M.R.O. 1—77,008—8-6-37.

(1) Number of pages 22

(2) Date of repair 8-4-43

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public (Secret) DEPARTMENT.

G.O. No. 2950 Press ~~Mis.~~

373-74

Dated 14-9 1866.

Not to be folded or roughly handled

No. 373. Read the following Proceedings of the Board of Revenue, dated 24th August 1866, No. 6,065.

Read the following letter from the Collector of South Canara, to the Acting Secretary to the Board of Revenue, dated Mangalore, 11th July 1866, No. 127 :—

1. I have the honor to submit the following report on the operations of the Department Public Works, for the past official year 1865-66.

2. The Budget allotment for the year stood originally as shown below:—

	Rs.
Original Works...	16,610
Minor new works	2,000
Repairs...	49,245
Total... ...	67,855

To this several additions were subsequently made under the special orders of Government, viz.:—

	Rs.
For new Salt Cotaurs at different stations...	6,405
Bridge at Bircheenhollay, Munzerabad Ghát	920
For improving Munzerabad Ghat, and completing bridges on the line...	2,480
Tools and Stores...	1,200
Other items	2,349
Total... ...	13,354
From this, however, again certain deductions and transfers were made, in all	5,738
	7,616
Add Budget allotment...	67,855
Total amount actually available for expenditure during the year	75,471

3. The subjoined abstract Statement shows the expenditure of the year under report as compared with that of the preceding, and from which it will be seen that there is a falling off in the year under report of upwards of one-third, a very large sum indeed, but owing entirely to the smallness of the sum allotted for expenditure in the District.

one and half Anna the cwt., or two Rupees per ton, and would scarcely be felt by the planters. I would also recommend that, when the bridges and culverts on this line require to be renewed, they should be constructed so as to give a width of eighteen feet between the parapets.

11. With regard to the other communications in the District, I may observe that generally they are in good order and sufficient for the present traffic. I would strongly, however, urge the completion of the bridges that are still wanting as funds admit; on the road between Mangalore and Agumbay, I may mention that there are several streams unbridged, and particularly the Yennahollay river; the beds of these streams are generally very rocky and stony, and there banks very precipitous, hence the passage of bandies is attended with very considerable difficulty and risk; and a road otherwise excellent for wheeled conveyances is by these few breaks rendered to a large extent useless. It must be remembered that in Canara there are almost no villages, and that if a bandy does break down, there are not the means at hand of repairing it, hence, and although these roads have been opened for so many years, the greater bulk of the traffic is still carried on pack-bullocks. As the roads, however, become finished, the use of wheeled conveyances gradually springs up, and hence I would strongly urge that in Canara it would be far better to confine our expenditure to render the roads already in existence perfect and complete, instead of opening out new roads.

12. I may also mention that the Agumbay ghát within the limits of the Mysore Territory is in the Mysore limits very narrow, and in some places, and especially at the corners of the zigzags, to such an extent as to be dangerous. The work of widening was going on in the month of April, when I inspected the ghát, but the traffic on this line is so large that I would strongly urge that the ghát should throughout be opened to the full extent of twenty-one feet. I would also take this opportunity of urging that the Mysore authorities should be earnestly solicited to complete, as soon as practicable, the portion of the Codecul ghát within their limits, and the roads leading thereto; a new and improved line of road leading from the top of the Colloor ghát towards Codoor and Shemoga is also very much wanted, and this work, I would recommend, should be undertaken by the Mysore authorities, as the funds at their disposal may admit. The only other work that appears to me as very urgently wanted is a bridge over a stream near the village of Hallady on the road between Cundapur and Agumbay; this stream comes down with immense velocity, and frequently cuts off all communication to the west and south for days together. I have seldom seen a place where an iron girder bridge was more wanted, and I urgently trust this work may soon be put in hand.

13. In conclusion, I would only repeat the recommendation I made last year regarding the substitution of iron girders for wooden platform bridges. During the year under report, I have inspected almost the whole of the platform bridges in the District, and I am now quite satisfied that, while (owing to the absence of skilled labor in the District, and especially of carpenters) they are exceedingly expensive, they are also very thriftless; the wood of which they are made is often green, and from exposure to sun and rain soon rots, holes are thus rapidly formed,

Proceedings of the Madras Government, Public Works Department,
14th September 1866.

and if the traffic is at all heavy, the platforms become full of holes and sometimes are even dangerous. This is the case in almost all the bridges of the kind I have seen, and the same is, I observe, the case in the bridges in the Mysore Territory. I cannot, therefore, but think that the substitution of iron girders for the present wooden platform would in the end be found not only much more safe and durable, but that the expense would probably not be much greater.

---

1. Ordered that the foregoing report be submitted for the information and orders of Government.

2. Considering the limited means placed at the disposal of the Public Works Department for expenditure in South Canara in 1865-66, viz., 75,471 Rupees, as against 1,19,718 Rupees in 1864-65, the above report of progress must be regarded as very satisfactory.

3. The Collector points out in paragraph 4, under the head *Pootoor Range*, the necessity for bridging certain streams on the Codecul ghát road, the want of these bridges being the only break in an otherwise uninterrupted line of communication for wheeled traffic.

4. Referring to Mr. Cadell's opinion in another part of the same paragraph, as to the heavy cost incurred by the Public Works Department in the building of certain Salt Cotaurs in the *Cundapur Range*, and his preference to have such works undertaken by the Revenue Department, his attention will be drawn to the Board's Circular, No. LXXIV., dated 1st November 1865, from which he will observe that, under instructions from Government, it is open to him in future to obtain the execution of all salt works of a simple character by his own Department, on intimating his desire to the Superintending Engineer of the Division.

5. In paragraph 6, the Collector recalls* attention to the condition of the Mangalore Light, which is much complained of by Commanders of ships, and suggests the improvement of the apparatus as a measure urgently demanded by the increasing shipping of the port. In their Proceedings in the Marine Department, 11th November 1865, No. 238, Government referred the subject to the Superintendent of Marine. The Board are not aware what further steps have been taken in the matter; but in the meantime they beg to support the Collector's recommendation, especially as it is reported that the Port Funds will admit of the expense, which, however, is not estimated.

* *Vide* paragraph 27 of Collector's Report, 9th August, No. 116, in Board's Proceedings, 10th October 1865, No. 6,390.

6. In paragraph 8, the Collector recommends the construction of an iron girder bridge over the Netravaty river at Pani-Mangalore, and suggests its construction out of borrowed capital, the interest of which might be paid by the levy of a small toll. He strongly recommends a similar bridge, in paragraph 12, for a rapid stream near the village of Hallady on the Cundapur and Agumbay road; and in the last paragraph of his report, he repeats his former suggestion to substitute iron girders generally for the present insecure wooden platform bridges of the District. In paragraph 4 of their Proceedings in the Public Works Department, 30th October 1865, No. 3,267, Government remarked that the question was then under the

consideration of the Superintending Engineer; but the Board are not aware whether any report has been since made by that officer on the subject. The Board do not, however, concur in the expediency of bridging the Netravaty at Pani-Mangalore. The cost would be very heavy, for the river is there of considerable width, and the advantage to be derived from the bridge would be incommensurate with the cost, there being every facility of water-carriage all the year round from Pani-Mangalore to Mangalore Port.

7. For the same reason the Board do not support the Collector's proposal to widen the road from Mangalore to the river bank opposite Pani-Mangalore.

8. The cost would be heavy, for a great part of the road is embanked to a considerable height through paddy fields, and the facilities for water-carriage render the road comparatively unimportant.

9. The Board beg attention to the Collector's remarks in paragraph 9 regarding the insufficient width of the Mercara Ghát and line of road, and the necessity of widening out the whole line to the full extent of twenty-one feet. To re-pay the heavy expenditure that the improvements would entail, the Collector proposes, in paragraph 10, a system of tolls, aggregating one Rupee in all for the entire distance of eighty-four miles from Mercara to Mangalore, which he states would not be felt by the planters, four Annas of the one Rupee being paid to Coorg for the portion of the line in that territory, and the remaining twelve Annas being reserved with the Government allowance for the maintenance of the sixty-four miles in South Canara. With reference to this proposal, the Board observe that in his letter of the 12th September 1861, No. 156, replying to the Board's Circular, dated 8th May 1861, No. 2,347, Mr. Fraser, then Acting Collector of the District, reported that as a toll was already collected at Pani-Mangalore on this line, no further tolls could be levied under the provisions of Act VIII. of 1851. The Collector will explain this. As regards the want of shade on the Mercara ghát, the Collector may not be aware that the vicinity of the ghát was cleared to a considerable distance on either side at the time of its construction after the Coorg insurrection, in order to preclude the formation of barricades against troops.

10. The Board, however, concur in opinion with the Collector that an ample margin should be reserved on either side of all ghát roads.

11. In paragraph 11, the Collector strongly urges the construction of the bridges still wanting on the road between Mangalore and Agumbay, to complete the line for wheeled traffic, the breaks caused by their absence now rendering it comparatively useless; and the Board request attention to his remarks.

12. Referring to the narrow and dangerous condition of the Agumbay ghát within the Mysore limits, the Board support the Collector's recommendation that it should, if possible, be widened to the full extent of twenty-one feet throughout; and they would also support his further recommendation in paragraph 12, that the Mysore authorities be moved to complete the portion of the Codecul ghát within their limits, and the roads leading to it, at their earliest convenience, and to undertake (as funds will admit) a new and improved line of road from the Colloor ghát towards Codoor and Shemoga stated by Mr. Cadell to be very much wanted.

No. 374. ORDER THEREON, 14th September 1866, No. 2,950.

ESTABLISHMENT, No. 27,

1. Communicated to the Superintending Engineer of the 7th Division, who will give his early attention to the remarks contained in paragraphs 3 and 11 of the Board's Proceedings regarding the want of bridges on the Codecul Ghát road, and on the road between Mangalore and Agumbay.

2. Paragraph 5 will be communicated to the Marine Department, with reference to the Orders in that Department, No. 238, dated the 11th November 1865.

3. Adverting to paragraph 6, the Government observe that copies of designs for Iron Girder bridges were sent to Colonel Walker on the 20th March last to enable him to prepare estimates for bridging some of the large rivers in the Malabar and Canara Districts. These should be laid before Government in due course.

4. Colonel Walker's particular attention will be drawn to the requirements of the Mercara Ghát and line of road noticed in paragraph 9.

5. The Mysore Government will be addressed on the subject of the condition of the Agumbay Ghát, &c., adverted to in paragraph 12 :—

Ordered that the following letter be sent.

(Here enter No. 2,951, dated 14th September 1866.)

(True Extract.)

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

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

Exd. S. T. Augustin.

PUBLIC WORKS DEPARTMENT.
FORT SAINT GEORGE,
14th September 1866.

No. 2,951.

No. 375.

To

THE COMMISSIONER FOR THE GOVERNMENT OF THE TERRITORIES OF HIS HIGHNESS THE MAHARAJAH OF MYSORE.

SIR,

ESTABLISHMENT, No. 28.

I am directed to forward for your information, extracts from the Proceedings of the Board of Revenue, No. 6,065, dated the 24th August 1866, on a report of the Collector of South Canara on the state of the communications between that District and the Territories under your jurisdiction, and I am to request your particular attention to the several suggestions and recommendations of the Collector and the Board of Revenue.

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

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

Exd. S. T. Augustin.

No. 6,065.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 24th August 1866.

Read the following letter from W. M. CADELL, Esq., Collector of South Canara, to the Acting Secretary to the Board of Revenue, dated Mangalore, 11th July 1866, No. 127:—

1. I have the honor to submit the following report on the operations of the Department Public Works, for the past official year 1865-66.

2. The Budget allotment for the year stood originally as shown below:—

	Rs.
Original works...	16,610
Minor new works	2,000
Repairs	49,245
Total... ...	67,855

To this several additions were subsequently made under the special orders of Government, viz:—

	Rs.
For new Salt Cotaurs at different stations	6,405
Bridge at Bircheenhollay, Munzerabad ghaut	920
For improving Munzerabad ghaut, and completing bridges on the line ...	2,480
Tools and Stores	1,200
Other items	2,349
Total... ...	13,354
From this, however, again certain deductions and transfers were made, in all...	5,738
	7,616
	67,855
Add Budget allotment	75,471

Total amount actually available for expenditure during the year ... ...

3. The subjoined abstract Statement shows the expenditure of the year under report as compared with that of the preceding, and from which it will be seen that there is a falling off in the year under report of upwards of one-third, a very large sum indeed, but owing entirely to the smallness of the sum allotted for expenditure in the District.

Abstract Statement.

	Expenditure of 1864-65.	Expenditure of 1865-66.	Comparison. Increase.	Comparison. Decrease.	Estimate of 1866-67.
	Rs.	Rs.	Rs.	Rs.	Rs.
IMPERIAL. *New Works.*					
Communications	53,566	28,191	.....	25,375	
Buildings	7,605	13,434	5,879	.....	
	61,171	41,675	5,879	25,375	
Repairs.					
Communications	41,325	30,336	.....	10,989	
Buildings	5,893	2,783	.....	3,110	
	47,218	33,119	.....	14,099	
	1,08,389	74,794	.....	Net 33,595	
	840	1,307	467	.....	
Tools and Plant				Net 33,128	
	1,09,229	76,101	.....	7,536	
Total Imperial	9,037	1,501	.....		
Add Income tax expenditure ...	1,18,266	77,602	.....	40,664	

4. As might be expected from the smallness of the allotment, no work of any great importance or magnitude has been undertaken during the year under report; steady and useful progress has, however, been made in improving and perfecting the several lines of communication. I will now proceed to notice such of these as may seem to call for remark.

I. Mangalore Range.—A sum of Rupees 1,905-14-3 has been expended in the construction and improvement of Military buildings, and in extending the Magazine at Mangalore; the latter is, however, still represented to be too small for the requirements of the station, and is now full to overflowing.

The Civil and Sessions Court has been re-roofed at an expenditure of between 5 and 6,000 Rupees; this was a work which was most urgently needed.

Satisfactory progress has been made in the further opening out and improvement of the new Military line of road *viâ* Pani-Mangalore, Vitlah, and Hossdrug, to Cannanore; the roadway has been opened throughout to a width of four, six, and eight yards, and the track is now fully passable for wheeled conveyances; the expenditure on the roadway during the year has been Rupees 3,461. The Voketoor bridge, which was reported to have fallen last year, is again being re-built, and the abutments and piers have been raised nearly to the full height; the wooden platform alone remains to be completed. The Kadar bridge on the same line of road, and for which an estimate of Rupees 3,940 has been sanctioned, has also been commenced, and the foundations of the southern abutment and of three piers completed. A bridge over the Currimbellah nullah, of thirty feet span, has also been completed, and another platform bridge of four spans over the Adkattalla nullah on the same line has also been commenced.

In this range, the repairs to Military and Civil buildings have cost, respectively, Rupees 374-8-7 and 1,472-3-8, and those to Travellers' Bungalows Rupees 558.

In repairs to communications, Rupees 4,944-4-0 have been spent on Trunk Road No. II to Mercara; this road is generally in good order, but the traffic thereon is exceedingly heavy, particularly in the months from October to April, when Coffee is being brought down to Mangalore for shipment. I will, however, allude again to this subject in a future part of this report.

On the new Military road leading from Pani-Mangalore by Vitlah to Hossdrug, Rupees 4,745-3-6 have been spent in repairing and widening the road, and which, as already stated, is now open for wheeled conveyances.

On the portion of the Agumbay ghaut line of road within this range, a sum of Rupees 1,869 has been expended in repairs.

The extension of the quay at the port of Mangalore has also made considerable progress during the past year, and the work is doubtless a very great improvement; it is only to be regretted that funds are not available for making the work of a more stable and permanent character; a rough stone revetment built of loose stones in clay would seem to be but a poor defence against the scour of both floods and tides. The removal of the flagstaff, and which was recommended by me last year, is now being carried out, and when finished will, I hope, be found a great improvement and accommodation to the shipping frequenting the port.

II. Pootoor Range.—The principal works executed within this range during the year under report are the completion of the large wooden platform bridges on the Munzerabad line over the Caddambella, Cubbinhollay, and Bircheenhollay rivers, and of the Wallal, and another small bridge on the same line. Over some of the smaller streams on this line there are at present only temporary wooden bridges, but the line throughout has been very greatly improved during the past year, and it is being made use of more and more extensively every year. The expenditure during the past year on this road has been Rupees 3,082 under the head of Improvements, and Rupees 3,961 under the head of Repairs.

On the Codecul ghaut line (late Charmady ghaut line) the bridge over the Maunnyhulla, near Buntwal, with the approaches thereto, has been completed; the large wooden platform bridges over the Beltangady, Nidgal, and Moondajeh rivers have likewise been finished, and are open to traffic. This line of road is also now quite open for wheeled conveyances, and the only streams not bridged are a jungle stream near Poonjalcutta, and two streams, one 4 miles east from Beltangady, and one at the village of Charmady; a bridge formerly existed over the latter, but was carried away in a flood, and the abutments only remain. A sum of Rupees 4,831-9-7 has been expended on improvements, and Rupees 5,653-10-7 on repairs on this road.

The only other works executed in this range are the repairs to Trunk Road No. II. between Pani-Mangalore and Pootoor, amounting to Rupees 1,452, and ordinary moonsoon repairs Rs. 117.

III. Cundapur Range.—In this range, there has been a large outlay in the construction of Salt Cotaurs at the stations of Tallur (Chellanmucky Devaragra, Honnenagra, and Arebet,) the aggregate cost of which is Rupees 5,640. Other small salt works have cost Rupees 450, and Rupees 220 have been spent in the conversion of an old Sayer station into a Police sub-station. The cost of these Salt Cotaurs, and which after all are mere large mud huts with common thatched roofs, seems to me very excessive, and I cannot but think that if executed by the Revenue Department, their cost would have been considerably less. Mr. Ball, the Deputy Collector, I may add, is quite competent to undertake works of this nature.

On the Mangalore and Agumbay roads the bridge over the Wottayhollay rivers has been completed at a cost of Rupees 2,803, and another over a small stream has also been completed at a cost of Rupees 1,354-8-11; these bridges were very much wanted.

On the road between Hallady and Cundapur, the foundations of a bridge over a jungle stream have been completed, and on the road between Wandsay and the Colloor ghaut two bridges over jungle streams, at an expense, respectively, of Rupees 812 and 899, have been altogether completed. The large wooden platform bridge over the Jeukal river has also been commenced, and the abutments and piers have been raised nearly to their full heights.

In repairs, Rupees 3,630 have been spent on the roads comprising what is called Hallady road circuit, and Rupees 3,001 on the roads branching from the Colloor ghaut, and comprising the Colloor ghaut circuit; these works are not of such importance as to call for remark, but they are, however, very useful local communications, and the traffic on them is increasing yearly as they are gradually finished and perfected.

5. To come now to the wants and requirements of the District, undoubtedly the most important of all these, is the improvement of the harbour of Mangalore, and the making of the means of egress and ingress over the bar safe and practicable at all times; great changes are annually taking place in the possession of the bar; during the last monsoon it shifted upwards of 150 yards to the northward, and the combined force of the floods from the monsoon rains, together with the action of the surf, are yearly carrying away a narrow strip of land covered with Cocoanut trees of many years' growth; the same process is now again being repeated, and the bar will probably advance to the northward until a re-action takes place, and it breaks out at the place where it formerly existed. It is very desirable that, *if possible*, the bar should be controlled and confined within fixed limits; but in the present state of the public finances, and looking also to the large expenditure necessary to secure any adequate result on a work of this nature, I fear it is not likely anything will be done.

6. I would again especially bring to notice the state of the Mangalore Light, and which continues to be much complained of by the Commanders of vessels frequenting the port. With the number of coasting steamers now constantly passing up and down, and the yearly increasing quantity of shipping coming to load Coffee, it is absolutely indispensable that the lighting apparatus should be improved, and as the Port Funds will admit of the charge, I earnestly trust that sanction will soon be given.

7. The extending of the quay is doubtless an improvement so far as it goes, and it is only to be regretted that the funds in hand do not admit of works of a more permanent and lasting character, or of controlling the mouth of the harbour; the quay is now being extended to the south, while the bar is advancing in an exactly contrary direction.

8. I would again earnestly recommend the construction of an iron girder bridge over the river Netravaty at Pani-Mangalore, the bed of the river is very wide and rocky, and the ferrying over of loaded bandies is always attended with very much difficulty and delay; this river is the

only break on the whole line of the Mercara road, and considering that the heavy traffic both of the Mercara and Munzerabad ghauts crosses at this spot, the want of a bridge is very much felt; there can be no doubt that, if money were borrowed for the construction of such a bridge, and a small pontage levied, the collections would yield a fair return at least for the money so invested.

9. I would also very strongly urge the widening and improving of the Mercara line of road, and especially of the ghaut itself; this is in some places not more than thirteen or fourteen feet wide, and in my judgment, and looking to the very large and annually increasing traffic passing down the ghaut, it ought, I conceive, to be made the full width of twenty-one feet; this will, however, be attended with some expense, for the land on both sides is in many places private property, and already planted with Coffee up to the edge. It is very much also to be regretted that on this ghaut all the fine timber which used to overhang the road has been felled, and that the line of road has been for miles denuded altogether of shade; in the formation of new ghauts hereafter this ought not to be overlooked, and provision ought to be made not only for securing the full width of roadway, but also for sufficient land for purposes of shade. I may also remark that parts of this road are very narrow; in one place near the sixth mile from Mangalore, the embankment is so narrow that two bandies can pass with difficulty; and considering that the last sixteen miles of road are common to no less than three lines of ghauts, viz., the Mercara, Munzerabad, and Codecul ghauts, I would strongly urge that this part of the road should be first taken in hand and widened throughout to the full extent of twenty-one feet.

10. These improvements will, of course, entail a considerable expenditure; but it appears to me that they must be done sooner or later, and that funds for the purpose ought to a certain extent at least be provided by those who make most use of the road; this could very easily be done by a system of tolls, and I venture to think that tolls aggregating one Rupee for the entire distance from Mercara to Mangalore, eighty-four miles, might easily and without any objection be collected and paid by the planters, provided, of course, the whole of the sum so raised, and after the payment of the toll establishments, were spent in improving and more frequently metalling the road. Of this sum four Annas ought, I think, to be paid to the Coorg authorities for improving the ghaut, and the remaining twelve Annas, with the Government allowance, ought to be sufficient to maintain the sixty-four miles of road within the limits of this District in good working order. The charge I have proposed for tolls would after all only amount to a little more than one and half Anna the cwt., or two Rupees per ton, and would scarcely be felt by the planters. I would also recommend that, when the bridges and culverts on this line require to be renewed, they should be constructed so as to give a width of eighteen feet between the parapets.

11. With regard to the other communications in the District, I may observe that generally they are in good order and sufficient for the present traffic. I would strongly, however, urge the completion of the bridges that are still wanting as funds admit; on the road between Mangalore and Agumbay, I may mention that there are several streams unbridged, and particularly the Yennaholiay river; the beds of these streams are generally very rocky and stony, and their banks very precipitous, hence the passage of bandies is attended with very considerable difficulty and risk; and a road otherwise excellent for wheeled conveyances is by these few breaks rendered to a large extent useless. It must be remembered that in Canara there are almost no villages, and that if a bandy does break down, there are not the means at hand of repairing it, hence, and although these roads have been open for so many years, the greater bulk of the traffic is still carried on packbullocks. As the roads, however, become finished, the use of wheeled conveyances gradually springs up, and hence I would strongly urge that in Canara it would be far better to confine our expenditure to render the roads already in existence perfect and complete, instead of opening out new roads.

12. I may also mention that the Agumbay ghaut within the limits of the Mysore Territory is in the Mysore limits very narrow, and in some places, and especially at the corners of the zigzags, to such an extent as to be dangerous. The work of widening was going on in the month of April, when I inspected the ghaut, but the traffic on this line is so large that I would strongly urge that the ghaut should throughout be opened to the full extent of twenty-one feet. I would also take this opportunity of urging that the Mysore authorities should be earnestly solicited to complete, as soon as practicable, the portion of the Codecul ghaut within their limits, and the roads leading thereto; a new and improved line of road leading from the top of the Colloor ghaut towards Codoor and Shemoga is also very much wanted, and this work, I would recommend, should be undertaken by the Mysore authorities, as the funds at their disposal may admit. The only other work that appears to me as very urgently wanted is a bridge over a stream near the village of Hallady on the road between Cundapur and Agumbay; this stream comes down with immense velocity, and frequently cuts off all communication to the west and south for days together. I have seldom seen a place where an iron girder bridge was more wanted, and I urgently trust this work may soon be put in hand.

13. In conclusion, I would only repeat the recommendation I made last year regarding the substitution of iron girders for wooden platform bridges. During the year under report, I have inspected almost the whole of the platform bridges in the District, and I am now quite satisfied that, while (owing to the absence of skilled labor in the District, and especially of carpenters) they are exceedingly expensive, they are also very thriftless; the wood of which they are made is often green, and from exposure to sun and rain soon rots, holes are thus rapidly formed, and if the traffic is at all heavy, the platforms become full of holes and sometimes are even dangerous. This is the case in almost all the bridges of the kind I have seen, and the same is, I observe, the case in the bridges in the Mysore Territory. I cannot, therefore, but think that the substitution of iron girders for the present wooden platform would in the end be found not only much more safe and durable, but that the expense would probably not be much greater.

---

1. Ordered that the foregoing report be submitted for the information and Orders of Government.

2. Considering the limited means placed at the disposal of the Public Works Department for expenditure in South Canara in 1865-66, viz., 75,471 Rupees, as against 1,19,718 Rupees in 1864-65, the above report of progress must be regarded as very satisfactory.

3. The Collector points out in paragraph 4, under the head *Pootoor Range*, the necessity for bridging certain streams on the Codecul ghaut road, the want of these bridges being the only break in an otherwise uninterrupted line of communication for wheeled traffic.

4. Referring to Mr. Cadell's opinion in another part of the same paragraph, as to the heavy cost incurred by the Public Works Department in the building of certain Salt Cotaurs in the *Cundapur Range*, and his preference to have such works undertaken by the Revenue Department, his attention will be drawn to the Board's Circular, No. LXXIV., dated 1st November 1865, from which he will observe that, under instructions from Government, it is open to him in future to obtain the execution of all salt works of a simple character by his own Department, on intimating his desire to the Superintending Engineer of the Division.

5. In paragraph 6, the Collector recalls* attention to the condition of the Mangalore Light, which is much complained of by Commanders of ships, and suggests the improvement of the apparatus as a measure urgently demanded by the increasing shipping of the port. In their Proceedings in the Marine Department, 11th November 1865, No. 238, Government referred the subject to the Superintendent of Marine. The Board are not aware what further steps have been taken in the matter; but in the meantime they beg to support the Collector's recommendation, especially as it is reported that the Port Funds will admit of the expense, which, however, is not estimated.

6. In paragraph 8, the Collector recommends the construction of an iron girder bridge over the Netravaty river at Pani-Mangalore, and suggests its construction out of borrowed capital, the interest of which might be paid by the levy of a small toll. He strongly recommends a similar bridge, in paragraph 12, for a rapid stream near the village of Hallady on the Cundapur and Agumbay

* Vide paragraph 27 of Collector's Report, 9th August, No. 116, in Board's Proceedings, 10th October 1865, No. 6,390.

Government observe

road; and in the last paragraph of his report, he repeats his former suggestion to substitute iron girders generally for the present insecure wooden platform bridges of the District. In paragraph 4 of their Proceedings in the Public Works Department, 30th October 1865, No. 3,267, Government remarked that the question was then under the consideration of the Superintending Engineer; but the Board are not aware whether any report has been since made by that officer on the subject. The Board do not, however, concur in the expediency of bridging the Netravati at Pani-Mangalore. The cost would be very heavy, for the river is there of considerable width, and the advantage to be derived from the bridge would be incommensurate with the cost, there being every facility of water-carriage all the year round from Pani-Mangalore to Mangalore Port.

7. For the same reason the Board do not support the Collector's proposal to widen the road from Mangalore to the river bank opposite Pani-Mangalore.

8. The cost would be heavy, for a great part of the road is embanked to a considerable height through paddy fields, and the facilities for water-carriage render the road comparatively unimportant.

9. The Board beg attention to the Collector's remarks in paragraph 9 regarding the insufficient width of the Mercara ghaut and line of road, and the necessity of widening out the whole line to the full extent of twenty-one feet. To repay the heavy expenditure that the improvements would entail, the Collector proposes, in paragraph 10, a system of tolls, aggregating one Rupee in all for the entire distance of eighty-four miles from Mercara to Mangalore, which he states would not be felt by the planters, four Annas of the one Rupee being paid to Coorg for the portion of the line in that territory, and the remaining twelve Annas being reserved with the Government allowance for the maintenance of the sixty-four miles in South Canara. With reference to this proposal, the Board observe that in his letter of the 12th September 1861, No. 156, replying to the Board's Circular, dated 8th May 1861, No. 2,347, Mr. Fraser then Acting Collector of the District, reported that, as a toll was already collected at Pani-Mangalore on this line, no further tolls could be levied under the provisions of Act VIII. of 1851. The Collector will explain this. As regards the want of shade on the Mercara ghaut the Collector may not be aware that the vicinity of the ghaut was cleared to a considerable distance on either side at the time of its construction after the Coorg insurrection, in order to preclude the formation of barricades against troops.

10. The Board, however, concur in opinion with the Collector that an ample margin should be reserved on either side of all ghaut roads.

11. In paragraph 11, the Collector strongly urges the construction of the bridges still wanting on the road between Mangalore and Agumbay, to complete the line for wheeled traffic, the breaks caused by their absence now rendering it comparatively useless; and the Board request attention to his remarks.

12. Referring to the narrow and dangerous condition of the Agumbay ghaut within the Mysore limits, the Board support the Collector's recommendation that it should, if possible, be widened to the full extent of twenty-one feet throughout; and they would also support his further recommendation in paragraph 12, that the Mysore authorities be moved to complete the portion of the Codecul ghaut within their limits, and the roads leading to it, at their earliest convenience, and to undertake (as funds will admit) a new and improved line of road from the Colloor ghaut towards Codoor and Shemoga stated by Mr. Cadell to be very much wanted.

(A true Copy and Extract.)

Secretary.

To the Secretary to Government, Public Works Department.
Copy to the Secretary to Government, Revenue Department.
" to the Collector of South Canara.

Exd. T. Cartledge.

Extract

Public Works Department

No. 2959

Proceedings of the Madras Government

Under date the 14th September 1866

Read the following

Pro. of the Board of Revenue (Here Enter 3/24th August 1866- No 6065)

3562

Communicated to the Superintending Engineer of the 7th Division, who will give his early attention to the remarks contained in paras 3 and 11 of the Boards Proceedings regarding the want of bridges on the Codecul Ghaut road, and on the road between Mangalore and Agumbay.

Para 5 will be communicated to the Marine Department, with reference to the orders in that Dept's No 238, dated the 11 Nov 65.

Adverting to para 6, the Government observe

that copies of designs
for Iron Girder bridges
were sent to Colonel
Walker on the 20th March
last & enable him to
prepare estimates for
bridging some of the large
rivers in the Malabar
and Canara Districts. These
should be laid before
Government in due course

Colonel Walkers par-
=ticular attention will
be drawn to the re=
=quirements of the Mercara
Ghaut and line of road
noticed in para 9—

The Mysore Government
will be addressed on
the subject of the im=
=provement of the Agumbay
Ghaut & adverted to
in para 12

Ordered that the
following letter be
sent

To the Supt. of Dev.
— Board of Revenue
— Revenue Depts.

No. 2951

To the Commissioner for the
Govt. of the Territories of
His Highness the
Maharajah of Mysore

Sir/ I am directed to forward
for your information,
extracts from the Proceedings
of the Board of Revenue,
No. 6065, dated the 24th August 1866,
on a report of the Collector
of South Canara on the
state of the communications
between that District and
the Territories under your
jurisdiction, and I am
to request your particular
attention to the several
suggestions and recom=
=mendations of the
Collector and the Board
of Revenue —

Hurt & Hyde
11th Sept. 1866

Dep. Sec. Letter

P.V. 1866. Despch
Pro: of Govt for Sept.r

Nos. 2950, 2951.

Pro: of the Madras Govt
Dated 14th Septr 1866.

Passing Orders on Proceedings of the Board of Revenue on the Collector's report on Public Works in the South Canara District for 1865-66.

The Commissioner of Mysore furnished with Extracts from the above Proceedings, relative to the state of the Communication between the South Canara District and the Mysore territories.

4373 - 374 - 9375

Sr. Sept.r 66. Pr 6rs