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MADRAS RECORD OFFICE.**Government of Madras.***Public Works* **DEPARTMENT.**

G.O. No. 3498

Press
~~Mis.~~

452-453

Dated 20-11-

1865.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
20th November 1865.*

No. 452. Read the following Proceedings of the Madras Government in the Marine Department, dated 11th November 1865, No. 238 :—

Read also the following Proceedings of the Madras Government in the Public Works Department, dated 30th October 1865, No. 3,267.

1. The removal of the Mangalore flagstaff to a more convenient spot has been sanctioned in the Proceedings of the 8th instant, No. 235.
2. The Collector's recommendation that the lighting apparatus of the light-house be improved, is referred for the report of the Superintendent of Marine.

(True Extract.)

(Signed) A. J. ARBUTHNOT,
Chief Secretary.

No. 453. ORDER THEREON, 20th November 1865, No. 3,498.

CIVIL WORKS, No. 68.

Communicated to the Superintending Engineer of the 7th Division, with reference to paragraph 3 of the Order of the 30th ultimo, No. 3,267.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Superintending Engineer of the 7th Division.
.. Board of Revenue.

Exd. S. T. Augustin,

*Proceedings of the Madras Government, Public Works Department,
30th October 1865.*

No. 754. Read the following Proceedings of the Board of Revenue, dated 10th October 1865, No. 6,390 :—

Read the following letter from the Collector of South Canara, to the Acting Secretary to the Board of Revenue, dated Mangalore, 9th August 1865, No. 116.

1. I have the honor to submit my Report on the operations of the Public Works Department for the past official year: my acquaintance with the District being but limited, I trust I shall be excused for any deficiencies that may appear therein.

2. The Budget grant for the year was originally Rupees 82,020, viz.,

Part I. New works ...	Rupees 33,920
II. Repairs ...	48,100
	<u>82,020</u>

To this was subsequently added the sum of Rupees 28,138, thus making the total sum available for expenditure Rupees 1,10,158.

3. Under the head of "Income tax," there was, however, a further grant of Rupees 7,640, which, with Rupees 1,790 remaining in my treasury from the previous year, and a further sum of Rupees 130 in the hands of the Departmental Officer, amounted to Rupees 9,560, and adding this to the sum above named, the grand total of receipts available for the expenditure of the year was Rupees 1,19,718, as shown below :—

	RS.
Original Budget provision ...	82,020
Subsequent additions thereto ...	28,138
Income tax grant for the year ...	7,640
Arrears of the latter remaining for the year 1863-64 ...	1,920
Total ...	<u>1,19,718</u>

4. From the subjoined Statement it will be seen that the total expenditure in the past year was Rupees 1,18,266 against Rupees 88,025 in the preceding year, showing an increase in Rupees 23,763* under the head of "New Works," and in Repairs of Rupees 6,478 (inclusive of tools Rupees 840), the whole increase being Rupees 30,241 :—

	Expenditure of 1863-64.	Expenditure of 1864-65.	Increase.	Decrease.	Estimate of 1865-66.
	RS.	RS.	RS.	RS.	RS.
IMPERIAL FUNDS.					
NEW WORKS.					
Communications ...	37,274	53,566	16,292		13,610
Buildings ...	6,618	7,603	957		3,060
	<u>43,892</u>	<u>61,171</u>	<u>*17,249</u>		<u>16,610</u>
REPAIRS.					
Communications ...	35,684	41,825	5,641		42,125
Buildings ...	5,896	5,893		3	7,120
	<u>41,580</u>	<u>47,218</u>	<u>5,641</u>	3	<u>49,245</u>
Cost of tools ...	85,503	1,08,389	22,890	3	65,855
	...	840	840		As per Budget.
Total Imperial	85,502	1,09,229	23,730		Additional grants under Reserve, Buildings and Communications... 10,108
Add Income-tax expenditure...	2,523	9,037	*6,514		
	<u>88,025</u>	<u>1,18,266</u>	<u>Net. 30,241</u>		<u>Total... 75,963</u>

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5. I will now proceed to notice the more important of the works which have been carried out, and in the order of their importance.

Manjerabad Ghaut, and the road leading thereto.
Trunk Road No. III.

of this Rupees 2,030 has been actually expended in blasting rock, in re-tracing the line of road in some places, and otherwise generally improving the same. This line of communication was inspected throughout by Mr. Morris in November last, but previous to the carrying out of the improvements. I hope myself, ere long, to have an opportunity of seeing the road myself, but I have been told by a gentleman residing at this station, and who lately visited Munjerabad, that the ghaut leading thereto has been very greatly improved.

7. On this line of road the following bridges have been or are nearly completed, and will be available for traffic shortly after the monsoon:—

1. Bridge at Wollajee, seventeenth mile.—Commenced in the year 1863-64, has been completed in the past year at an expense of Rupees 1,956.

2. Bridge No. III. also commenced in the same year.—Has now been completed at a cost of Rupees 2,161, with the exception, however, of the earth work forming the approaches.

3. Bridge at Kadambala.—This bridge, and which has to be re-constructed as observed by Mr. Morris in his Report of last year, for the fourth time, is now completed (with the exception of the approaches) at a cost of Rupees 4,650.

4. New wooden platform to the Rajikar.—Completed.

5. Cabinholly bridge.—This bridge, and for which an estimate of Rupees 5,272 was sanctioned, is nearly completed, the expenditure having been Rupees 5,294.

6. Dackinholly bridge.—Completed at a cost of Rupees 903.

7. Bridge west of Wallal.—Foundations and piers completed at a cost of Rupees 414.
Charmade Ghaut, and road leading thereto.

1. Maniholla bridge, near Buntwal, completed with the exception of the parapets and part of the wing walls; the total expenditure incurred has been Rupees 6,568. Estimate, Rupees 6,120.

2. Beltangadi bridge, total expenditure Rupees 10,458.—All the laterite work completed, transverse beams laid, and planking commenced. Estimate, Rs. 11,100.

3. Nedajal bridge nearly completed, but not yet open to traffic.—A very large work; expenditure during the year Rupees 10,315.

4. Bridge over Moondajee nullah.—This work is likewise approaching completion; expenditure incurred Rupees 1,925 in the year under report.
New road leading from Vittal to Hosdroog.

8. This road, the estimate for which was Rupees 34,460, and out of which expenditure of the year under report having been Rupees 8,017, making the total expenditure up to the 1st May, Rupees 31,244. For this, thirty-six and three-quarters of a mile of road have been opened, and eight and a quarter miles remain to be completed in the present year. This road was inspected by Mr. Sewell in February last, and the parts completed are reported by him to have been well executed, and the gradients generally easy.

9. The following bridges have either been constructed or preparations made for their construction in the past year:—

1. Bridge over the Koddar. Estimate, Rupees 3,940
Materials collected " 455

2. Wokettur bridge; amount of expenditure incurred Rupees 5,827. Estimate, Rupees 3,550.

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(This bridge was completed, but I regret to have to add that it has given way entirely during the present monsoon).

3. Two minor bridges have been completed at a cost of Rupees 851. Estimate, Rupees 1,065.

10. Several bridges are, however, still required to make this line practicable for bandies.

11. Out of Income-tax funds, the following sums have been expended on the several communications specified. I regret my inability to furnish any particulars regarding these works:—

	RS.
Improving and draining Karkal and Pudbidri road	1,778
Do. Mulki and Mudbidri road	2,180
Opening new road between Puttur and Manjeshwar	2,473

12. The buildings, &c., constructed during the past year are as follow:—

	RS.
Extension and improvement of the Quay (Income-tax Fund)	1,730
Salt Koty at Mangalore	720
Police Hospital at do. and Dresser's house	1,483
Sub-station houses, and Police stations	2,405
Alterations in the Taluq Cutcherry at Mangalore	200
Adapting the Munsiff's Court for a Department Public Works Range Office	306
Completion of the Bungalow at Siradi on the Munjerabad road, Trunk No. III.	2,440
Total	9,284

13. None of these works seem to call for any particular remark; the buildings were, however, all very much required, and supply wants which were much felt.

14. REPAIRS.—The amount sanctioned for repairs on the line was Rupees 7,260, of which Rupees 7,256 was spent chiefly in re-metalling the road; the road is reported generally to be in very fair order within the limits of this District; a land slip has, however, taken place in the Sumpajee ghaut about ten miles from Mercara, in the District of Coorg, and the communication by carts is at present stopped.

15. Rupees 4,426 have been spent in repairing and improving this road the, sanction being Rupees 4,400. The western section is in good order from the village of Mani (where the road branches from No. 11) to Upinangadi; to the east of this, and as far as Siradi, the road has been much improved by blasting and removing rocks. Eastward of Siradi, and up to the frontier, the old line has in many parts been abandoned, and a new trace opened up to four yards width. The road throughout is now quite practicable for carts, and the Cabinholly bridge (the only obstruction during the monsoon) will also shortly be opened.

16. Out of the allowance of Rupees 4,620 for repairs to this road, Rupees 4,564 have been spent; the works have been chiefly the blasting and removal of rocks, and the widening of the road generally; the road is now passable for bandies in the dry season, and when the bridges now under construction are completed, it will be available for traffic all seasons.

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Road from Mangalore to the Agoomby Ghaut
via Karkal.

penditure incurred has been in completing the Belway bridge, and in metalling and improving the road generally.

Colloor Ghaut line.

17. Rupees 3,410 have been expended on this line, being Rupees 110 within the sanctioned amount, the expenditure incurred has been in completing the Belway bridge, and in metalling and improving the road generally.

18. This road was inspected by Mr. Ball, the Deputy Collector, to whom I am indebted for the following remarks:—"The first portion of the line between Cundapur and Wandase (ten miles) is merely a bridle-path, up hills and down valleys; the whole distance should be re-traced to render it any ways useful for passengers or traffic. Two branches of the Cundapur river, however, prove a serious obstacle; and it may probably have been on this account that this bit of road has not been opened out hitherto, while the road has been completed to Wandase

"The road between Wandase and Jedkal (eight miles) is in fair order, but narrow and steep at some places; and should be improved. Several drains are required, as well as three small bridges to the south of the Hessonber bridge, built this season. The drains may probably cost 80 or 100 Rupees each, and the bridges about 750 Rupees each. A portion of this road has been re-traced this year by the Taluq Overseer.

"Jedkal and Kollur road (five and a half miles).—This portion of the Kollur Ghaut line is also in fair order, but at some places narrow and steep. A portion of this road has also been lately improved by the Engineer's Department. Two bridges, one at Chettibadhalla, the other near Chandrakatta, with sundry drains, are required. The above bridges may probably cost about 1,000 and 750 Rupees respectively, and the drains 80 or 100 Rupees each.

"At Kollur itself, the timber bridge on masonry piers over the Kollur nullah is much decayed, and should be replaced by a masonry bridge, which would probably not cost more than 1,800 or 2,000 Rupees.

"The branch road leading from Halkal on the main line of the ghaut road to the port of Baindur is in fair order, but several drains and bridges are required. To render this line (Kollur Ghaut line) available for cart traffic throughout, which it is not at present, it requires re-tracing and widening at several places, independent of the erection of the bridges and drains mentioned above. Besides this, the Jedkal, Halkal, and Wasre nullahs should be bridged, as, in their present state, they prove serious obstacles during the monsoon, they being reported impassable for days together. The improvements to the road may probably be effected at a cost of about 350 or 400 Rupees a mile. The annual maintenance allowance for these roads appears to have been judiciously expended in keeping the roads in repair, and in erecting the minor bridges."

19. I have also been furnished by Mr. Ball with the following remarks regarding the other communications inspected by him in the Cundapur Taluk:—

"Wandase and Hallady road (sixteen miles).—This bit of road which connects the Kollur ghaut and the Agumba ghaut lines has been latterly neglected, no repairs having been executed to it, I am told, for some years past. It is still used by pack-bullocks carrying grain, salt, &c. If put in thorough order, and the nullahs bridged, it will, no doubt, be much used by inland traders.

"The Hallady and Bassrur road via Hunsemakky (twelve miles) is also very steep in some places, and requires several drains and a few bridges. If it is re-traced, the number of drains and bridges may be reduced. The road work will not cost more than 350 or 400 Rupees a mile. As the road between Bassrur and Cundapur will, in all probability, be undertaken next season, I would recommend the early improvement of this road, as it is some miles shorter and more direct to Cundapur than that via Hunsemakky and Koteswar.

"The Hunsemakky and Koteswar branch road (eight miles) joins the Hallady and Bassrur line at the village of Hunsemakky. It is in good order, having

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been recently repaired by the Engineer's Department, and although circuitous, is at present used by carts coming down the Agumba Ghaut to Cundapur.

"The old Hossangadi Ghaut line, although totally neglected for years, and consequently in very bad repair, is nevertheless still used by pack-bullocks. Many of the inland traders applied to me to have the road put in order, as they said it was more direct and furnished more fodder for their cattle than either the Kollur or Agumba Ghaut lines, between which it lies. I believe it was given up on the opening of the Kollur Ghaut line some eighteen or twenty years ago. I think it would be advantageous to put this old line in fair order again, as at present there are but two lines of road connecting the Mysore country with the coast in the Cundapur Taluq, namely, the Kollur and Agumba lines.

"The imports from the Mysore country are grain, lamp-oil, jaggery, tobacco, condiments, &c., and the exports from this District salt, cocoanuts, coconut-oil, dried fish, &c. Large quantities of native cloths are also imported into the District from Bellary and Cuddapah Districts by the above lines of road. If the roads were, therefore, made available for carts throughout, there is every probability of the trade increasing with the above-mentioned and other adjoining Districts."

20. On the several lines of road known as the Hallady road circuit and the Colloor road circuit Rupees 9,682 and Rupees 6,631 have been spent out of the sanctioned estimates of Rupees 9,860 and Rupees 6,860. In future reports, I shall hope to be able more fully to report on these communications.

21. This road has been kept and remains in fair order; the sum expended has been Rupees 5,280 out of a sanction of Rupees 5,290.

22. The maintenance allowance of Rupees 2,420 has been nearly expended.

23. REPAIRS.—On these Rupees 874 have been expended (Income-tax Fund).

24. The annexed statement shows the amount of expenditure in the repairs of buildings:—

	RS.
Revenue	1,898
Judicial	743
General	962
Military	790
Ecclesiastical	56
Municipal	178
Accommodation for travellers	1,266
Total	5,893

25. My acquaintance with the District has been of such short duration that the Board will not expect me to say much as to its wants and requirements; but as far as my experience enables me to offer an opinion, I beg to offer the following suggestions.

26. The first and most prominent want of the District seems to me the improvement of the Harbour at Mangalore. I am aware that in times past a good deal has been done in this way, and that endeavours have been made to control the bar of the Netravaty river; but these efforts do not appear to have been attended with success, and even during the present monsoon the bar has shifted very considerably. I am well aware that the difficulties connected with harbour engineering,

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particularly in this country, are very great, and that of necessity these operations must be very costly; but when so much has been done to develop the resources of the country by the opening out and improvement of its internal communications, with a view of bringing its produce to a port of shipment, it cannot be but that ere long something must be done for the security of the shipping frequenting the port, and for the safety of the produce when being conveyed from the shore to the shipping. Mangalore, as the Board are aware, is rapidly becoming one of the largest

Years.	Tons.	Value in Rupees.
1860-61.....	2,755	11,47,860
1861-62.....	2,689	14,36,440
1862-63.....	3,475	21,23,018
1863-64.....	3,112	14,37,327
1864-65.....	3,706	17,16,239

shipping ports for coffee on this coast, and as the plantations in the Nugger Division of Mysore and in Coorg, which are being extended with such marvellous rapidity, come into bearing, there cannot be a doubt but that the shipment of coffee, and which must naturally find its way to Mangalore by the Manjerabad

and Sumpajee ghauts, will be very greatly increased. I am, therefore, very strongly of opinion that the time has arrived when the services of a competent and thoroughly trained Harbour Engineer should be secured for the improvement of the harbours, and of the communications with the shipping generally.

27. In connection with the Port of Mangalore, I am also inclined to think that the removal of the flag-staff to a spot where the signals can be more easily made out is urgently necessary; and that the growing importance of the port also demands that the lighting apparatus in the light-house should be of a higher and improved order. The top of the light-house is at such an elevation, that were the light only sufficiently powerful, it could be seen at a distance of twelve or fifteen miles, and the importance of a light-house of this nature to the shipping running up to Bombay during the south-west monsoon, as also to the large and increasing number of coasting steamers, cannot be overrated.

28. One other suggestion only I would beg leave to make, and that is the introduction, throughout the District, of iron girders for bridges, particularly on the trunk lines of roads. As the Board are aware, bridges on this coast are generally either built of laterite arches, or with laterite or granite piers and wooden platforms. Laterite is at best, however, an uncertain material for arch-work, and hence the frequent falling of bridges which are almost annually heard of; while it is obvious that a platform of wood must, in a country like this, (and especially at the foot of, and on the ghauts,) where the monsoons are most violent, be the very reverse of durable. Now that a large amount of tonnage is annually visiting the port for the purpose of shipping coffee, I would beg respectfully to suggest whether it would not, in every way, be an advantageous and economical arrangement to have a supply of bridge girders of different spans sent out direct to Mangalore, to be made use of in all bridges hereafter to be constructed, as also where the wooden platforms now existing have fallen into disrepair.

1. Submitted for the information of Government. Attention is requested to the Collector's remarks on the subject of the Port of Mangalore.
2. The Board observe that the Superintending Engineer of the Division might be requested to report his opinion on the Collector's remarks on the subject of iron girders. These remarks appears to the Board to be well deserving of consideration.
3. In their Proceedings on last year's Report, the Board specially requested that the Collector would submit his opinion on the District requirements in future Reports, especially as regarded roads and communications. Mr. Cadell has not done so, probably in consequence of his limited experience in the District.
4. It seems to the Board that at least one of the ghaut roads referred to in paragraphs 18 and 19 of the Report should be put in order. It is to be regretted that little more than two-thirds of the grant for improving the Manjerabad ghaut has been expended within the year under report.

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30th October 1865.*

No. 755.

ORDER THEREON, 30th October 1865, No. 3,267.

ESTABLISHMENT, No. 71.

1. Communicated to the Superintending Engineer of the 7th Division, whose attention will be drawn to the requirements of the roads noticed in paragraphs 18 and 19 of the Collector's report.
2. The suggestion in the latter portion of paragraph 26 will receive consideration.
3. Paragraph 27 will be referred to the Marine Department.
4. The subject of using iron girders for bridges is now under the consideration of the Superintending Engineer.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

Order in the Marine Department 11 November 1865. No. 238

*The removal of the Mangalore
Flagstaff to a more convenient spot has been
sanctioned in the Proceedings of the 8th Instant. No. 238.*

*The Collector's recommendation
that the lighting apparatus of the
light house be improved, is referred for the
report of the Superintendent of Marine.*

- To the Superintending Engineer, 7th Division.
- " Marine Department.
 - " Revenue Department.
 - " Board of Revenue.

(True Extract)

*C. A. Orr
Chief Secretary*

Public Works Department

Exd. S. T. Augustin.

Arch. H. Smith

Feb 3, 1890

Communicated to

The Superintendent Engineer

of the 1st Division, with

reference to items 3 of the

order of the 30th March 1889.

Wm. H. George
2nd of March 1890

W. H. G.

To the Superintendent Engineer
of the 1st Division.

14th March of 1890.

1890. Doc. 121. 1st Division.

177 1865 Dept
Pro. of Govt for a Nautical

No 4572

Pro. of Govt in the
Marine Dept

D/ 4-23 Nov 65
Recd. 14-11-65

203

Referring the sugges-
tion, made by the Comd^r of
South Africa, for improving
the lighting apparatus in
the light house at Manga-
lore to the Supt. of Marine
and intimating that the
removal of the Manga-
lore Flag Staff to a more
convenient spot has been
already sanctioned.
At 3498. 20th November 1865
Nithan Order.

No 452. 453.

177 " Board of Officers.
1865. Dec 12th 1865
of the 1st Div.
Engineer
J. B. B.

unrecovered
attaching Engineer
Division, with
piece of the
30th Marine 1865
J. B. B.