, in addition to their own laborious duties, I deem deserving of the highest commendation.

104. From the Departments of the Collectors of Canara, Coimbatore, Malabar, and Salem, and of the Civil Engineers of the 1st (Sub-Division), 2d, 3d, 4th, 6th and 7th Divisions, much valuable assistance in superintendence, has been received.

105. In the Statements accompanying this Report, are several Estimates which received sanction prior to the 1st May 1853—as well as sums of money paid as compensation for land, which were not included in the statements of last year, owing to no particulars of the accounts having been received—to shew therefore, precisely the additional Estimates for the past year, it will be necessary to add to the Totals shewn in the General Summary which accompanied the last Report, these Estimates and amounts, together with the salaries of the Superintendent, and his Assistants, and the Office Establishment, from 1846-47 to 1852-53, inclusive.

106. This has been done in Statement No. 17, and the result is that during the year 1853-54, the additional Estimates amount to Rupees 579,440-13-9, the Bills sanctioned to Rupees 485,795-12-2, and the advances drawn, which may be considered as approximate to the expenditure, to Rupees 504,562-5-6.

107. The traffic returns though still imperfect, are more complete than they have been, and now that a uniform system of registering them has been introduced, I shall hope this year to receive them still more regularly. It will be observed that the heaviest traffic is on the northern road, on which the number of carts passing daily at the 5th mile from Madras is 1,707, and at the 11th mile 1,520. The next largest amount is on the southern road at the 23d mile, where the number is 1,332, then on the western road on which at the 5th, 21st, 75th, and 38th miles, the numbers are respectively 946, 846, 750 and 722, and then on No. 10 road, on which at the 75th mile, the number is 700. These returns, as compared with those furnished in my last General Report, shew a less amount of traffic on No. 1 road, but a very considerable increase on Nos. 6, 8 and 10.

108. In closing this Report I will briefly refer to the several works proposed to be carried out by the late Superintendent, to which my attention was particularly directed by Government in Extracts from Minutes of Consultation No. 31, dated 29th January 1852.

109. On No. 1 Trunk Road, in para 3—"a new road four miles in extent and partly in the Town of Vaniembaddy, has been opened for use, but not quite completed." Now completed. "A road for carts between the 18th and 60th miles" rendered unnecessary by the intended Railway. "Improvements of the road between Vaniembaddy and Bangalore," nearly completed.

110. On Number 2 Trunk Road, in para 5. The rebuilding of the Feringypett bridge; completed.

111. On No. 3 Trunk Road, in para 6—an advance of money has been sanctioned for extending the road from Oopunungaddy towards Buntwall.

112. On No. 5 Trunk Road, in para 8. The Parlakadoo, and Nurgumpilly bridges; completed. It has since been determined that the present road is to be repaired, instead of constructing a direct line between Avanashy and Bowany. The further improvements of the road between Vaniembaddy and Comarapollum are considered unnecessary, in consequence of the intended Railway.

113. On No. 6 Trunk Road, in para 9. The completion of the road between Goomidipoondy and Covoar north of Nellore, has been provided for, and the works are in progress. The new line from Covoar to Tungatoor, and Ongole, has been commenced. The road from Madras to Goomidipoondy has been completed, with the exception of the parapet walls to the Ponairy bridge. The construction of bridges over the Pamla-kalva, Kalinganuddee, and Mamadi-kalva, the three streams referred to, is in progress. From Toonee to Soobaram, 53½ miles, the road is nearly completed, and the remainder of the distance to Itchapoor 159 miles, is in progress. The bridge over the Bimlipattam river has been completed, and the road from Itchapoor to the Bengal frontier, 54 miles, nearly so.

114. On No. 7 Trunk Road, in para 11. Estimates have been submitted in part, for constructing this line.

115. On No. 8 Trunk Road, in para 12. The road from Vickravandy to Oolundoorpett, and Semiveram, 85 miles, has been nearly completed. The bridge over the Coleroon river near Trichinopoly, the Clinnaur bridge, and a causeway across the Oopaur completed, and the materials for the Palaur causeway near Chingleput, are being prepared.

116. On No. 9 Trunk Road, in para 13. The road from the lower Coleroon anicut to Pauprumpett 62½ miles, is nearly completed, and the Vuddavaur and Wallajah bridges, with the head sluice to the North Rajah Voikal, quite so.

117. On No. 10 Trunk Road, in para 14. The entire line 65 miles has been completed with the exception of the parapet walls to the Eroowarun bridge near Chittoor, and a bridge over the Poinay river at Trivellum, which is to be built by the Railway Company.

118. On No. 11 Trunk Road, in para 16. Estimates have been prepared for the whole line from Chittoor to Cuddapah, 99 miles, sanctioned in part, and the construction of the road commenced.

119. On No. 12 Trunk Road, in para 15. Estimates have been sanctioned for the portion of road between Codairy and Bellary, 45½ miles, and in part from Codairy to Mahal 74 miles.

120. Thus it will be seen that none of the works projected by the late Superintendent have been lost sight of, and that most of those in progress, have been completed.

C. C. JOHNSTON, CAPTAIN,
Superintendent of Roads.

Superintendent of Roads Office, }
Camp Madras, 4th July 1854. }

Accounts Particular of the Road Department, to 30th April 1854.

Letter of Estimate.	Amount of Estimates.	No. and date of Minutes of Consultation, sanctioning Estimates.	Advances.	Balance of Estimates.	Bills sanctioned.	Bills ready or submitted.	Particulars of Expenditure, and outstanding Balances.	Remarks.
STATEMENT No. 3. TRUNK ROAD No. 2.								
A	5,262 8	132 12th May 1846	5,262 8		3,133 11 5	2,128 12 7	1,144 5 7	Canara Collector. Graham Overseer.
N	1,455 1	182 1st June 1852	900	555 1			1,144 5 7	Outstanding.
R	200	372 23d November 1852	144 5 7	55 10 5			710 11 5	Balance of Estimates.
R	200	Do. Do.	200				3,133 11 5	Bills sanctioned.
							2,128 12 7	Do. ready.
	7,117 9		5,406 13 7	710 11 5	3,133 11 5	2,128 12 7	7,117 9	
STATEMENT No. 4. TRUNK ROAD No. 3.								
G	3,759 13	249 8th November 1845	3,759 13					
B	1,150	173 4th September 1850	1,150					
C	3,305 11 10	44 4th February 1853	3,305 11 10				13,215 8 10	Canara Collector.
A	13,539 13 7	99 29th March 1853		13,539 13 7			18,489 13 7	Balance of Estimates.
E	9,900	277 23d July 1853	5,000	4,900				
	31,705 6 5		13,215 8 10	18,489 13 7			31,705 6 5	
STATEMENT No. 5. TRUNK ROAD No. 4.								
B	6,800	426 2d December 1853	6,800			4,182 12 11	2,000	Malabar Collector.
D	13,131 7 10		7,618 5 8	5,513 2 2			8,740 2 11	Church Assistant Overseer.
A	504 10 2		504 10 2				10,740 2 11	Outstanding.
							5,513 2 2	Balance of Estimates.
							4,182 12 11	Bills ready.
	20,436 2		14,922 13 10	5,513 2 2		4,182 12 11	20,436 2	

A	Annual repairs from Frazerpett to Mangalore for 1853-54	105
N	Bridge over the Hunter nullah.	
R	Annual repairs between Oopinungady and Pootoor for 1852-53 and 1853-54	71
G	Construction of the Conchecoreootle bridge.	
B	Maintenance of the Munzerabad ghaut and road to Buntwal	46
C	Construction of road from Mangalore to Buntwal between the 15th and 16th miles	3
A	Do. of bridges in the Canara district.	
E	Do. of road from Oopinungady to Pani Mangalore	10
B	Annual repairs of Perambady ghaut and road	68
D	Completing do. do.	68
A	Sale of unserviceable tools.	

Accounts Particular of the Road Department, to 3rd April 1854.

Letter of Estimate.	Amount of Estimates.	No. and date of Minutes of Consultation, sanctioning Estimates.	Advances.	Balance of Estimate.	Bills sanctioned.	Bills ready submitted.	Particulars of Expenditure, and outstanding Balances.	Remarks.
STATEMENT No. 6. TRUNK ROAD No. 5.								
F	48,789 11	112 13th January 1849	35,900	12,889 11				
H	12,328 13	66 8th April 1850	12,328 13					
J	12,990 1 6	42 30th January 1851	12,990 1 6		11,233 0 2			
P	126 8	231 15th July 1851	126 8					
V	4,830 14	386 20th December 1851	4,830 14					
G	7,100	37 17th February 1852	7,100				9,141 0 3	Coimbatore Collector,
G	7,100	171 25th May 1852	7,100				5,900	Civil Engineer 5th Division.
V ²⁻³	5,204 5	197 18th June 1852	5,204 5				46,134 3 5	Malabar Collector.
C	1,566 3	214 1st July 1852	1,566 3					
R	1,370 12	214 1st July 1852	1,370 12				191,175 3 8	Outstanding.
R	1,370 12	260 12th August 1852	1,370 12				4,158 10	Balance of Estimates.
J ²	13,066 10 4	295 6th September 1852	13,066 10 4				11,233 0 2	Bills sanctioned.
W	4,781 10 9	335 15th October 1852	4,781 10 9					
M	2,218 14 9	267 1st July 1853	2,218 14 9					
L	2,200	373 3d October 1853	2,200					
N	653 15	404 5th November 1853		653 15				
O	252 11 6	121 14th March 1854	252 11 6	615				
Y	615			615				
	1,26,566 13 10		1,12,408 3 10	14,158 10	11,233 0 2		126,566 13 10	

F	Rebuilding Bowany bridge.	
H	Improvements between Wallaur and Ponany	
J	Construction of the Parlatadow bridge.	70
P	Repairs between Perindoray and Bowany	
V	Do. Coimbatore and Avanashy	12
G	Annual repairs between Wallaur and Ponany for 1852-53 and 1853-54	26
V	Additional metal and masonry works between Coimbatore and Avanashy	70
C	Repairs between Coimbatore and Caremthumpetty	26
R	Annual repairs between Coimbatore and Wallaur for 1852-53 and 1853-54	42
J ²	Construction of road between Palghat and Mungara	16
W	Do. of Watapollim bridge.	12 1/2
M	Repairs to Chinna Nowkurray bridge and Madukurray road dam.	
L	Repairs between Coimbatore and Bowany	
N	Widening the Maugodoo bridge.	40
O	Repairs between Avanashy and Perindoray	
Y	Additional metal between Coimbatore and Tennempollim	22 1/2

Accounts Particular of the Road Department, to 30th April 1854.

Letter of Estimate.	Amount of Estimates.	No. and date of Minutes of Consultation, sanctioning Estimates.	Advances.	Balance of Estimates.	Bills sanctioned.	Bills ready or submitted.	Particulars of Expenditure, and outstanding Balances.	Remarks.
STATEMENT No. 7. TRUNK ROAD No. 6.								
D & G	2,400	32 31st January 1847	2,400		2,396	5	34,933 9 3	Marshall, Lieutenant.
D & G	3,600	196 28th September 1847					51,336 15 8	Do. do.
A	5,760	397 3d November 1853	3,600		1,261	3 6	68,318 4 7	Rundall, do.
J	9,042 7 6	265 20th October 1846	5,760			11,799 3 2	6,204 6 1	Barber, do.
F ¹	86,337 14 11	103 18th March 1851	9,042 7 6		57,457 7 9		3,772 1 10	Cauvelly, Tasildar.
P, S Y	5,524 13	173 20th May 1851	86,337 14 11		5,524 3		1,052	Ulloor do.
H	3,688 3 9	351 2d December 1851	5,524 13			2,361 9 6		Ongole do.
F ²	952 14	157 13th May 1852	3,688 3 9				4,486 7	Rajahmundry Collector.
1 R ²	2,974	238 15th July 1852	952 14		774 13 4		68 13 8	Guntoor do.
L N T	47,906	153 7th May 1852	1,497	1,67				
1 R ³	3,210	204 22d June 1852						
2 R ³	3,210	340 23d October 1852						
GR	59,268 5 9	33 28th January 1853	47,906 0 5		1,500		1,70,172 10 1	Outstanding.
K	6,310 8 8	33 28th January 1853	1,500	1,710	1,500		2,44,857 5 6	Balance of Estimates.
O	28,753 7		3,210				15,184 4 9	Do. ready.
V	1,456 13 3	123 21st April 1853	69,310 8 8	25,21 12 9	15,663 0 4			
2 R ²	4,486 7	115 18th May 1853	1,456 13 3					
Q	39,567	388 21st October 1853	4,486 7					
W	2,974	397 3d November 1853	5,000	34,367 0 8	1,772 1			
X	29,285 2 10	37 25th January 1854	2,974					
Z	10,000	57 7th February 1854	10,000	19,385 2 10		1,023 8 1		
H ³	68 13 8	61 9th February 1854	7,000	3,000				
	90,973 7 6	151 30th March 1854	68 13 8	90,973 7 6				
	68,812 13 9	160 10th April 1854		68,812 13 9				
		197 27th April 1854						
	5,16,563 6 8		2,71,706 0 2	244,857 5 6	86,349 1 4	15,184 4 9	5,16,563 6 8	

D & G	Annual repairs from Itchapoor to Bengal frontier for 1852-53 and 1853-54.	54
A	Annual repairs from Goondipoondy to Ulloor for 1853-54.	102
J	Construction of bridge over the Bimlipatam river.	22
F 1,2	Completion of road between Yerkenjary and Goondipoondy	12
P	Repairs between Sunkaram and Ankay	12
S	Do. do. and Soobaram	12
Y	Do. Yellamanchilly and Chinnicotta	12
H	Construction of bridge to the approach to the Bimlipatam river bridge.	22
L N T	Annual repairs between Yerkenjary and Goondipoondy for 1852-53 and 1853-54.	254
R	Repairs between Yelloomanchilly and Toodee	534
GR	Annual repairs between Toodee and Soobaram for 1852-53 and 1853-54	15
K	Alterations and improvements, &c. between Yerkenjary and Ulloor	1
Q	Construction of a cross road to Palva Chuttram bungalow	391
V	Repairs between Raja Nuggrum and Durmaveram	68
Q	Construction of road between Dunda Godda and Hooma Causeway	159
W	Do. of a bridge across the Naugolia river at the town of Chinnicotta.	
X	Advance for road between Covoer and Ongole	
Z	Repairs to a platform bridge in the Guntoor district.	
H	Construction of road between Soobaram and Itchapoor	
	Completion of road between Goondipoondy and Covoer.	

Accounts Particular of the Road Department, to 30th April 1854.

Letter of Estimate.	Amount of Estimates.	No. and date of Minutes of Consultation, sanctioning Estimates.	Advances.	Balance of Estimates.	Bills sanctioned.	Bills ready or submitted.	Particulars of Expenditure, and outstanding Balances.	Remarks.
STATEMENT No. 8. TRUNK ROAD No. 8.								
B	54,899 6	63 15th March 1849	54,000	899 6	54,000			
J	13,032	167 16th August 1849	13,000		12,095 12	936 4	1,548 13	9 Civil Engineer 6th Division.
G	11,693	167 16th August 1849	11,693		11,693		2,000	Trichinopoly Collector.
G	11,693		11,693			6,276 2 5	21,383 3 11	Heathorn, Captain.
F ¹	1,10,488 11	19 26th January 1850	110,488 11				36,554 11 8	Do. do.
T	4,499 2	137 17th April 1851	4,499 2			2,857 7 3	3,076	7 Carangooly Tasildar.
V	32,233 15	236 21st July 1851	15,000	17,333 15	5,646 11			Chingliput do.
X	4,500		4,500			1,698 1 2	2,442 5 4	Tindivanam do.
F ²	42,099 5 9	361 9th December 1851	42,099 5 9				2,000	Ellavanasoor do.
C	47,667	125 12th April 1852	34,000	13,667 0 6	9,538 12 5	3,469 7	1,500	Verdachelum do.
L	31,769 12	172 25th May 1852	15,000	16,769 12			2,117 10	Toramungalum do.
K	57,263 10 4	224 3d July 1852	30,580	26,683 10 4	13,304 11	9,066 3 11	1,630 4 6	Villapooram do.
H	25,000	34 28th January 1853	25,000					
O	1,500 1	50 10th February 1853	1,500 1				2,50,893 1 9	Outstanding.
N ¹	7,826	248 29th June 1853	7,826		4,598 4	3,227 15 8	75,285 11 10	Balance of Estimates.
Q	4,903 7	284 25th July 1853	4,903 7				1,11,876 5 7	Bills sanctioned.
R	3,117 10		3,117 10				27,531 9 5	Do. ready.
N ²	1,400 12	350 8th September 1853	1,400 12					
	4,65,586 12 7		390,301 0 9	75,285 11 10	1,11,876 4 7	27,531 9 5	4,65,586 12 7	

B	Construction of road between Vikravandy and Oolooondoorpett	30
J	Preparation and cartage of material for three years in advance between Chingliput and Vikravandy	53
G	Annual repairs between Palaveram and Vikravandy for 1852-53 and 1853-54	80 1/2
F ¹	Construction of the Coleroon bridge near Trichinopoly.	
T	Do. Chinnaur bridge.	
V	Metalling between Vikravandy and Oolooondoorpett	30
X	Annual repairs do. do. for 1853-54	30
F ²	Reconstruction of the Coleroon bridge.	30
C	Construction of road between Oolooondoorpett and Vellaur river	
L	Do. of a causeway across the Palaur near Chingliput.	29
K	Do. of road between the Vellaur river and Samiavaram	
H	Repairs between Mussoory and Salem boundary	36
O	Annual repairs between Samiavaram and Trichinopoly for 1853-54	19
N ¹	Repairs between Palaveram and Vikravandy	81
Q	Rebuilding Vikravandy bridge.	80 1/2
R	Do. Chinnaur bridge.	
N ²	Extending and renewing rough stone flooring to the Cauvery bridge.	

54.

H

Accounts Particular of the Road Department, to 30th April 1854.

Letter of Estimate.	Amount of Estimates.	No. and date of Minutes of Consultation, sanctioning Estimates.	Advances.	Balance of Estimates.	Bills sanctioned.	Bills ready or submitted.	Particulars of Expenditure, and outstanding Balances.	Remarks.
STATEMENT No. 11. TRUNK ROAD No. 11.								
R	600	17 16th January 1852		600			23,840 2 2	Mr. Addis.
R	600		487 5 2	112 10 10		365 0 4		Roychoty Tasildar.
R	600		600				500	Goorumconda do.
E	11,881 7 10	41 3d February 1852	8,000	3,881 7 10		1,424 3 10		Chennoor do.
B	16,903 1	91 17th March 1852	8,000	8,903 1		3,504 1	24,340 2 2	Outstanding.
A	3,056 9 9	329 21st October 1853	3,056 9 9			510 8 6	66,150 2 8	Balance of Estimates.
D	31,954 12 6	16 9th January 1854	4,000	27,954 12 6			5,803 12 9	Bills ready.
G	30,698 2 6	195 27th April 1854	6,000	24,698 2 6				
	96,294 1 7		30,143 14 11	66,150 2 8		5,803 12 9	96,294 1 7	
STATEMENT No. 12. TRUNK ROAD No. 12.								
F	3,154	392 6th December 1852		3,154			7,454	Balance of Estimates.
A	4,300	372 3d October 1853		4,300			7,454	
	7,454			7,454			7,454	
STATEMENT No. 13. TRUNK ROAD No. 13.								
A	15,000	269 14th August 1852	6,000	9,000			6,000	Civil Engineer 4th Division.
A	6,102 2 10	89 27th February 1854		6,102 2 10			15,102 2 10	Balance of Estimates.
	21,102 2 10		6,000	15,102 2 10			21,102 2 10	

R	Maintenance Goolcheroo ghant and road from 1851-52 to 1853-54.	7
E	Improvements between Damalcheroo and Kulloor including the ghant.	9
B	Construction of road between Bankrapett and Cuddapah.	6
A	Do. do. Chittoor and Pootlepett.	10
D	Do. do. Pootlepett and Verumpully.	10
G	Do. do. Kulloor and Kalcudda.	10
F	Removing chief obstacles between Coodairy and Poelair.	24
A	Constructing 2d class road between Bellary and Coodairy.	74
A	Preliminary works on the direct road to Cuddapah.	45
A	Constructing bridges and drains on do.	

Accounts Particular of the Road Department, to 30th April 1854.

Letter of Estimate.	Amount of Estimates.	No. and date of Minutes of Consultation, sanctioning Estimates.	Advances.	Balance of Estimates.	Bills sanctioned.	Bills ready or submitted.	Particulars of Expenditure, and outstanding Balances.	Remarks.
STATEMENT No. 14. MAKING OUT ROADS.								
	7,366 1 1		7,366 1 1		207 13 9	4,556 5 3	101 10 ... Cuddapah Collector. 1,500 ... Bellary do. 200 ... Moberly, Lieutenant. 400 ... Rundall, do. 100 ... Hemery, do. 200 ... Sholinghur Tasildar. 100 ... Mr. Addis. 2,601 10 ... Outstanding 207 13 9 Bills sanctioned. 4,556 5 3 Do. ready. 0 4 1 In Bank.	
	7,366 1 1		7,366 1 1		207 13 9	4,556 5 3	7,366 1 1	
STATEMENT No. 15. GENERAL SUMMARY.								
1	2,05,215 13 6		1,89,206 1	16,009 2 6	91,563 6 4	662 6 6	96,975 4 2	
2 & 5	9,000		9,000			198 14 3	8,801 1 9	
2	7,117 9		6,406 13 7	710 1 5	8,133 11 5	2,128 12 7	1,144 5 7	
3	31,705 6 5		13,215 8 10	18,489 3 7		4,182 12 11	13,215 8 10	
4	20,436 2		14,922 15 10	5,513 2 2			10,740 2 11	
5	1,26,566 13 10		1,12,408 3 10	14,158 0	11,233 2		1,01,175 3 8	
6	5,16,563 5 8		2,71,706 0 2	2,44,857 5 6	86,349 1 4	15,184 4 9	1,70,172 10 1	
8	4,65,686		3,90,301 0 9	75,285 1 10	1,11,876 5 7	27,531 9 5	2,50,893 1 9	
9	1,99,421 7 9		1,07,976 8 11	91,444 4 10	24,862 10 1	24,596 9 5	58,517 5 5	
10	90,312 7 6		87,473 11 5	2,838 2	75,204 2 1	704 2 5	11,565 6 11	
11	96,294 1 7		30,143 14 11	66,150 2 8		5,803 12 9	24,340 2 2	
12	7,454			7,454			6,000	
13	21,102 2 10		6,000	15,102 2 10			2,601 14 1	
M	7,366 1 1		7,366 1 1		207 13 9	4,556 5 3		
			12,46,127	5,58,015 3 4	4,04,435 2 9	85,549 10 3	7,56,142 3 4	Outstanding.
							5,58,015 3 4	Balance of Estimates.
							4,04,435 2 9	Bills sanctioned.
							85,549 10 3	Bills ready.
	18,04,142 3 8						18,04,142 3 8	

Superintendent of Roads Office, Camp,
Madras, 9th June 1854.

C. C. JOHNSTON, CAPTAIN,
Superintendent of Roads.

Accounts Particular of the Road Department, to 30th April 1854.

Letter of Estimate.	Amount of Estimates.	No. and date of Minutes of Consultation, sanctioning Estimates.	Advances.	Balance of Estimates.	Bills sanctioned.	Bills ready or submitted.	Particulars of Expenditure, and outstanding Balances.	Remarks.
			STATEMENT No. 16.					
			SUMMARY OF 4 LAC FUND FROM 1846-47 TO 1853-54.					
	18,04,142 3 8		12,46,127 0 4	5,58,015 3 4	4,04,433 2 9	85,549 10 3	7,56,142 3 4	Current.
	11,11,740 5 1		10,87,683 0 4	24,057 4 9	10,73,800 13 9	...	11,882 2 7	Adjusted.
	29,15,882 8 9		23,33,810 0 8	5,82,072 8 1	14,80,236 .. 6	85,549 10 3	7,68,024 5 11	
a	2,28,117 7 11		2,28,117 7 11	...	2,28,117 7 11	...	...	
b	1,363 3 8		1,363 3 8	...	503 9 ..	857 10 8	...	
			25,63,290 12 3	5,82,072 8 1	17,08,859 1 5	86,407 4 11	7,68,024 5 11	Total to 1st May 1854.
							5,82,072 8 1	Balance of Estimates.
							17,08,859 1 5	Bills sanctioned.
							86,407 4 11	Bills ready.
	31,45,363 4 4						31,45,363 4 4	

a Salaries of the Superintendent, his two permanent assistants and the Office Establishment for 8 years, from 1846-47 to 1853-54 inclusive.
b Contingent Bills.

STATEMENT No. 17.
PARTICULARS OF ESTIMATES, ADVANCES, AND BILLS SANCTIONED DURING THE OFFICIAL YEAR 1853-54.

	23,33,809 4 3	18,26,615 4 5	5,07,193 15 10	10,29,204 5 1	1,38,241 4 8	6,59,169 10 8	1st May 1853.
	2,32,113 2 4	2,32,113 2 4	...	1,93,859 0 2	...	38,254 2 2	
†	25,65,922 6 7	20,58,728 6 9	5,07,193 15 10	12,23,063 5 3	1,38,241 4 8	6,97,423 12 10	Outstanding.
	31,45,363 4 4	25,63,290 12 3	to 1st May 1854.	17,08,859 1 5	...	5,07,193 15 10	Balance of Estimates.
						12,23,063 5 3	Bills sanctioned.
						1,38,241 4 8	Do. ready.
	5,79,440 13 9	5,04,562 5 6		4,85,790 12 2	...	25,65,922 6 7	1st May 1853.

Roads.

1	20,714 1 11	Additional 1851-52 and 1852-53.
3	2,300 ...	Annual 1851-52 and 1852-53.
3	3,759 13 ...	Conchearc Hills Bridge.
5	1,370 12 ...	Annual 1852-53.
6	2,931 5 11	Compensation for land.
8	1,779 14 9	Do. do.
9	2,757 13 ...	Do. do.
9	300 8 ...	Annual for Ferry boats 1852-53.
10	1,543 1 1	Moogelly ghaut repair 1848.
	505 9 ...	Contingent Bills sanctioned.
	291 3 6	Do. out.
	33,254 2 2	
	1,93,859 0 2	Office Establishment, &c. from 1846-47 to 1852-53.
*	2,32,113 2 4	Amount chargeable to Estimates to 1st May 1853.

C. C. JOHNSTON, CAPTAIN,
Superintendent of Roads.

Statement of New Works, Additions, Alterations, and Improvements, proposed to be executed by the Road Department during the official year 1854-55.

District.	Description of Work.	Total Estimate for the work.		Amount already sanctioned.		Amount already expended (or advanced).		Sanction required (or expenditure proposed) for the year 1854-55.	Further amount required (or remaining) for completing the work.	Remarks by the Local Government.	Remarks by the Government of India.
		Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.		
TRUNK ROAD, No. 1.											
Chingleput and North Arcot	Annual repairs from Madras to the 129th mile.	39,178	11 0	39,178	11 0			39,178	11 0		
Salem	Do. from the 129th mile to the Mysore frontier at the 193d mile.	6,655	8 6	6,655	8 6			6,655	8 6		
Do.	Improvements between the 129th and 193d miles.	45,009	12 6	45,009	12 6	29,000		16,009	12 6		
No. 2.											
Canara and Coorg	Annual repairs from Frazerpett to Mangalore 105 miles.	10,525	0 0	10,525	0 0			10,525	0 0		
Canara	Do. from Oopin Ungady to Pootoor, 7½ miles.	200	0 0	200	0 0			200	0 0		
Do.	Construction of the Huntiar nullah bridge of six yards span.	1,455	1 0	1,455	1 0	800		655	1 0		
No. 3.											
Do.	Annual repairs of Munzerabad ghaut and road, 46 miles.	1,150	0 0	1,150	0 0			1,150	0 0		
Do.	Construction of road in part from Oopin Ungady to Pani Mangalore, 10 miles.	9,900	0 0	9,900	0 0	5,000		4,900	0 0		
Do.	Construction of bridges in the Canara district.	Further estimates not yet prepared.									
		13,589	13 7	13,589	13 7			6,000	0 0	7,589	13 7
No. 4.											
Malabar and Coorg	Annual repairs of Perumbaddy ghaut and road, 68 miles.	6,800	0 0	6,800	0 0			6,800	0 0		
Do.	Improvements to do.	13,131	7 10	13,131	7 10	7,618	5 8	5,513	2 2		
No. 5.											
Malabar	Annual repairs between Walliur and Ponany, 70 miles.	7,100	0 0	7,100	0 0			7,100	0 0		
Coimbatore	Annual repairs between Coimbatore and Wauliur 13½ miles.	1,370	12 0	1,370	12 0			1,370	12 0		
Malabar	Enlarging the Mauradoo bridge.	653	15 0	653	15 0			653	15 0		
Coimbatore	Additional metal between Coimbatore and Tennampollum.	615	0 0	615	0 0			615	0 0		
No. 6.											
Ganjam	Annual repairs between Ichapeor and Bengal frontier, 54 miles.	3,600	0 0	3,600	0 0			3,600	0 0		
Nellore	Annual repairs between Yerkenjary and Goondipoondy, 22 miles.	2,974	0 0	2,974	0 0			2,974	0 0		
Do.	Annual repairs between Goondipoondy and Ulloor, 102 miles.	5,760	0 0	5,760	0 0			5,760	0 0		
Vizagapatam	Annual repairs between Toones and Soobaram, 53½ miles.	3,210	0 0	3,210	0 0			3,210	0 0		
Nellore	Alterations, improvements and repairs between Yerkenjary and Ulloor, 124 miles.	94,332	5 5	94,332	5 5	63,310	8 8	26,021	12 9		
Ganjam	Repairs and Masonry works between Dendagadda and Hoorna Causeway.	39,567	0 8	39,567	0 8	5,000	0 0	14,000	0 0	20,567	0 8
Do.	Construction of a bridge of 25 arches of 10 yards span over the Nangoolia river near the town of Chicacole.	29,285	2 10	29,285	2 10	10,000	0 0	9,285	0 0	10,000	2 10
Nellore	Construction of road in part between Covoor and the Moodegunda river 3 miles north of Ongole, 69 miles.	117,112	12 1	117,112	12 1			50,000	0 0	67,112	12 1
		Estimate for masonry works to be prepared.									

Statement of New Works, Additions, Alterations, and Improvements, &c.—(Continued.)

District.	Description of Work.	Total Estimate for the work.		Amount already sanctioned.		Amount already expended (or advanced).		Sanction required (or expenditure proposed) for the year 1854-55.		Further amount required (or remaining) for completing the work.		Remarks by the Local Government.	Remarks by the Government of India.
		Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.		
Ganjam and Vizagapatam.	Construction of road from Soobaram to the Bimlipatam river, 22 miles.....	15,709	9 6	15,709	9 6	.....	.....	40,000	0 0	50,973	11 3		
	Construction of road from the Bimlipatam river to Itchapoor, 137 miles.....	75,263	14 0	75,263	14 0	.....	.....						
Nellore	Construction of portions of road between Goondipoondy and Coveor No. 7.	68,812	13 9	68,812	13 9	.....	.....	30,000	0 0	38,812	13 9		
Nellore and Guntoor	Construction of road from the Maodegunda river 3 miles north of Ongole, to the Hyderabad frontier at Peondigal on the south bank of the Kistna, 91 miles.....	122,724	12 0	122,724	12 0	.....	.....	35,000	0 0	87,724	12 0		
No. 8.													
Chingliput and South Arcot.	Annual repairs between Palaveram and Vikravandy, 80½ miles.....	11,693	0 0	11,693	0 0	.....	.....	11,693	0 0	.....	.....		
South Arcot	Annual repairs between Vikravandy and Ooloondoorpett, 30 miles..	4,500	0 0	4,500	0 0	.....	.....	4,500	0 0	.....	.....		
Trichinopoly	Annual repairs between Samiaveram and Trichinopoly, 8½ miles...	850	0 0	850	0 0	.....	.....	850	0 0	.....	.....		
South Arcot	Metalling between Vikravandy and Ooloondoorpett, 30 miles.....	32,233	15 0	32,233	15 0	15,000	0 0	17,233	15 0	.....	.....		
Do.	Construction of road between Ooloondoorpett and the Vellaur river, 29 miles.....	47,667	0 6	47,667	0 6	34,000	0 0	10,000	0 0	3,667	0 6		
Trichinopoly.....	Construction of road between the Vellaur river and Samiaveram, miles.....	57,263	10 4	57,263	10 4	30,580	0 0	14,000	0 0	12,683	10 4		
Chingliput.....	Construction of Causeway across the Palaur river near Chingliput.....	31,769	12 0	31,769	12 0	15,000	0 0	8,000	0 0	8,769	12 0		
No. 9.													
Tanjore	Maintenance of two Ferry boats at the lower Coleroon Anicut.....	300	8 0	300	8 0	.....	.....	300	8 0	.....	.....		
Do.	Annual repairs between the lower Coleroon Anicut and Comboconum, 13 miles.....	675	0 0	675	0 0	.....	.....	675	0 0	.....	.....		
South Arcot.....	Construction of road between Pauprumpett and the Geddalum river, 19½ miles.....	48,094	12 6	48,094	12 6	39,747	7 2	8,347	5 4	.....	.....		
Do.	Construction of road between the Geddalum and Coleroon rivers, 43 miles.....	49,150	8 6	49,150	8 6	44,072	15 0	5,077	9 6	.....	.....		
Tanjore.....	Construction of a bridge over the Coleroon river above lower Anicut.....	80,000	0 0	80,000	0 0	2,000	0 0	30,000	0 0	48,000	0 0		
No. 10.													
North Arcot.....	Annual repairs from Arcot to the Mysore frontier, 65 miles	6,813	0 0	6,813	0 0	.....	.....	6,813	0 0	.....	.....		

Superintendent of Roads Office,
Camp Madras, 9th June 1854.

C. C. JOHNSTON, CAPTAIN,
Superintendent of Roads.

ABSTRACT of Cart Traffic, &c., Madras Trunk Roads.

Road.	Place or mile from Madras.	Months.	Going East.		Going West.		Animals.		Remarks.
			Spring Con- veyances.	Carts.	Spring Con- veyances.	Carts.	Going East.	Going West.	
1	Uminjikarry Bridge	May to October 1853	12	508	13	438	112	89	Tons. 360
"	Tundalum	21 Do. to November 1853	14	438	18	408	75	85	321
"	Chinnai Choultry	38 July to October 1853	4	358	4	364	43	29	273
"	Tengal	75 May to do.	3	347	3	403	122	168	288
"	Puliconda	98 July to do.	2	256	3	274	1038	658	241
"	Nautrumpilly	135 Do.	5	158	5	184	187	103	85
"	Coorobahully	165 June to do.	4	99	3	92	83	126	77
2	Fort of Sumpajee Ghaut	July to do.	..	12	..	12	192	183	663
4	Periambuddy do.	May 1853 to April 1854	3	119	2	130	1325	1804	578
5	Tengeryvetiah	July 1853 to March 1854	..	9	..	9	..	..	7
"	Darunpoory	May 1853 to April 1854	..	9	..	19	..	..	10
"	Waliaur	August	..	189	..	157	361	377	139
6	Yerukanjairy	5 December 1853 to April 1854	4	913	4	794	294	615	663
"	Red Hills	11 July to December 1853	9	771	4	749	159	168	378
"	Soolooppett	49 October 1853 to April 1854	..	59	..	65	15	29	47
"	Naidooppett	65 November 1853 to do.	..	79	..	88	78	113	68
"	Venacathellum Chuttrum	97 September 1853 to do.	..	60	..	55	199	268	55
"	Nellore	106 July 1853 to do.	..	19	..	11	21	19	12

ABSTRACT of Cart Traffic, &c., Madras Trunk Roads.

Road.	Place or mile from Madras.	Months.	Going East.		Going West.		Animals.		Remarks.
			Spring Con- veyances.	Carts.	Spring Con- veyances.	Carts.	Going East.	Going West.	
6	Ongole	185 July 1853 to April 1854	..	7	..	14	14	12	Tons. 8½
"	Inkole	215 Do.	..	5	..	7	7	4	4
"	Yatoocor	255 Do.	..	16	..	16	8	11	12½
"	Choultry North of Gun- toor	256 Do.	..	18	..	16	7	16	13½
"	Yanagooden	344 August 1853 to March 1854	..	45	..	32	119	107	35
"	Pungbeddy	355 Do.	..	45	..	20	112	70	29
"	Dhurnaverum	401 Do.	..	72	..	64	339	257	66
"	Tounee	435 Do.	..	67	..	56	428	436	68
"	Nuckapilly	442 Do.	..	10	..	14	231	155	18
"	Cossimcootah	473 July 1853 to do.	..	12	..	12	180	47	15
"	Ankapilly	477 August to December 1853	..	94	..	77	801	573	98
"	Vizayanagrum	517 July 1853 to March 1854	..	11	..	88	..	..	37
"	Coopully	549 Do.	..	2	..	28	3	104	14
"	Gaurah	August 1853 to do.	..	21	..	7	20	20	11
"	Ichapoor River	628 July to December 1853	..	10	..	12	11	8	8½
"	Accavulsha near Berham- poor	August 1853 to March 1854	..	27	..	21	42	7	31
"	Berhampoor	648 July to December 1853	..	22	..	23	1	4	16
"	Woodandapoorum	August to do.	..	24	..	28	246	184	30
"	Coamarabagilly near Chitterpoor	Do. 1853 to March 1854	..	45	..	37	39	57	35

ABSTRACT of Cart Traffic, &c., Madras Trunk Roads.

On No. 1 Trunk Road average daily traffic between Madras and Coorobapully

Superintendent of Roads Office,
Camp Madras, 4th July 1854.

C. C. JOHNSTON, Captain,
Superintendent of R.

MEMORANDUM to shew the Marches made by the Superintendent of Roads from May 1853 to May 1854.

Superintendent of Roads Office,
Camp Madras, 4th July 1854.

C. C. JOHNSTON, Captain,
Superintendent of Roads.

Extract from the Minutes of Consultation, under date the 19th August 1854.

Read the following Report from the Superintendent of Roads.

(Here enter 4th July 1854.)

1. The above Report from the Superintendent of Roads, is in continuation of that dated 25th June 1853, and brings up the proceedings of the Road Department to the 30th April 1854.

2. The accounts which accompany the above shew that in the 8 years comprised between the 1st of May 1846, and the 30th of April 1854, the Estimates prepared by the Superintendent and sanctioned by Government amounted in the aggregate to Rupees 31,45,363 of which,

Bills have been sanctioned for work performed.....	17,08,859
Bills for work performed ready to be submitted	86,407
Sums outstanding on works in progress.....	7,68,024
Undrawn balance of Estimates or works not commenced upon	5,82,072

31,45,363

3. Looking to the details furnished in the Report, the Estimates for the different Trunk Roads amounted as shewn underneath.

No.	Length of Road.	Amount of Estimates sanctioned to 30th April 1854.	Amount adjusted.	Estimates still current.
1. Trunk Road from Madras to the Mysore frontier beyond Gossoor	189½	6,00,652	3,95,436	2,05,215
2. From Frazerpett via the Sumpajee ghat to Mangalore.....	105	54,032	46,914	7,117
3. From the North Western frontier of Mysore via the Munzerabad ghat to Buntwall.....	46	44,982	13,277	31,705
4. From the Mysore frontier via the Periam-bady ghat to Cannanore	68	2,20,821	2,00,385	20,436
5. From near Vaniembady on No. 1 Trunk Road to Ponnaiy on the Western Coast.....	279	1,88,939	62,372	1,26,566
6. From Madras to the Bengal frontier	680½	6,07,087	90,524	5,16,563
7. From near Ongole (Trunk Road No. 6) to the Hyderabad frontier at Pondigal.....	91	Estimates in course of preparation.		
8. From Madras to Trichinopoly and the Salem boundary	225	6,95,980	2,81,393	4,65,586
9. From Panrumpett (No. 8) to Combaconum	75½	2,39,931	40,510	1,99,421
10. From Arcot (No. 1) to the Mysore frontier beyond Palmanair	65	91,855	1,543	90,312
11. From Chittoor (No. 10) to Cuddapah.....	99	1,18,386	22,091	96,294
12. From Mahul (on No. 11) to Bellary	119½	21,102		21,102
	2,049	28,84,767	11,04,445	17,80,317

4. These Trunk Roads comprize a total distance of 2,049 miles of which, it is represented 702 are quite completed, 535½ are in course of completion and will be finished in 1854-55, 471½ have lately been commenced and 340 miles have to be estimated for. These distances are exclusive of the two second class roads from Oopinungaddy to Pootoor—7½ miles, and from Madras to Cuddapah via Naggery 163.

5. The largest disbursements, as yet authorized, are on the three Trunk Roads here under mentioned, and amount in the aggregate to more than half the outlay on all the Trunk Roads.

Trunk Road No. 1.....	6,00,652.
Do. „ 6.....	6,07,087.
Do. „ 8.....	6,96,980.

6. The Return of Cart Traffic, though still incomplete, shows the heaviest Traffic to be on the

	No. of Carts passing daily.
Northern road No. 6.....	1,707 at the 5th Mile.
Southern road „ 8.....	1,332 at the 23d Mile.
Western road „ 1.....	946 at the 5th Mile.
No. 10 road.....	700 at the 75th Mile.

7. Alluding to Trunk Road No. 1, the Superintendent reports that its condition was in parts almost impassable for wheeled conveyances after hard rain for 2 or 3 days, a result he attributes to the width of metalling (now 6 yards) being insufficient for the heavy bandy traffic passing over it; and states that there is no remedy for it except that of allowing a greater width of metalling. He is of opinion that in general “an increased width of metalling even to the extent of 10 yards where the traffic is so incessant, as on this line, would be attended with great advantage, as always allowing a good surface to be preserved, without much, if any additional cost eventually.” “The first outlay though considerable, would not exceed what would be required from time to time to keep up the condition of the narrower road,” but he does not recommend such an outlay on the Western line, as the Railway when completed will relieve it of a very great portion of the present heavy traffic.

8. It is satisfactory to observe that by constant attention and good judgment on the part of Lieutenant Chauncy in the expenditure allowed for repairs, this road has been greatly improved—Captain Johnston seems to doubt from the experience he has obtained on this line whether granite will be found in the end better, or even more durable than laterite.

9. The quarry roads are nearly completed and the advantages anticipated from them are likely to be fully realized. From a calculation of the cost of cartage, it is stated that for the same outlay, 32 per cent more material will now be carted to the road than formerly. The Superintendent is observed hopes to turn these quarry roads to account as feeders to the Railway.

10. With reference to the statement in para 30, it is observed that, at the request of Mr. Malby, the Collector of Canara, Ensign Hay of the 50th Regiment N. I. has been placed under the orders of the Superintendent of Roads for the superintendence of the Munzerabad Ghat and subsidiary roads.

11. The Government consider the testimony borne by the Collector of Coimbatore to the advantages obtained by the improvement of the road between that Town and Wallinur to be highly satisfactory. They observe in reference to para 40 that under date the 22d July the Superintendent of Roads was authorized to prepare and submit the Estimates previously proposed by him for improving and metalling the Topoor line from Vaniembady to Womaloor and from Senkerrydroog to Bowany, for completing the new line already commenced to connect Womaloor via Turamungalum with Senkerrydroog and for completing the bridging and tunnelling of the line throughout, together with an Annual Estimate for keeping the road in repair.

12. The improvement of the road from Madras to Goondipoondy and to Goodoor on No. 6 Trunk Road, which is ascribed in paras 54 to 58 to the able superintendence of Lieutenant Marshall and the Overseers under his orders, more especially Overseer Goodchap, is highly creditable to these Officers.

The Government notice with satisfaction the improvements effected under the supervision of Mr. Addis on the line to Cuddapah by the Goolcherroo Ghat on No. 11 Trunk Road. The Goolcherroo Ghat has been maintained in perfect order by the small annual expenditure allowed by Government and great progress has been made in the construction of the line from Damulcherroo to Kulloor and an excellent bandy road nearly completed up the Damulcherroo Ghat.

13. In para 94 the Superintendent of Roads notices the benefit effected by a small expenditure under 2,000 Rupees on the direct road to Cuddapah under the judicious measures of the present Civil Engineer of the 2d Division. So far back as 1852 a sum of 9,000 Rupees was sanctioned for the improvement of this road but through the supine-

P. W. Consultation 3d July
1852 Nos. 5 and 6.
Do. Do. 17th August
Nos. 14 and 15.

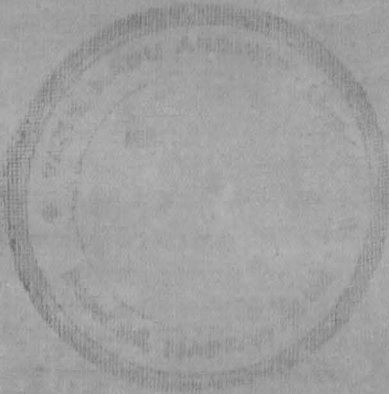
ness of the late Civil Engineer the traffic has been deprived of any advantage therefrom till the beginning of the present year.

14 Taking a general view of the proceedings of the Road Department, as shown in the report for the year 1853-54 under review, as to the extent of work performed and of that in progress, the general condition of the several lines, and the extent of traffic now using them, the Right Honorable the Governor in Council considers that great credit is due to Captain Johnston for his able management of the Department and for the successful result of his labors. He notices with satisfaction the favorable mention made by that Officer of the services of Lieutenants Chauncy, Tireman, Francis, Marshall, Magrath, and Barber and Mr. Addis and of the Overseers generally.

(True Extract.)

H. C. MONTGOMERY,

Chief Secretary.



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