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MADRAS RECORD OFFICE

Government of Madras

Judicial DEPARTMENT

G.O. No. 849-50 Press
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Dated 31-3-50 1950

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 31st March 1875.

No. 645. Read the following endorsement of the Chief Secretary to Government, Financial Department, dated 9th March 1875 :—

Read the following Proceedings of the Board of Revenue, dated 1st March 1875, No. 483.

Read the following letter from A. MACGREGOR, Esq., President of the Local Fund Boards, Malabar, to H E. STOKES, Esq., Acting Secretary to the Board of Revenue, dated Calicut, 28th January 1875, No. 400

THE Government in their Order, dated 9th December last, No. 2,067, have referred to me the letter from the Chief Commissioner of Coorg, on the subject of the proposed South Coorg Road, for report through the Board of Revenue.

2 I have the honor to forward copy of a letter from the Special Executive Engineer, and to state that I agree in the views expressed by Colonel Kennedy.

3. The enclosures that accompanied the above Government Order are herewith returned.

ENCLOSURE No 1

From Lieutenant-Colonel R. B KENNEDY, Special Executive Engineer, Wynaad, to A. MACGREGOR, Esq., President of the Local Fund Boards, Malabar, dated Luckadie, 28th December 1874, No. 919

Reference—Your letter, No 361, dated 18th instant.

IN reply to above with its enclosures, I have the honor to state that, in my opinion, any road in continuation of that constructed by us from Manantoddy to the Coorg frontier should be of such a character as to allow its use by carts throughout the year. I have no knowledge of the country beyond the Wynaad limits, and think that it is rather for the Executive Officers in Coorg to determine what description of bridges, drains, and road surface would be advisable; consequently I confine myself to saying that a roadway 18 feet wide would correspond with what has been opened on the Wynaad side, and that the work done by us up to date comprises opening to that width, of which four yards was gravelled 6 inches thick, the streams being temporarily bridged with rough timber bridges. Our estimate is not yet all spent, as work has for some time been suspended owing partly to more pressing demands elsewhere, but chiefly to the little utility of the line, while its continuation into Coorg was not proceeded with; the balance will provide substantial masonry culverts throughout, and I propose, where the larger permanent bridges are taken in hand, that they should have masonry abutments supporting queen-post truss superstructures of teak

(True Copy)

(Signed) A. MACGREGOR,
President.

ENCLOSURES Nos. 2 and 3.—Correspondence from Government of India.

SUBMITTED to Government with reference to G. O, Financial Department, dated 9th December 1874, No. 2,067.

(True Copies and Extract)

(Signed) H. E. STOKES,
Acting Secretary.

TRANSFERRED to the Public Works Department.

(Signed) W. HUDLESTON,
Chief Secretary.

Proceedings of the Madras Government, Public Works Department,
31st March 1875

No. 646. ORDER THEREON, 31st March 1875, No. 849.

CIVIL WORKS, No 36.

ORDERED that the above letters be forwarded to the Chief Commissioner, Mysore, with reference to letter from the Secretary, Public Works Department, No. 2,674, dated 21st November 1874, and that the following letter be despatched.

(Here enter No. 850, dated 31st March 1875.)

(True Extract.)

Colonel, R.E.,
Secretary to Government.

PUBLIC WORKS DEPARTMENT,
FORT ST. GEORGE, 31*st March* 1875.

No 647.

No. 850.

FROM

COLONEL G. W. WALKER, R.E.,
Secretary to the Government of Madras,
Public Works Department,

To

THE CHIEF COMMISSIONER OF MYSORE.

CIVIL WORKS, No. 37.

SIR,—Under the orders of His Excellency the Governor in Council I have the honor to submit copies of letters from the President of the Local Fund Boards, Malabar, and from the Special Executive Engineer, Wynaad, on the subject of the proposed South Coorg Road, the latter of which affords full information on the subject of your Secretary's letter, No. 2,674, of 21st November 1874.

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

Colonel, R.E.,
Secretary to Government.

Exd S T. Austin.

Spare Copies

No. 15, D C.

COORG CHIEF COMMISSIONER'S OFFICE,
DATED BANGALORE, 24th August 1874.

FROM

THE SECRETARY TO THE CHIEF COMMISSIONER OF COORG,
DEPARTMENT, PUBLIC WORKS.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
DEPARTMENT, PUBLIC WORKS,
CALCUTTA.

SIR,

The Government of India having seen fit, as communicated in your letter No. 224 R. C. of the 18th May 1874, to sanction an additional grant of Rs. 20,000 to that of the current official year (to be met by subsequent re-appropriation); also an extra half-lak for each of the succeeding five years, for the improvement of the system of roads in Coorg,—I have the honor, by desire of the Chief Commissioner, to submit for the favorable consideration of His Excellency the Governor General in Council, the accompanying forecast from current year to 1879-80 inclusive, shewing the manner in which it is proposed to deal with the funds thus placed at disposal; and in so doing, I am to solicit the favor of Government's orders being passed on the subject, in view to the prevention of lapse during the year now current, and to the preparation, in due time, of the Budget for 1875-76.

2. The Chief Commissioner will not take up the time of Government by endeavoring to trace minutely the various proposals for improving the Coorg communications, which commenced with Mr Bowring's letter, (General No 442—32, D P. W., of 15th November 1865 (replied to by your No 31 C of the 13th of the following January) and which, owing to first a sudden expansion of the Budget limit to two laks, in 1867—68 and 1868—69, and then to an equally sudden reduction to less than one lak per annum, under-

3. **General Scope of Original Proposals.** The first proposals aimed chiefly at the improvement in alignment, and in metalling (both very defective) of the main trunk roads as then (and still) existing; at bridging the Cauvery river on the Mercara-Virarajendrapet road; at making a line from the last-mentioned place to Siddapur; and lastly, at creating a number of so-called "pack-bullock" lines, and the Government of India, while considering it premature to discuss the details of the proposals, promised favorable consideration to all but the latter class of projects, which were for the time to be postponed, pending collection of reliable data.

4. Her Majesty's Secretary of State subsequently directed the opening of one of the proposed new lines through Kiggatnad in South Coorg towards Manantodi in Wynad; and though from defect of funds on reduction of Budget, the portion of the line within Coorg limits was abandoned after having been traced, the road under on the Wynad side was completed as a fair weather communication by the Madras Government.

5. Surveys and levels of the existing main roads were prepared with a view to lay definite projects before Government, but the difficulties and costliness of retracing them every where to a maximum gradient of 1 in 20, became so evident, that taken with the rapidly growing prosperity of central Coorg, and the necessity of making Siddapur the point of departure for all main-lines, the conviction was forced on the Local Administration, that it would be preferable, as a solution of the difficulty, to create a new system of main-roads, abandoning the improvement of the existing ones with the exception of the Periyanibadi and Sampaji Ghats, which, under all circumstances, would have to be retained.

6. As a first step in this direction, a project estimated at Rs. 2,26,501, was submitted to the Government of India for constructing a 1st class road from Virarajendrapet through Siddapur towards Periyapatna in Mysore. Sanction was, however, declined; and in the meanwhile, the Budget limit having been suddenly lowered to one half of its former amount, this, with all other projects for new roads on the scale projected, had to be abandoned.

7. Although no new main-road was thus in the interval 1868—68, added to the Coorg communications, fair weather cart tracks were executed on good tracts between Virarajendrapet and Siddapur, and Cheno to the Mysore frontier; again from Kaggod to Katgeri; also traces of lines from Siddapur to Mercara, to Virarajendrapet, and, as before mentioned, from Attur through Kaggatnad to the Wynad frontier.

8 The long interval of his absence, though not altogether unprogressive, may be said to have had some compensating advantages, not only by affording a well-formed public opinion regarding the communications most desirable for the country, but by indicating in the clearest manner to the Local Administration what is really wanted, and what will prove most serviceable to all the interests involved. Mistakes, which might have been committed in the absence of less perfect information, will thus have been avoided.

9 Experience has now proved, that while the Virarajendrapet-Siddapur-Periyapatna communication promises to be by far the most important for Coorg, the line itself can be constructed in a much less costly manner than originally estimated for.

10 The interval which has elapsed, has similarly brought out the fact that, whereas the main road towards Wynad is of comparatively minor importance, other District communications are likely to prove of great value to the Province. The consolidation of the cross-country routes may also be mentioned among the advantages of the delay, as also the change in the style of the County bridges, which, originally proposed for the Virarajendrapet-Mercara road, were intended to be like those at Siddapur. Even for work done, likewise, under systematic management of the Assistant Engineer, Mr Grimmett, has been lowered, and the operations of the Department generally, brought under better control than formerly.

11 Before proceeding to consider the details of the forecast submitted, a reference to the following statements of the roads in Coorg both Imperial and Local as they were at the close of the last official year 1873—74, may not be out of place.

Statistics of Roads of all Classes at close of 1873—74.

IMPERIAL ROADS.

12

1st Class.

Periyambadi Ghat	13 miles at	Rs 150	..	Rs. 7,150
Approaches	„ 21	„ „ 373	..	„ 7,875
Sampaji	„ 19	„ „ 150	..	„ 2,850
Approaches	„ (10 miles, but really 20)	„	..	„ 2,250
			73 miles	„ 20,825

2nd Class.

Mercara-Periyambadi Road	21 miles at Rs. 300	..	Rs. 6,300
Mercara-Kodlipet Road	44 „ 150	..	„ 6,600
		65 miles	„ 12,900

3rd Class.

Virarajendrapet-Periyapatna Road, viâ Siddapur 50 miles, at Rs. 150			Rs. 2,250
Kaggod Kanagoe Road, 2 miles			Nil
		23 miles	Rs. 2,250

Total

From Virarajendrapet, viâ Attur to Wynad boundary 30 miles.
From Siddapur to Mercara 21 miles.

DISTRICT ROADS.

1st, Completed.

Road from Irasoget to Siddapur (on Imperial)	12 miles at Rs. 250	..	Rs. 3,000
Virarajendrapet-Hattihalli Road, (on bridges)	6½ miles at Rs. 150	..	„ 975
County portion of Siddapur-Arbugal Road	7½ „ 100	..	„ 750
	26 miles	..	„ 4,725

2nd, Incomplete Roads.

Road from Irasoget to Suntikoppal	11 miles	
Do. Chikkangal to Hunsepet	44 „	
	55 „	

Traces.

Trace from Ponampet to Kigganad .. 6 miles.
Do Shanivarsante to Seringal about 18 miles not completed.

13 With the above preliminary remarks, I am now to shew in detail the work which it is proposed to execute under the forecast herewith submitted.

Works proposed in forecast herewith submitted

IMPERIAL.

I. Existing main-roads to be retained.

Sampaji Ghat 19 miles
Periyambadi Ghat 13 miles

II. Additional main-roads to be constructed.

Virarajendrapet-Periyapatna Road	21	miles in Coorg.
Siddapur-Mercara Road and Cauvery Bridge	18	„
Connecting lines	5	„
Virarajendrapet-Periyambadi Road	4	„
Total main-roads 80 miles.		

III 2nd Class Roads.

Mercara-Kodlipet Road, 44 miles
Bridges over Hatti and Madapur rivers

IV. 3rd Class Roads.

(2) Road fr.. provisionate estimate n.. road out; but from Nil

14 *To be handed over to District Funds in* 1880, *and to be maintained as 4th Class Roads.*

Approaches, to Sampaji Ghat	20	miles.
Do Periyambadi „	21	„
Road from Mercara to Virarajendrapet	20	„
Total, 61 miles.		

15. It is proposed to complete all the roads under II by 1880; and the maintenance allowance that will then be required, compared with that in 1873—74, is given in the attached statement B, shewing a probable annual saving of Rs. 6,025.

16 The details of the proposed expenditure year by year, are given in statement A, regarding which I am to offer the following remarks.

ORIGINAL WORKS.

Military.

17 The work here mainly consists in the construction of a new rifle range (1) which though originally entered in current year's Budget has been deferred till next; and of a few minor works which, having already been brought under notice, call for no further remark.

Civil Buildings.

18. Provision has been made for completing the offices now under construction for the Assistant Superintendent, Assistant Engineer, and Assistant Conservator of Forests, at Mercara (9.) Besides this a new District Jail will be required; but as on due consideration it has been found impossible to assign any money for its construction in this forecast, the amount promised by the Government of India being even now insufficient for finishing the road projects, to which the extra grant has been exclusively given, the subject will have to be treated separately.

19 Two new Taluk Cutcherries at Somavarpet and Shanivarsante for the Nanjarajpatna and Yelsavirshime Taluks, Nos. 11 and 12 respectively, have been entered and provided for at Rs 7,000 each. These buildings are urgently required, as the old ones are in a very dilapidated condition.

20 No remarks, the amount required being trifling

Agricultural Works.

Communications. Bridges.

21. Provision has been made for the completion of the Chaurahalla and Kakatodu bridges, No. 13 and 14, and the full amount to complete the latter work has been set aside for the current year, it being intended to finish the work before the end of March 1875

Virarajendrapet-Periyapatna Road.

22. The cost of opening out the Virarajendrapet-Periyapatna Road, viâ Sidlapur, inclusive of bridges, drains, and metalling throughout, is estimated at Rs 1,42 000, and the project No 15 has been entered for the current official year with an assignment of 13,000. The detailed project, with plans, &c, is now in the Chief Engineer's Office under examination, and will be submitted for sanction of Government in a few days.

Siddapur-Mercara Road.

23 The length of the proposed line between Mercara and Siddapur, No 16, has been set down at 18 miles, as it is believed that the present trace (21 miles) will be considerably reduced by going round the other side of Anadi or Nalnakdi hill. As the detailed project may possibly be in readiness for 1875—76, an appropriation of Rs. 23,500 has been entered for the work,—the total cost of which may be roughly estimated at 1½ laks.

Kaggod-Kattigere Road.

24 As regards item No. 17 (being for a road of 3 miles in length between the new line proposed from Siddapur to Mercara and Kaggod) it may suffice here to observe that, although the trace has not as yet been made, there would appear to be no serious engineering difficulty to be overcome; and that there can be no question that once the first mentioned road has been opened out, this short communication would become an absolute necessity in the interests of all traffic passing from Mysore through to Mangalore, and *vice versâ*. The rate Rs. 7,000 per mile should suffice for all requirements.

Kaggod-Kattigere Road.

25. The estimate for the Kaggod-Kattigere road (No 18) amounting to Rs. 17,[illegible] this short line, already opened as a fair weather [illegible] greatest use by carrying the Mangalore tiles which will be entered for in the current year's Budget.

Cauvery Bridge.

26. The next important work entered is the bridge over the Cauvery (No 19) estimated at one and a half laks (the stream is 240 feet wide at the point selected), but as the amount required will greatly depend on the material employed—iron or masonry—this can only be taken as a very rough approximation It is not proposed to commence this work till 1877—78; and as it cannot possibly be completed with the assignments made by the close of 1879—80, the subject, like that of the jail, will be again adverted to further on.

Bridges on the Mercara-Kodlipet Road.

27. Two absolutely necessary bridges on the Mercara-Kodlipet road, viz., those over the Hatti and Madapur streams, have not been entered (Nos 20 and 21) If built on the same design as the Chaurahalla, now under construction on the same road, the amounts entered (Rs. 15,000 and 10,000) will, in all probability, suffice. North Coorg is at present cut off from the remainder of the Province for about four months of the year, during the monsoon, but if these works were constructed, the road being then passable at all times, the proceeds of the tolls, which might with justice be imposed, would probably form a valuable addition to the District Funds

REPAIRS.

Military.

23. The main work provided for here, is the repair of the roof of the Palace at Mercara, used as Officers' Quarters, Mess-house, &c, by the Regiment there stationed. The defects of the continuous iron-roof put on a few years ago by the Madras Government having proved irremediable, and it being absolutely essential to deal in a thorough manner with it, Rs. 8,471 have been assigned for placing so called Mangalore tiles (by far the best and most economical material) over the iron roof, which has fortunately a steep pitch suitable for their application.

The other minor works of repairs need not be specified.

25. Repairs Civil Buildings being of the ordinary character, call for no remark.

30 As regards agricultural works, money if to spare might no doubt with great advantage be laid out on the repairs and improvement of the few of this class which exist in the Province; but owing to the limited means at disposal, their claims must for the most part remain in abeyance.

31 Under repairs communications, the Virarajendrapet Periyapatna road has been omitted, as this becomes an "original work," and maintenance allowance of the approaches to Sampaji-Ghat has been reduced from Rs. 6,840 in current year's budget, to Rs 4,000, as it appears better to substitute gravelling for comparatively expensive metalling on this line, which on acceptance of the present programme would be reduced to a fourth class or District Funds road in a few years, and the more so as all the savings that can be effected are urgently required for original works of communication.

ESTABLISHMENT

32 Some sensible addition may very possibly be needed under establishment; but in the desire to save as much as possible for the immediate object in view, no such addition is entered, and every effort will be made to do without it

TOOLS AND PLANT.

33. "Tools and Plant" has been increased from Rs 800 to 1,000 to provide for extra tools required for opening out the new lines

34 The contribution from District Funds is raised from Rs 5,800 to Rs. 6,000 per annum, in consideration of the yearly increasing receipts which it is believed will render such additional aid feasible

35 In addition to roads proposed to be constructed from the Imperial grant (para 13) the following lines will be undertaken from District Funds.—

District Fund Roads.

			Roughly approximate Estimates. Rs.
(1)	Road from Fraserpet to Seringal, eleven miles	This line is partly opened, and an estimate amounting to Rs 11,537 having lately been sanctioned for it by the Chief Commissioner, the work is now under execution	11,537
(2)	Road from Gonnikoppal to Ponampet and Kiggatnad, nine miles, approximate estimate Rs 5,000	From Gonnikoppal to Ponampet the road is partly traced out, but from Ponampet to Kiggatnad, it is a mere trace about five feet	„ 5,000
(3)	Road (15' wide with log-bridges) from Shanivarsante to Seringal, about eighteen miles.	Part of this line has been traced and opened three feet wide	„ 10,000
(4)	Road of same class from Virarajendrapet to Nálknad, sixteen miles		„ 8,000
(5)	do	Nálknad to Bagamangala, twenty miles	„ 10,000
(6)	do	Bagamangala to Mercara viâ Bug-nad, 24 miles	„ 12,000
(7)	do	Gonnikoppal to Siddapur, already to agre at extent opened, nine miles	„ 1,000
(8)	do	Attur to Virarajendrapet, five miles	„ 4,000
(9)	do	Attur to Kiggatnad eight miles	„ 8,000
(10)	do	Kiggatnad to Wynad boundary, fourteen miles	„ 28,000
		Total...	„ 97,537

36 The amount entered against each of these roads, with the exception of No. 1, is a rough approximation only, as correct data for the works are not available.

37 The road from Gonnikoppal to Kiggatnad and Ponampet, already partly opened, is urgently required to bring the chief place of the taluk in communication with the rest of the Province. Rs. 3,000 have been appropriated for this work in the current year's District Fund's Budget; and it will be taken in hand after the monsoon.

38 Shanivarsante-Seringal road being an essential continuation of the line from Fraserpet, calls for no remark

39 The projects numbered four, five, and six, are intended to provide for the wants of West Coorg In November 1872, the Assistant Engineer, accompanied by the Superintendent of Coorg, inspected the roads connecting these places which had been cut by the Coorgs themselves; and although some portions will have to be retraced, the lines have apparently on the whole been fairly selected At present these roads are about fifteen to eighteen feet wide, but gullies, small streams, and paddy fields, interpose obstacles which prevent their being used by carts.

40. The road from Dadamangala to the Kaipal Baleare rail-road, follows nearly a track made some years ago by Mr Stokoe (the present Executive Engineer), but now and there this has been entirely obliterated; and at such places a new line has been traced (the well-known Ghat principle of gradients) has been opened by the people. It will, however, be easy to remedy these defects. During the tour of inspection, the ryots stated that they wanted only widths, but must arrange to open out any deviation which might be found necessary, and that the only help they required from funds at the disposal of the authorities would be the construction of the necessary bridges, and the raising of such slight embankments across paddy fields as might be found necessary. The construction of the log bridges ought not to be expensive, as good timber is found everywhere; but it is scarcely possible in the present state of information to estimate for this kind of work; so that the sums entered against these projects are liable to correction.

41. The road from Gonnikoppal (or rather from a point situated 2½ miles further to the east towards Tittimati on the approaches to the Periyambadi Ghat) to Siddapur, is one already constructed by planters, and has a branch leading to Anantpur. It traverses one of the richest coffee growing districts; and although running partly through private property, is greatly used by the public, and probably it will become necessary to transfer it to District Funds, a measure to which the contractors will it is understood readily agree.

42. Projects numbers 8, 9 and 10, provide for connecting Virarajendrapet with the Wynad boundary and have been entered last, as in the opinion of the Superintendent of Coorg and others best able to judge of their relative value, they appear to be least wanted. Virarajendrapet and Attur are already connected, and although the gradients of the present road are objectionable still, as long as there are other places of greater importance to which no roads at present exist, it would be undesirable otherwise to devote such means as may be available.

43. Attur and Kiggatnad will have communication when the road from Gonnikoppal to Kiggatnad has been opened, and although the distance is longer by about 3½ miles than the direct route, it has the advantage of passing through the town of Ponnampet, which is yearly rising in importance. With regard to the piece from Kiggatnad to the Wynad boundary, it would now seem notwithstanding the opinion entertained by the late Chief Commissioner as to its probable value, that it is not immediately wanted by Coorg, though doubtless useful to Wynad; and were ample funds available might be advantageously constructed. The only village, and this is a very small one, touched by it is Tavalkere, about 3 miles from Kiggatnad; after that the road runs through jungle until it joins the Manantoli road. It was found very difficult to open out the 3 feet trace, and these difficulties will be encountered when it may be required to collect large gangs of labor in furtherance of the work. It is estimated at Rs. 2,000 per mile, but doubts may be entertained whether this will suffice.

44. The annual receipts realized on account of District Funds are —

District Funds.

Ferry collections		Rs 700
Cattle fines		„ 2,000
Market fees		„ 1,000
Fees from staging bungalows		„ 300
Tolls on ghat roads		„ 18,000
	Rupees	22,000

Against this has to be charged establishment, including that required for collecting the tolls Rs. 6,500
Contribution to Imperial Funds „ 6,000
Miscellaneous public improvements „ 700
Repairs (say) „ 4,000
Rupees 17,000

leaving an annual balance of Rs. 5,000, for "Original Communications"; so that from 1874—75 to 1879—80, Rs. 30,000 would be available for this purpose, to which a further sum of Rs 17,500, being savings from previous years, may be added, giving a grand total of nearly Rs 48,000. The completion of the projects 1 to 7 inclusive, para 35, would alone cost 57,537 rupees, so that even for this portion of the programme the funds will prove insufficient, though no doubt most of the lines mentioned could be opened in a way that however incomplete would be of considerable service to traffic. The roads proposed to be handed over to District Funds, para 14, will not be able to contribute to imperial expenditure; but at the same time the probable saving effected under "Repairs Communications" of Rs. 6,025, *vide* statement B, will make up for this short-coming.

45. As owing to the reduction of the Budget and the practical abandonment of new road projects for Coorg, there was no further necessity to reply to the several points upon which information was sought in letter from the Government of India, No. 446 C of 14th July 1868, in reference to these schemes (para 13). I am now, however in the present state of the question, to advert to them. Information was required on the following points.

Replies to enquiries put by Government.

I. In the event of the new roads (Virarajendrapet-Periyapatna and Siddapur-Mercara) being constructed, will any expenditure beyond maintenance be required for the Periyapatna-Anechaukur, Hunsúr-Virarajendrapet, Bittengal-Periyambadi, Mercara-Periyambadi and Mercara-Periyapatna Roads?

II What will be the probable annual cost of maintenance of all the roads under both schemes?

III. What will be the probable cost of bringing all existing roads into a proper state for accommodating the main traffic?

IV Should it be decided to adopt the alternative under III, will it be necessary to convert the Virarajendrapete-Periyapatna Road into a cart road?

46 For convenience sake, it will be best to reply to these questions in inverse order.

47.—It can scarcely be doubted that even were the Hunsur-Virarajendrapet and Bittengal Periyambadi Roads put in thorough order, it would in a short space of time become absolutely essential to open out the line from Virarajendrapet to Periyapatna in order to accommodate cart traffic. This is a point upon which all the local authorities, planters and others, are united.

48 In no other part of Coorg has cultivation made such rapid strides; and so great has been the influx of population from Mysore and the western coast, that where formerly hardly a hut was to be seen, these now line the cart-track for miles at Siddapur, Anantpur, and Ahmati, and have encroached to such an extent as to lead to serious inconvenience. Once this road has been opened as far as Periyapatna, it is a certainty that the main-traffic must take this direction, and there would be no choice but to convert it into a main road. This reason alone, should, in the opinion of the Chief Commissioner, furnish a very strong argument against the expenditure of such large sums on the improvement of the road from Anechaukur *viâ* Bittengal to Periyambadi as would diminish the means that are certain to be required for that now adverted to.

49 Turning now to the existing roads (head III above) which would have to be improved, there are three, as follows

a—Approaches to Periyambadi Ghat (Road from Anechaukur to Bittengal and Bittengal to Periyambadi.)

(2) Road from [illegible] to Sampaji Ghat (Fraserpet-Mercara-Road)

provisional estimate [illegible] to be cased out; but from Periyambadi Road (Mercara-Virarajendrapet and Virarajendrapet-Periyambadi)

eighteen [illegible] The approaches to the Periyambadi Ghat enter Coorg near the 17th mile from the junction of this line with the Hunsúr-Mercara Road, and joins the Periyambadi Ghat at the 38th mile-stone, its length in Coorg is 21 miles. From the boundary to Bittengal (17 miles) it crosses a succession of steep hill spurs nearly at right angles; and this portion of the road is a continuation of abrupt rises and falls at a ruling gradient of 1 in 13, with occasional steeper pieces. There is no serious difficulty in tracing a new line with gradients of 1 in 20; but as this can only be done by going round the several spurs, the length of the road between the boundary and Bittengal, would probably thereby be increased to 24 miles. From Bittengal (34th mile) to the 36th mile-stone, the gradients are easy, and require very little alteration; but the 37th and 38th miles are very steep, occasionally 1 in 10, and must be retraced altogether, so that the aggregate length of this road to be altered would amount to 26 miles, and the distance from the boundary (Anechaukur) to Periyambadi be increased from 21 to 28 miles.

Approaches to the Periyambadi Ghat.

51. Besides the alteration required in the road itself, it would also be necessary to provide new iron superstructures for the following existing timber bridges —

Mavinhalla bridge, 2 spans, 35 feet each	11,000
Gonnikoppal bridge, 2 spans, 35 feet each	11,000
Attur bridge, 2 spans, 30 feet	10,000
2 Bridges at Bittengal, 20 feet span each 3 900	7,800
One bridge at Bittengal, 10 feet span	1,500
	41,300

52. This is, in reality, understating the requirements, as there are minor works to be dealt with. If iron be not employed for these bridges, fresh timber superstructures must, thus leading to enhanced future outlay.

53 It will further be necessary to metal the 26 miles of new road. The scarcity of stone here makes this description of work very expensive, the more so as the daily hire of a cart is rupees 1—12—0.

From a statement selected by the Assistant Engineer, showing the position of places from which stone and gravel were procurable, it would appear that the least metal distance per mile, so that in case of having to excavate such a large quantity of metalling, the material would have to be carried for still further away than thereat. The average cost of excavating and removing metalling per cubic yard may be reckoned at annas 2—12—3 and by extra carriage; but we take annas 3 as the following calculation :—

26 miles metalled, 6 yards wide, and 1 foot thick = 26 × 1760 × 6 × 1 = 12,48,960 cubic yards at Rs. 3 = 41,616

26 miles gravelling, 6 yards wide, and 1 foot thick = 26 × 1760 × 6 × 1 = 7,48,960 cubic yards at annas 8 = 4,160

Total Rs. 45,776

51 Assuming that the cost of opening out the alignment will not exceed the average Rs. 2,500 per mile, (too low if anything) the total cost of improving this road would stand thus :—

26 miles opening out alterations at Rs 2,500	..	65,000
Bridges	..	41,500
Metalling and gravelling	..	44,776
		1,51,276
Add contingencies 4 per cent ..	..	6,024
Total ..	..	1,57,300
or say	Rs.	1,60,000

Approaches to the Sampaji Ghat.

52. Approaches to Sampaji Ghat (Mercara-Fraserpet road.) On this road, the following miles must be retraced (the 2nd and 3rd only have already been altered since 1865,) 4th to 9th (Doddagere) the 12th, 13th, 14th, 15th, and 16th, total 11 miles. The three most important pieces, and which are at the same time the most difficult are, the 4th mile, the 7th mile, and the portion from the 12th to the 15th mile stones. From the 4th milestone there is a steep rise of 1 in 13; the road runs then for about three furlongs along the side slope of a hill, after which it changes hillsides, and falls with a very steep gradient (1 in 10) This latter piece about three furlongs is called the Boylkere Ghat, and during the rainy season is often takes carts a day to ascend. To alter the road it will be necessary to go along an outlying spur, and this can be done nearly at a level but before a junction with the main spur can be effected, either a valley about three hundred feet wide, and one hundred feet deep would have to be crossed over, or in skirting it, the road cut out of a nearly perpendicular hill side about one hundred feet high. Neither of these works present any serious engineering difficulty ; but the cost will be certainly not less than Rs. 10,000.

56. The deviation on the 7th mile is easily effected by crossing the paddy flat at another place, and going through a coffee estate belonging to Mr. McPherson ; but as this is a valuable plantation, the compensation for the land required by a new line, would probably be high. From the 12th to the 15th mile the road is a succession of steep rises and falls, many of them having a gradient of 1 in 13. It is evident that there are two alternative lines, the one running along the north face, and the other along the south face of the hill After a careful examination by the Assistant Engineer of both faces, it would appear that, as regards shortness and easy gradients, the north face is the best, but that there are several places where the road would have to be blasted through solid trap rock, some of them fifty to sixty feet high. On the other side there are no rocks, but the face of the hill is intersected with some five or six deep narrow gullies about twenty feet wide, dry in the summer, but roaring torrents during the monsoon. A trace about 1½ mile long, starting from the 15th mile-stone, has been made along this side ; but the expense of crossing the gullies prevented its being opened out. The deviation mentioned in the foregoing paras would lengthen the road by about three miles, so that fourteen miles alteration would have to be provided for, making the total distance from Mercara to Fraserpet 23 miles.

57 The data for metalling and gravelling being as shown in the annexed statement C Rs. 1—10—0 and 8 annas, respectively, the cost of putting the approaches (Fraserpet to Mercara) to the Sampaji Ghat in thorough order would be as follows :—

14 miles deviation at Rs. 2,000	..	28,000
Crossing at Boylkere	..	10,000
Compensation for land on 7th mile	..	5,000
Building gullies on alteration of 12th, 13th, 14th and 15th miles, No. 6 at Rs. 3,000	..	18,000
Metalling 14 miles, 14 × 1760 × 4 × 1 ÷ 12 = 8213 cubic yards at Rs. 1—10—0 =		13,346
Gravelling, 14 × 1760 × 6 × 1 ÷ 36, = 4107 cubic yards at annas 8 =		2,054
	Rs. ..	83,400
Contingencies ..	..	4,170
Total Rs ..	..	87,570
Or say Rs.		88,000

58 The first 3 miles of this road would have to be aligned *de novo* ; but this is not essential as the Kuggod Katagere road may be opened instead, and the heavy traffic could then pass along this short line, and up the Sumpaji Ghat, the distance being 1½ miles longer. The 6th 7th, 8th and 9th miles must be retraced, as also the 16th and half of the 19th In the piece from Virarajendrapet to Periyambadi about one mile, in detached pieces, will have to be altered ; so that the total retracing, leaving out the first three miles, would amount to 6½ miles. A rather costly work will be the Pandmand embankment (13th mile,) and inclusive of new bridge would not cost less than Rs 12,000 A bridge over the Cauvery should also as proposed in the original scheme for road improvements, be provided for. As this road is at present unmetalled with the exception of detached pieces, provision is necessary for metalling the whole line Summarizing the several improvements we have, —

Mercara-Periyambadi Road.

Alteration of 6½ miles of road at Rs 2,500	Rs	16,250
Opening Kuggod-Katigere road complete, inclusive of metalling		10,000
Pandmand embankment and bridge		12,000
Metalling 24 miles at Rs 2 per C yard 24 × 1760 × 4 × 1 ÷ 12 = 14,080 cubic yards at Rs 2		28,160
Gravelling 24 miles at 8 annas per C. yard 24 × 1760 × 6 × 1 ÷ 36 = 7,040 cubic yds		3,520
	Rs.	69,930
Contingencies .		3,496
Total Rs .		73,426

or say Rs 73,000

To this has to be added the bridge over the Cauvery, say Rs 1,50,000.

59 Abstracting the expenditure for improving and thoroughly finishing the existing roads, we obtain the following—

Cost of finishing Existing Roads.

Anechaukur-Periyambadi road (Approaches to Periyambadi Ghat)		1,60,000
Mercara-Fraserpet road (Approaches to Sampaji Ghat)		88,000
Mercara-Periyambadi road		73,000
Cauvery bridge .. .. Total Rs ..		1,50,000
		4,71,000

60. The expenditure from 1874—75 to 1879—80 of the alternative scheme as shown in Statement A, amounts to Rs 4,00,050 ; adding to this the balance 1,05,000 required to complete the Cauvery bridge gives a total of Rs. 5,05,050; but from this amount it will be necessary to deduct Rs. 25,000 for bridges on the Kodlipet road, which have not been taken into consideration in the Improvement scheme, so that the total expenditure would amount to Rs. 4,80,050,

Opening new roads . Rs. 4,80,050. Improving existing roads . Rs. 4 71,000.

To the latter will probably have to be added the cost of opening the Virarajendrapet-Periyapatna road, and the Kodlipet road bridges, which would raise the total of improving existing roads to Rs 6,38,000 against Rs. 4,80,050 ; shewing a practical saving, by adopting new scheme, of 1½ Laks.

Cost of maintaining roads under both Schemes.

61. It is now necessary to reply to the 2nd question put by Government *viz*, What would be the probable annual cost of maintenance of all the roads under both schemes? In statement B the maintenance of Imperial roads, when the new scheme is worked out, is shewn to amount to Rs. 35,750 , and in para 14 of this letter, it is stated that the undermentioned roads would have to be handed over to District Funds, and be kept up as 4th class roads Were it decided to maintain these lines from Imperial Funds, the following expenditure would have to be incurred in addition.

Approaches to Sampaji Ghat 20 miles at Rs. 150		3,000
Approaches to Periyambadi Ghat 21 miles at Rs 150		3,150
Road from Mercara to Virarajendrapet 20 miles at Rs. 150		3,000
		9,150
Add to this expenditure as per statement B		35,750
Total maintenance under new scheme. ..		44,900

62. Under the Improvement scheme no line would be handed over to District Funds ; and the maintenance required would be —

1st CLASS ROADS.

Periyambadi Ghat 13 miles at 550 Rs.		7,150
Approaches to do 28 miles (*Vide* para 50) at Rs 375		10,500
Sampaji Ghat 19 miles at Rs 400		7,600
Approaches to do 23 miles (para 55) at Rs. 300		6,900
Mercara-Periyambadi road 24 at Rs. 300..		7,200
Kuggod-Katigere road 2 at Rs. 300		600
Total 1st class 109 miles		39,950

2nd CLASS ROADS

Mercara-Kollipet road, 11 miles at Rs [illegible] ... 6,000

3rd CLASS ROADS.

Virarajendrapet-Periyapatna road, 10½ miles at Rs [illegible] ... 2,000

Grand Total Rs ... 15,000

so that the difference in favor of the new scheme as regards future expenditure, amounts to Rs 12,750 per annum if the 3rd Class roads be handed over to District Funds; and to Rs. 4,250, if they are still maintained from Imperial Funds.

63. With regard to the 1st question, para 63, it may be said that nothing but maintenance will be required for the roads mentioned therein.

64. As the Government in their letter under reply have requested special reference to matters contained in previous correspondence, I am directed to give the following corrected statement of distances referred to in para 10 of the Government of India letter, No 446 of the 14th July 1868.

Hunsur-Mercara

Correct lengths of existing and proposed roads.		
	Hunsúr-Periyapatna	13 miles
	Periyapatna-Virarajendrapet	17 "
	Virarajendrapet-Mercara	20 "
		46 "

Hunsur-Virarajendrapet

Hunsúr to Anechaukal	10 miles
Anechaukal to Hittengal	17 "
Hittengal to Virarajendrapet	3 "
	30 "

(This road was handed over to District Funds [illegible] years ago)

Hittengal Periyambadi road ... 4 "

Periyambadi-Mercara road

Periyambadi to Virarajendrapet	4 miles
Virarajendrapet to Mercara	20 "
	24 "
Total...	113 miles

Distances by proposed new lines.

Hunsúr to Periyapatna	13 miles
Siddapur to Periyapatna	18 "
Siddapur to Mercara	18 "
Siddapur to Virarajendrapet	10 "
Virarajendrapet to Periyambadi	4 "
	63 "

65. The corrected distances given in para 11 of the above quoted letter, would be as follows.—

	By existing roads	By existing roads improved	By proposed roads
1 Hunsúr to Mercara	46	42	42
2. Do Virarajendrapet	59	46	49
3. Do Periyambadi (top of the Ghat of that name)	40	47	41
4. Periyambadi to Mercara	24	24	32

So far as mere length is concerned, there would not be much gained by the new system of main roads; those chiefly of use to through traffic (Nos. 1 and 3 above) showing little practical difference in this respect. Their superior advantages in all other respects have it is hoped, however, been sufficiently explained to render further remark here unnecessary.

66. The best method in the opinion of the Local Administration for expending the extra funds placed at disposal having now, as far as possible, been laid before Government, I am to solicit consideration to the fact that, largely supplemental as the grants no doubt are, they do not adequately meet the very urgent requirements of the Province in two or three important respects.

Bridge over the Cauvery.

As above shewn, the bridge over the Cauvery river cannot be completed; no provision can be made for a new Jail at Mercara; and many District roads of acknowledged necessity, must stand over for lack of funds.

67. The necessity for constructing a bridge over the Cauvery has so frequently and prominently been brought under notice, that the Chief Commissioner will not again here revert to the matter; but he cannot conceal from Government the great anxiety he has felt on the subject of a new Jail.

Mercara Jail.

68. On the occasion of a late inspection of the existing Jail-buildings within the Mercara Fort, by the Chief Engineer, they were not only found to be beyond the reach of all ordinary repair, but to be in many places in a critically dangerous condition. The female ward was in a specially bad state. There was not room in the Hospital for more than half the sick. Proper seggregation of the different classes of prisoners (in all 90 in number) was an impossibility &c; and notwithstanding the most anxious efforts of all the local authorities, it has, I am to observe, become a question whether, owing to the bad state of the buildings, it may not ere long be necessary to remove a number of the prisoners from Coorg.

Vide letter from Government of India, Nos. 419 C of the 14th July 1868, and 307 A. G. of the 27th March 1872. para 2.

69. After the abandonment, from lack of funds, of the design which had been sanctioned for a new Jail, the hope was entertained of being enabled by constant attention and patching to make the old buildings answer till funds were again more at command; but, the attempt having failed, the question of how to provide suitable shelter for the prisoners has again, I am to observe, presented itself in a manner which the Chief Commissioner ventures to think calls for the immediate and serious consideration of Government.

70. In conclusion, I am to state that as the working season commenced in Coorg a short time since, and (owing to the fact of all the coolies and skilled workmen having to be imported from Mysore) that it would have been difficult, if not impossible, for the Assistant Engineer to make the requisite arrangements later on in the year for the labor needed for the execution of the works about to be undertaken from the extra grant of Rs 20,000, the Chief Commissioner has taken on himself to sanction the prosecution of the latter, in anticipation of the orders of the Government of India, on the programme for 1874—75, herewith submitted. The method of dealing with the repairs of the Palace roof under an estimate of Rs 8,531, included in the latter, has also been sanctioned.

71. While soliciting confirmation of Sir Richard Meade's action in this respect, I am to request the favor of early instructions on the whole case as now submitted, and the re-appropriation of the Rs.20,000, extra grant, which would bring the total grant for the current official year up to Rs 1,17,000.

72. The accompanying maps elucidating the present condition of the roads and the proposals now made, sufficiently explain themselves.

I have the honor to be

Sir,

Your most obedient Servant,

R H. SANKEY, *Lieut.-Col, R. E.,*

Secretary to the Chief Commissioner of Coorg, D. P. W.

A.

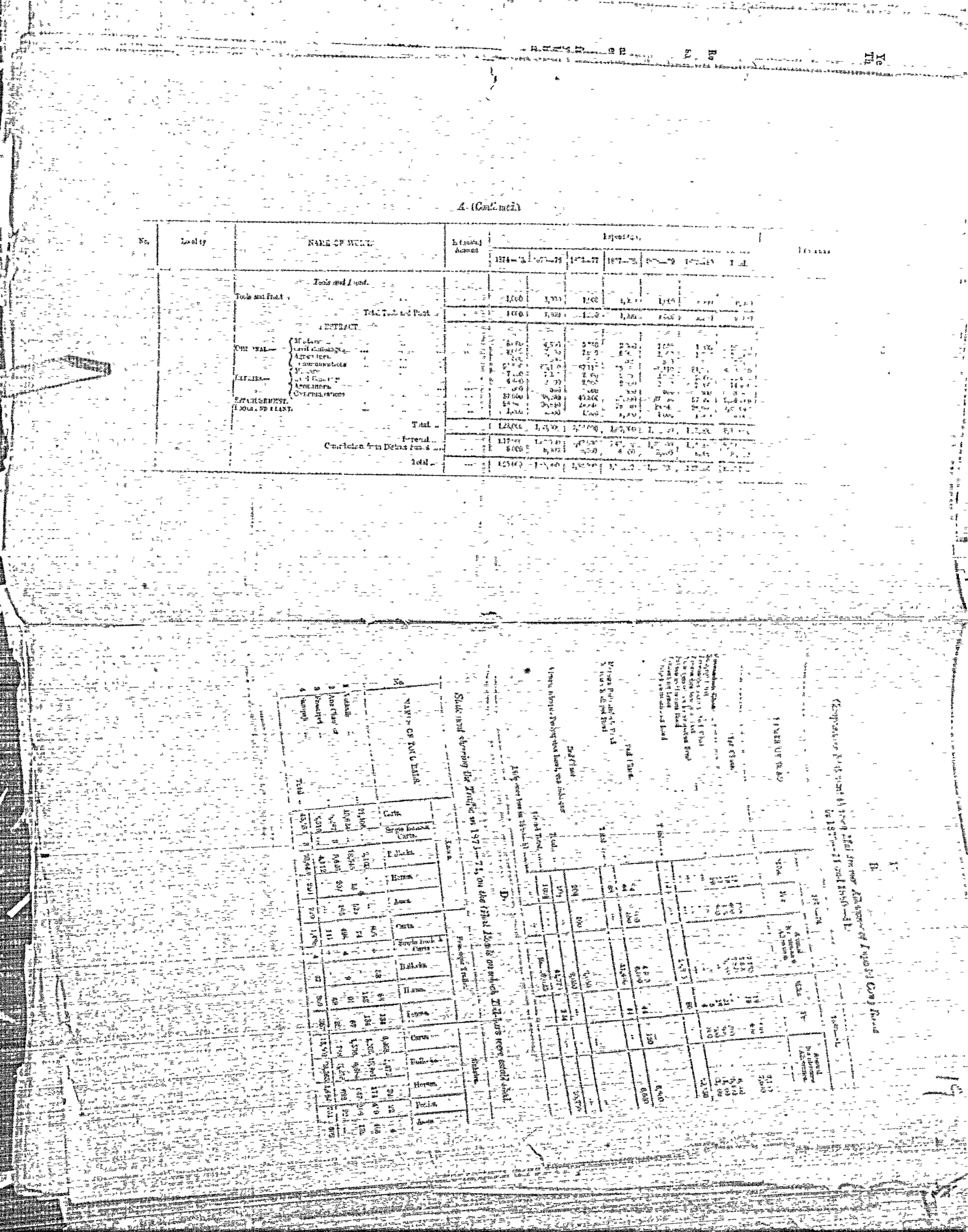
IMPERIAL COORG PROVINCE.

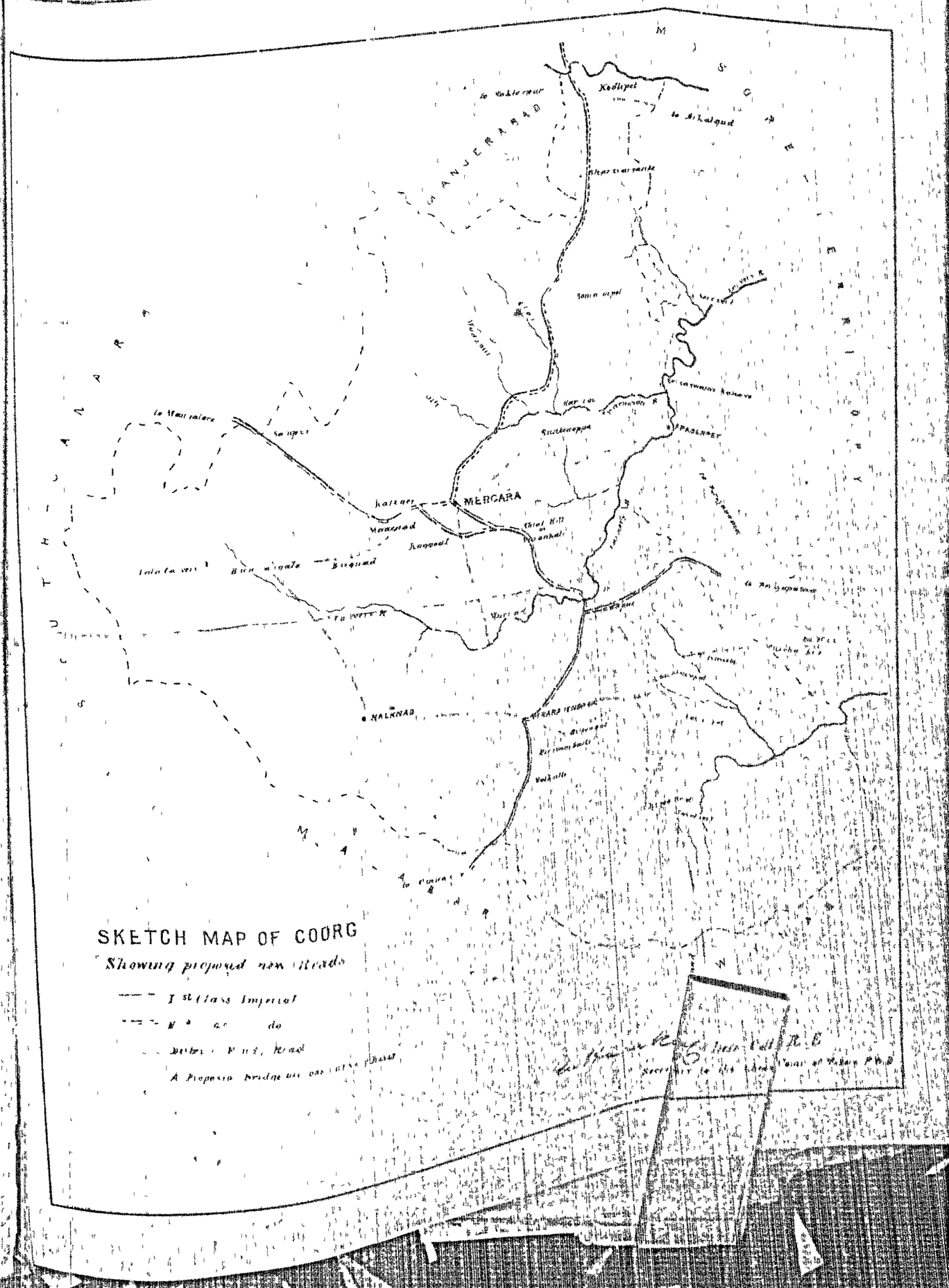
Forecast Statement of work to be executed from 1874—75 to 1879—80 and annual expenditure on each.

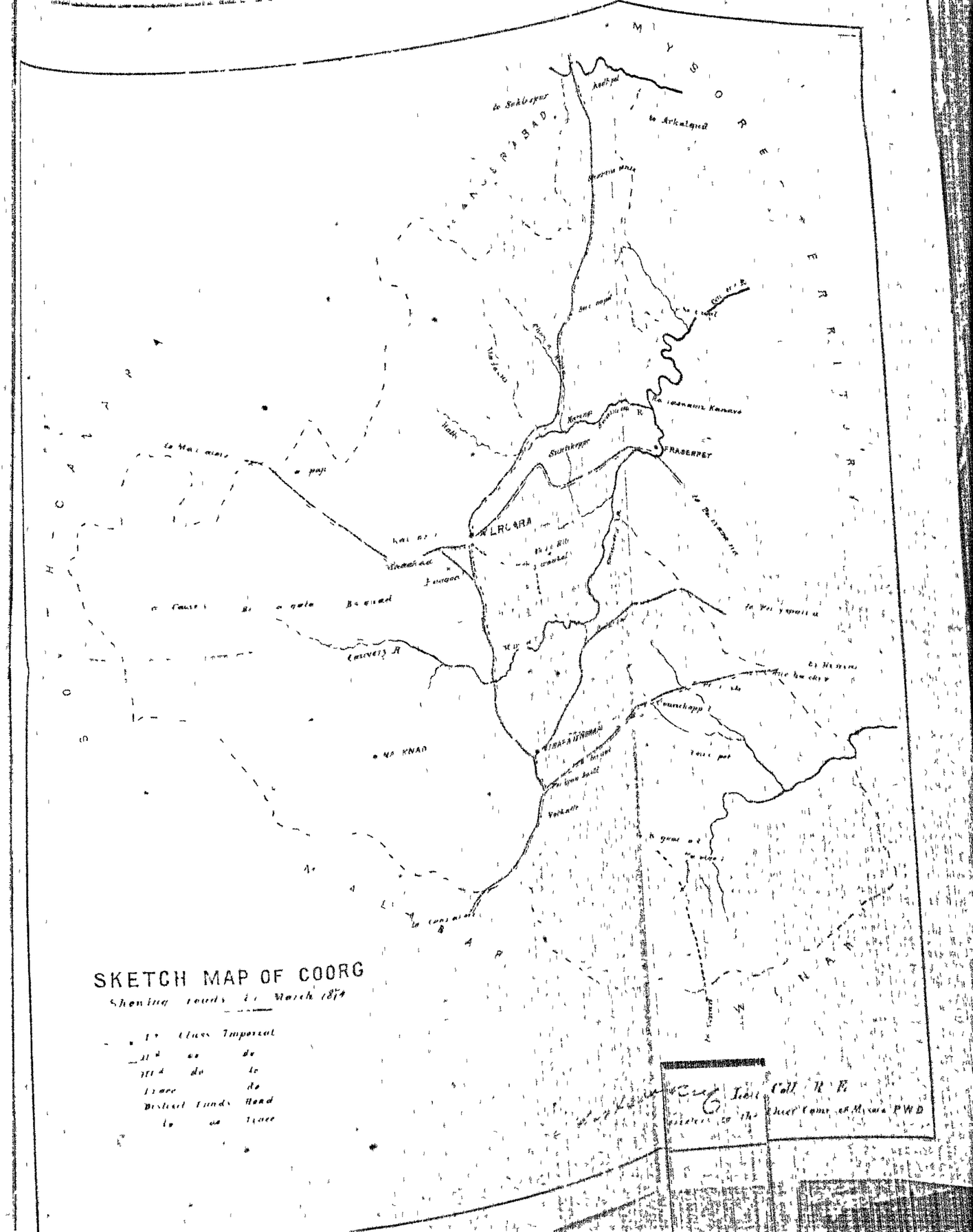
No.	Locality.	NAME OF WORK.	Estimated amount.	Expenditure 1874—75	1875—76	1876—77	1877—78	1878—79	1879—80	Total.	Remarks.
		— ORIGINAL WORKS.									
		"Military."									
1	Mercara	Line Barge for the use of the Regiment stationed at Mercara									
2	Do	Arms Enclosure (Inlaws)									
3	Do	Latrines with dry earth closets for male and female servants of Officers and Guards stationed at the Fort.									
4	Do	Lecturing cook room									
5	Do	Barrack cooking House, new wing &c.									
6	Do	Armourers Shop &c.									
7	Do	Hall & Staff Sergeants Quarters									
8	Do	Retaining wall (about 41 lineal Chains)									
		Total Military									
		"Civil Buildings."									
9	Do	Office for Assistant Superintendent, Executive Engineer and Assistant									
		Deduct expenditure in previous year									
		Balance									
10	Do	New Office Jail									
11	Somwarpet	Taluk Cutcherry									
12	Shanivarsante	Do									
		Reserve									
		Total Civil Buildings									
		"Agricultural."									
		Reserve									
		Total Agricultural									
		"Communications."									
13	No. I Sub-Division	Cheriabetta Bridge									
		Deduct expenditure to 31st March 1874									
		Balance	11,500 326 11,174	11,174	...	...	...	...	11,174	Completed	
14	No. II. Sub-Division	Kaddol Bridge									
		Deduct expenditure to 31st March 1874									
		Balance	11,174	11,174	...	...	...	...	11,174	Completed	
15	Do	Viraj ndrenet Peruapatna Road, 21 miles	1,42,000	13,000	20,000	27,000	20,000	30,000	12,000	1,42,000	Do
16	No. I Sub-Division	Sampaje-Mercara Road, 10 miles	1,25,000		25,000	27,000	27,000	25,000	2,000	1,26,000	Do
17	Do	Connecting line between Mercara-Shanpur and Kadgeri Kutgere Road 8 miles	21,000			3,000	4,500	7,500	6,000	21,000	Do
18	Do	Kadgeri Kutgere Road, Connecting the above with Sampaji Ghat, 2 miles.	17,586	2,000	8,000	7,000	500			17,500	Minor Repairs for this work if required to be provided from "Pollams Communications Reserve"
19	No. II. Do	Cavery Bridge at Siddapur	1,50,000				6,500	7,500	31,000	45,000	Not completed—1,05,000 Rupees required
20	No. I. Do	Bridge over the Hutta River, Mercara-Kohnet Road	15,000			2,000	4,000	6,000	3,000	15,000	Completed
21	Do	Do over the Mujanur River Do Do Do	10,000				1,000	4,000	5,000	10,000	Do
		Reserve		1,326	1,008	1,110	1,110	1,110	1,110	6,864	
		Total Communications.		30,500	65,110	67,110	73,110	81,110	81,110	4,00,000	
		REPAIRS.									
		"Military."									
	Mercara	Retaining Palace	8,851	8,250	5,281					8,531	
		Reserve		3,950	2,000	2,000	2,000	2,000	2,000	13,950	
		Total Military		7,150	7,281	2,000	2,000	2,000	2,000	22,481	
		"Civil Buildings."									
	Do	Repairs Central school	2,333	2,333						2,333	
		Reserve		2,067	2,000	2,000	2,000	2,000	2,000	12,067	
		Total Civil Buildings.		4,400	2,000	2,000	2,000	2,000	2,000	14,400	
		"Agricultural."									
		Reserve		500	500	500	500	500	500	3,000	
		Total Agricultural.		500	500	500	500	500	500	3,000	
		"Communications."									
		Perumalli Ghat, 13 miles at 550 Rs.		7,150	7,150	7,150	7,150	7,150	7,150	42,900	
		Approaches to Periyambur Ghat 21 miles at 271½ Rs.		5,700	5,700	5,700	5,700	5,700	5,700	34,200	
		Sampaji Ghat, 19 miles at 400 Rs.		7,600	7,600	7,600	7,600	7,600	7,600	45,600	
		Approaches to Sampaji Ghat 10 miles at 200 Rs.		4,000	4,000	4,000	4,000	4,000	4,000	24,000	
		Kadgeri-Somwarpett Road, 24 miles at 200 Rs.		4,800	4,800	4,800	4,800	4,800	4,800	28,800	
		Mercara-Kohnet Road, 44 miles at 150 Rs.		6,600	6,600	6,600	6,600	6,600	6,600	39,600	
		Reserve		1,200	2,419	4,450	1,200	1,200	1,200	11,669	
		Total Communications.		37,050	38,269	40,300	37,050	37,050	37,050	2,26,769	
		Establishment.									
		Direction		3,810	3,810	3,810	3,810	3,810	3,810	22,860	
		Construction and Repairs		23,030	23,030	23,030	23,030	23,030	23,030	1,38,180	
		Total Establishment		26,840	26,840	26,840	26,840	26,840	26,840	1,61,040	

A (Contd.)

No.	Locality	NAME OF WORK	Estimated Amount	Expenditure						
				1974–75	1975–76	1976–77	1977–78	1978–79	1979–80	1980–81
		Tools and Plant								
		Tools and Plant								
		Total Tools and Plant								
		EXTRACT								
		CIVIL WORKS — Workshop, Land Buildings, Approaches, Compounds								
		ELECTRICAL — Workshop, Land & Buildings, Approaches, Overhead Lines								
		ESTABLISHMENT (Tools & Plant)								
		Total								
		Interest								
		Contribution from Distt. Funds								
		Total								




SANJERABAD
KUTHIANAD
Kodlipet
to Arkalgud
to Hassan
to Periapatna
MERCARA
Chief Hill
Station
Bhagamandala
Bhagamandala
NALKNAD
to Cannanore
to Tellicherry
to Manantoddy
to Seringapatam
to Mysore
SKETCH MAP OF COORG
Showing proposed new Roads
1st Class Imperial
do
Dotted do
A Proposed bridge


MYSORE TERRITORY
MALABAR
SUNKERGUNDA
FRASERPET
VIRAJENDRA
SKETCH MAP OF COORG
Showing roads in March 1874
1st Class Imperial
2nd do do
3rd do do
Trees do
District Funds Road
do do Trees

Enclosure to letter to Government of India, No. 15 B. C. dated 2 8th August 1874

C.

SAMPAJI GHAT.

Data for work

Collection of stone on 5th, 8th, 9th, 10th, 11th, 12th, 13th, and 14th Miles —

Mile.

	Rs	As.	P.
2 men dig and convey to road side one Cubic yard of metal procurable at an average of 100 yards at 4 annas	0	8	0
To every 15 Coolies 1 Daffedar at 5½ annas therefore 2 (5½÷15)= ..	0	0	9
Cost of collecting 1 cubic yard of stone Rs	0	8	9

Collection of stone on 15th, and 16th Miles.

Stone procurable within 50 yards from road side —

1½ Coolies dig and convey to road side 1 cubic yard of stone at	0	4	0 ..	0	6	0
Proportion of Daffedar ½ (5½÷15)=				0	0	7
Cost of collecting 1 cubic yard of stone Rs.				0	6	7

Breaking and Stacking metal.

2½ men break and stack 1 cubic yard of metal at annas 4	0	10	0
Proportion of Daffedar 2½ (5½÷15)=	0	0	11
Cost of breaking and stacking 1 cubic yard Rs.	0	10	11

Spreading metal

1 Woman will spread one cubic yard of metal covering 3 running yards of road. Allow one man for every 10 women for filling basket, shaping metal and packing it. 1760÷3=587 women at 2½ annas ..	91	11	6
59 men at 4 annas	11	12	0
17 Daffedars at 5½ annas	5	13	6
6 men and 6 women will water and tamp 100 running yards of road.			
1760÷100×6= 106 men at 4 annas	26	8	0
106 women at 2½ annas	16	9	0
11 Daffedars at 5½ annas	3	12	6
Total	159	2	6

Rs. 159 2 6÷586=0 4 4 per cubic yard

Gravelling

2 men will dig and fill 9 cubic yards, deduct from this 2 cubic yards for top soil, leaves 7 cubic yards of gravel at 4 annas per man ..	0	8	0
A cubic yard contains 65 baskets and a woman will carry per day 50 baskets to a distance of ¼ furlong 65×7÷50=9 women to convey 7 cubic yards at 2½ annas	1	6	6

7 Cubic yards of gravel will cover 42 running yards, 1 inch thick and 6 yards wide and to dress, water and tamp this, 4 men and 3 women are required.

4 men at 4 annas	1	0	0
3 women at 2½ annas	0	7	6
1 Daffedar at 5½ annas	0	5	0
Total	2	11	6

Rs. 3 11 6÷7=0 8 6 per cubic yard.

Abstract for metalling on 8th, 9th, and 10th miles.

Collections	0	3	9
Breaking and stacking	0	10	11
Bottelling road	0	2	8
Spreading	0	4	4
Total	1	10	8

or say Rs 1 11 0, per cubic yard.

Approaches to the Sanrain Ghat

Collection of stone.

2 men dig and convey to road side 1 cube yard of metal procurable at an average of 100 yards at Rs 0 [illegible] 9			
To every 15 coolies 1 Daffedar at " 0 5 6, therefore 2 (5½–15)			
Cost of collecting 1 cubic yard of stone Rs			

	Rs	As	P
	0	7	6
	0	0	9
	0	8	3

Collection of Stone.

Stone procurable within 50 yards from road side

1½ coolies dig and convey to road side 1 cubic yard of stone at 3 annas and 9 pies			
Proportion of Daffedar ½ (5½ – 15)			
Cost of collecting 1 cubic yard of stone Rs.			

	0	5	7
	0	0	7
	0	6	2

Breaking and Stacking metal

2½ men break and stack 1 cubic yard of metal at 3 annas and 9 pies			
Proportion of Daffedar 2 (5½–15)			
Cost of breaking and stacking 1 cubic yard Rs			

	0	9	4
	0	0	11
	0	10	3

Spreading metal

1 woman will spread 1 cubic yard of metal covering 3 running yards of road Allow one man for every 10 women for filling basket, shaping metal and packing them 1760–3=587 women at 0 2 4 [illegible] 85 9 8

59 men at Rs. 0 [illegible] 9			
17 Daffedars at Rs. 0 5 6			
6 men and 6 women will water and tramp 100 running yards of road 1760–100 × 6=106 men at Rs 0 3 9			
106 women at Rs 0 2 4			
11 Daffedars at 4 annas			
Rs 149 5 0 ÷ 586=0 4 1 per cubic yard			

	13	13	3
	3	13	6
	21	13	6
	15	7	4
	12	6	
Total	149	5	9

Gravelling

2 men will dig and fill 9 cubic yards, deduct from this 2 cubic yards for top soil, leaves 7 cubic yards of gravel at Rs 0 3 9 per man			
A cubic yard contains 65 baskets and a woman will carry per day 50 baskets to a distance of ½ furlong			
65 × 7 – 50 = 9 women to convey 7 cubic yards at Rs 0 2 4			
7 Cubic yards of gravel will cover 42 running yard, 1 inch thick and 6 yards wide and to dress, water and tramp this 4 men and 3 women are required			
4 men at Rs 0 3 9			
3 women at Rs 0 2 4			
1 Daffedar at Rs. 0 5 6			
Rs 3 [illegible] 0 – 7 = 8 annas per cubic yard			

	0	7	6
	1	5	0
	0	15	0
	0	7	0
	0	5	6
Total	3	8	0

Abstract for metalling

Collection	0	8	3
Breaking and stacking	0	10	3
Gravelling road	0	2	6
Spreading	0	4	1
Total Rs per C.Yd	1	0	1

Periyambady Ghat.

Collection of stone, (except below Woority.)

2 men dig and convey to road side 1 cubic yard of metal procurable at an average of Rs 0 4 3			
To every 15 coolies 1 Daffedar at Rs 0 6 0			
Cost of collecting 1 cubic yard of stone Rs.			

	0	6	6
	0	0	10
	0	9	4

Collection of stone (below Woority) 37th, 36th and 35th miles—(Coolies have to march about 10 miles per day)

2½ men dig and convey to road side 1 cubic yard of stone at Rs. 0 4 3			
Proportion of Daffedar			
Cost of collecting 1 cubic yard of stone Rs			

	Rs	As	P.
	0	10	8
	0	1	0
	0	11	8

Breaking and Stacking Metal

(Except Below Woority)

2½ men break and stack 1 cubic yard of metal at Rs 0 4 3			
Proportion of Daffedar 2½ (6–15)			
Cost of breaking and stacking 1 cubic yard Rs			

	0	10	8
	0	1	0
	0	11	8

Breaking and Stacking Metal—*(Below Woority)*

37th, 36th, and 35th Miles.

3 men break and stack 1 cubic yard of metal at Rs. 0 4 3			
Proportion of Daffedar 3 (6–15)			
Cost of breaking and stacking 1 cubic yard (below Woority) Rs			

	0	12	9
	0	1	2
	0	13	11

Spreading metal. (except below Woority)

1 Woman will spread 1 cubic yard of metal covering 3 running yards of road Allow one man for every 10 women for filling basket, shaping metal and packing it

1760–3=587 women at Rs 0 2 6			
59 men at " 0 4 3			
17 Daffedars at " 0 6 0			
Gmen and 6 women will water and tramp 100 running yards of road 1760 –100 × 6 = 106 men at Rs 0 4 "			
106 women at " 0 2 6			
11 Daffedars at " 0 6 0			
Rs 162 9 9 ÷ 586=0 4 5 per cubic yard			

	91	11	6
	15	10	9
	6	6	0
	28	2	6
	16	9	0
	4	2	0
Total	162	9	9

Spreading metal (below Woority)

1½ women will spread one cubic yard of metal covering 3 running yards of road Allow 1½ men for every 10 women for filling basket, shaping metal and packing at Rs. 4 × 1730 ÷ 3 × 9 = 782 women at Rs 0 2 6

104 men at " 0 4 3			
33 Daffedars at " 0 6 0			
8 men and 8 women will water and tramp 100 running yards of road 1760 × 3 100 — 111 men at Rs 0 4 "			
111 women at " 0 2 6			
14 Daffedars at " 0 6 0			
Rs 226 14 9 – 586 = 0 6 2 per cubic yard.			

	122	3	0
	27	10	0
	12	6	0
	37	7	3
	2	0	6
	5	4	0
Total	226	14	9

Gravelling (except below Woority).

Two men will dig and fill 9 cubic yards, deduct from this 2 cubic yards for top soil, leaves 7 cubic yards of gravel at Rs 0 4 3 per man

A cubic yard contains 65 baskets and a woman will carry per day 50 baskets to a distance of ½ furlong

65 × 7 = 50 = 9 women to convey 7 cubic yards at Rs. 0 2 6

Seven cubic yards of Gravel will cover 42 running yds. 1 inch thick and 6 yds. wide and to dress, water and tramp this, 4 men and 3 women are requested.

4 men at Rs 0 4 3			
3 women at " 0 2 6			
1 Daffedar at " 0 6 0			
Rs. 3 13 6 ÷ 7 = 0 8 9 per cubic yard.			

	0	8	6
	1	6	6
Total	3	13	6

Gravelling (below Woority).

2½ men will dig and fill 9 cubic yards, deduct from this 2 cubic yards for top soil, leaves 7 cubic yards of gravel at Rs 0 4 3 per man

A cubic yard contains 65 baskets and a woman will carry per day 10 baskets to a distance of ½ furlong 65 × 7 – 40 = 11 women at Rs. 0 2 6

	0	11	4
	1	11	6
Carried over	2	6	10

				Rs	As	P
			Brought forward	2	6	10

Seven cubic yards of gravel will cover 42 running yards 1 inch thick and 6 yards wide and to dress, water and tamp this 5⅓ men and 4 women are required

5⅓ men at	Rs.	0	4	3	1	6	8
4 women at	„	0	2	6	0	10	0
1 Daffedar at	„	0	6	0	0	6	0
				Total	4	13	6

Rs 4 13 6÷7=0 11 1 per cubic yard

Abstract for metalling (except below Woority)

Collection	0	9	4
Breaking	0	11	8
Barrelling	0	2	10
Spreading	0	4	5
	1	12	3

or say Rs 1 13 0 per cubic yard

Abstract for metalling (below Woority)

Collection	0	11	8
Breaking	0	13	11
Barrelling	0	3	3
Spreading	0	6	2
Total Rs. per cubic yard	2	3	0

APPROACHES TO THE PERIYAMBADY GHAT

Gravelling.

6 men will dig and fill 27 cubic yards, deduct from this 6 cubic yards for top soil, leaves 21 cubic yards of gravel at Rs 0 3 11 .. 1 7 6

A cubic yard contains 65 baskets, and a woman will carry per day 560 baskets to a distance of 1 furlong

65×21÷25=55 women to carry 21 cubic yards at Rs. 0 2 1 .. 7 2 7

21 cubic yards of gravel will cover 42 running yards, 3 inches thick and 6 yards wide and to dress, water and tamp this 4 men and 3 women are required

4 men at	Rs	0	3	11	0	15	8
3 women at	„	0	2	1	0	6	3
1 Daffedar at	„	0	6	0	0	6	0
				Total	10	6	0

Rs. 10 6 0÷21=0 7 11 per cubic yard or say 8 annas

MERCARA PERIYAMBODY ROAD

Collection of metal.

Two men dig and convey to road side 1 cubic yard of metal procurable at an average of 100 yards at Rs 0 3 11 0 7 10

To every 15 coolies, 1 Daffedar at 6 annas, therefore 2 (6÷15)= 0 0 10

Cost of collecting 1 cubic yard Rs. .. 0 8 8

Breaking and Stacking metal

2½ men break and stack 1 cubic yard of metal at Rs 0 3 11 .. 0 9 10

Proportion of Daffedar 2½ (6÷15)= .. 0 1 0

Cost of breaking and stacking 1 cubic yard Rs. .. 0 10 10

Spreading metal.

One woman will spread 1 cubic yard of metal covering 3 running yards of road. Allow one man for every 10 women for filling baskets, shifting metal and packing it. 1760×6÷3=587 women at Rs 0 2 1 .. 76 6 11

59 men at	Rs	0	3	11	14	7	1
17 Daffedars at	„	0	6	0	6	6	0
				Carried over	97	4	0

6 men and 6 women will water and tamp 100 running yards of road.

				Rs.	As.	P
			Brought forward	97	4	0
1760×6÷100=106 men at	Rs	0	3	11	25	15	2
106 women at	„	0	2	1	13	12	10
11 Daffedars at	„	0	6	0	4	2	0
				Total	141	3	0

Rs. 141. 2 0÷586=0 3 10 per cubic yard.

Cartage ½ mile

One cart will make 10 trips and convey ½ cubic yard of metal each time therefore 5 cubic yards 1 8 0

Rs 1 8 0÷5=0 4 10 per cubic yard

Gravelling.

Same as Approaches to Periyambadi ghat viz., 0 7 11 or say 8 annas per cubic yard.

Abstract for,

	Metalling	Spreading metal previously prepared.
Collection	0 8 8	0 0 0
Breaking and stacking	0 10 10	0 0 0
Barrelling	0 2 7	0 3 7
Spreading	0 3 10	0 3 10
Cartage	0 4 10	0 4 10
Total Rs.	1 14 9	0 11 3
or say Rs.	2 0 0	or say Rs. 0 12 0

MERCARA-KODAGHEY ROAD

Collection of Stone.

1½ coolies dig and convey to road side 1 cubic yard of metal at Rs 0 3 9 0 5 7

Proportion of Daffedar .. 0 0 7

Cost of collecting 1 cubic yard of stone Rs .. 0 6 2

Breaking and Stacking

2 men break and stack 1 cubic yard of metal at Rs. 0 3 9 .. 0 7 6

Proportion of Daffedar 2(5½ - 15)= .. 0 0 2

Cost of breaking and stacking 1 cubic yard Rs. 0 7 8

Spreading metal.

Same as Approaches to Sampagi ghat, *viz.*, at 0—4—1 per cubic yard.

Gravelling

Same as Approaches to Sampagi ghat *viz.*, at 8 annas per cubic yard.

Abstract for metalling

Collection	0	6 2
Breaking	0	8 3
Barrelling	0	1 3
Spreading	0	4 1
Total ..	1	3 9
or say Rs. ..	1	4 0

Copy C.

Government of India

Public Works Department

Civil Works

Communications.

To

The Chief Commissioner of Coorg

Lt. Colonel Mitchell

Sir,

3. I am also to notice that no Revenue has apparently been made from the Funds towards the construction of the Line to Virajpet Frontier, but it is proposed to carry it out from District funds, and apparently not for some years to come, since it is entered as 8th, 9th and 10th in order of importance of the District roads to be constructed. It is to be remembered however, that the Government of India completed the line in Wynaad at an expense of Rs 40,000 in expectation of it being continued in Coorg and I am therefore to request that you will please acquaint me

communication with that Government on the subject and include with the forecast Duchess solution of the matter as may be deemed satisfactory.—

Steven Esq
Sec. to C.H. Dickens Esq. C.B. C.S.
Secy to the Govt of India.
True Extract
D.R. Lindsay Lt Col. R.E.
Offg Inspr Genl Irrigation & Chief Engineer Coorg & Mysore

Sub Circle 6 1875

Mysore 1871

Coorg

9 Dec 74. Surveys.
1 Feb 75 — 6 & 8 C.
2 Jul 75 — — 3.

Public Works Department.

1875.

Board of Revenue,

MADRAS.

PROCEEDINGS 1ST MARCH 1875, No 483.

9-25 Mar 75
Encl 2

Received

MARCH

No 483

South Coorg Road—towards Manantoddy—Letter from President of Malabar Local Fund Boards, forwarding copy of one from Special Executive Engineer reporting, with reference to the inquiry made by Secretary to Chief Commissioner of Mysore, as to what should be the precise class and character of the proposed road, submitted to Government.

P. No: 1875 Dept.
No: 1661

From

The Chief Secy.
Fmb. Dept.

Dd 9th March
No 12 — } 1875.

E. 2 G.O. No. 850. 21-7-74

Transferring Proceedings of the Bd of Revenue submitting a letter from the President of Malabar Local Fund Boards, forwarding copy of one from the Special Executive Engineer reporting in the returned to the inquiry made by Secretary to the Chief Commissioner of Mysore as to what should be the pay, grade, class and character of the South Coorg Road towards

No 845

Lab 3-75

Public Works Department

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the

READ the following :—

Pro: of the Board of Revenue } (Rl No. 483 of 1st March
Thro' the Fmb Dept }

Ordered that the a
letters be forwarded to th
Chief Commissioner Mys
with reference to letter from
Secretary Rl No. 2694 dat
21st November 1874, and that the
following letter be dictated

Spl & Fmb Works
Fmb Dept
Dispd 1-4-75

Rl No. of

To The Chief Commissioner
Mysore

Sir,

Under the orders of
His Excellency the Governor
in Council I have the
honor to submit Copies of
letters from the Resident

The Local Sund Boards
Kalabar, and from the
Jail Executive Engineer
Grand on the subject of
proposed Sixth Coorg
adjutant Calls upon which
Lords full information
the subject of your
Endorsement Letter No. 2874
dated 18th October 1875.

(Illegible) - 1-12-76
under G.O. No. 3329
of 1875-

Local Fund Boards

PUBLIC WORKS.

Chief Commissioner
Mysore
&
Ex Officio
Secretary to Government.

No. 425-647.

Bangalore, Dated 16th