Public Works (1897) Department.

RAILWAY BRANCH.

G.O., No. 1157 R

DATED 17th Decr 97

[Despatch Abstract.]

Railway from Samalkot to Tekeswarm

Endorsement from the Local & Municipal Dept forwarding letter from the President District Board, Godavari Submitting further statistics of traffic on the proposed —— recorded.

Indexed

[P. W. 25. 100—21-1-98]

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

RAILWAY.

Government {1897} of Madras.

PUBLIC WORKS.

Recd. } 1897. *Enclosures*

Regd. *Spare copies*

G.O., No. 1157 R., 17th December 1897.

DECEMBER.

Railway from Samalkot to Yeleswaram

Endorsement from the Local and Municipal Department forwarding letter from the President, District Board, Gódávari, submitting further statistics of traffic on the proposed —, recorded.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers:—

From—The President, District Board, Gódávari.
To—The Secretary to Government, Local and Municipal Department.
Dated—3rd March 1896, Ref. on Cur. No. 1435/D.B. of 1895.

As promised in paragraph 20 of the covering letter of the District Board's budget for 1896–97, I have the honour to submit the following report on the proposed light railway from Samalkot to Yeleswaram *viâ* Peddápur and Jaggampéta.

2. When the East Coast Railway was constructed, a serious error appears to have been made in aligning it, so as to pass through Samalkot instead of Peddápur, but the mistake having been committed, a change of alignment is not now possible on paying conditions, nor is it likely that a branch to Peddápur on the broad gauge would pay any better. But I entertain no doubt whatever about the remunerative character of a light railway (which I now think preferable to a steam tramway) between Samalkot and Yeleswaram—the chief centre of trade in agency produce of the district, though itself situated in one of the richest, most highly cultivated and populous tracts of the district outside the delta.

3. In the first place, the cost of construction will be low. Material can be cheaply conveyed to Samalkot (the starting point) from Cocanada by either rail or canal, and the country to be traversed presents no natural difficulties. There are no hills to be avoided or tunnelled, no swamps to be crossed entailing high embankments and none but small streams to be bridged with the single exception of the Yeleru river, and to cross this it is proposed to utilize the existing Yerraram bridge on the grand trunk road which the District Engineer certifies to be quite strong enough for the purpose. The cost of acquiring the land required for the line will also be small; for, though the District Engineer has found it advisable to depart from the original idea of utilizing the existing road, yet keeping as he proposes to the west of it, the line will pass almost entirely through dry lands which, in this part of the Peddápur taluk, do not command a high market value. Possibly, it may be remarked that *viâ* Jaggampéta is a round-about way of going from Samalkot and Peddápur to Yeleswaram, but Jaggampéta is a populous and important village where four roads meet, and it is necessary and advisable to pass by it in order to tap the agency traffic from Kottapalli, which comes next to Yeleswaram as an agency trade centre, north of the Gódávari. This course is also desirable in the interests of cheap construction, for to proceed direct from Peddápur, would be to pass through the richly-cultivated valley of the Yeleru, which the line as now proposed skirts, and this would entail considerable expenditure on land acquisition and, besides, subject the line to the danger of inundation and damage from floods.

4. In the next place, traffic prospects are excellent. As stated in my original memorandum on the subject (of which I enclose a copy though in some respects it is not altogether accurate, as, when I drafted it originally, I had been less than two months in the district) I was greatly struck during my last jamabandi tour in the Peddápur taluk by the enormous number of carts passing along the road from Yeleswaram to Peddápur. At the weekly market held at Yeleswaram, it is estimated by competent judges that produce worth more than Rs. 10,000 on an average is brought for sale from the interior agency tracts, including certain tracts lying in the Vizagapatam district. This consists principally of tamarind, myrabolams, soap nuts, *nux vomica*, honey, wax, and oranges, &c., which are exported to Cocanada and other places in the district. In exchange for this produce, the hillmen purchase oilseeds, grain, salt, cloth, gingelly oil, castor oil and other articles brought from the coast. There

is also a large export of jaggery and other produce from the surrounding country and a considerable trade in timber, which would, I have no doubt, develop enormously, could it only be easily and cheaply (in comparison with its bulk and value) carried to the railway or canal at Samalkot. Proceeding from Yeleswaram at Yerraram, the line connects with the grand trunk road and would get considerable traffic by it from Prattipadu and the country to the west of it, whilst Jaggampéta where it again leaves the grand trunk road, as already stated, is a big village where considerable traffic comes in from the Kottapalli and Murari directions. Again, Peddápur is not only a place with a large population of 13,658, but an important commercial centre from which an enormous quantity of jaggery and other produce of the very fertile Yeleru valley is exported to different parts of the district, chiefly to Cocanada for export to foreign ports. A statement showing approximately the quantity of goods carried along the route of the proposed line for the three years 1892–93, 1893–94 and 1894–95 prepared by the Tahsildar of Peddápur, in consultation with the leading local merchants who are fully acquainted with the trade and traffic of the tract the line will serve, is herewith submitted. In 1889–90 two gumastas were employed to register the cart traffic at Jaggampéta and Kattipudi for one year, and an abstract prepared from the said register is also appended to the above statement. That all this traffic will be diverted to the proposed railway which will afford cheaper and safer facilities of transport is beyond doubt, and it should also attract a good deal which now goes to Pittapur. The cart-owners now charge a hire of 2 pies per bag per mile, while the railway will probably charge little more than a half. The opening of such a line is also certain to originate a large trade in firewood and building-stone between Yeleswaram and Cocanada where both are in great demand.

5. There is also a large passenger traffic to be taken into account. It cannot be inconsiderable as the proposed line passes through important and populous villages and, besides, will of course serve a large population residing within a few miles of it throughout its course on both sides. Possibly, it may be said that traffic on the East Coast Railway in this district has so far disappointed expectations, but this is simply because the railway runs alongside navigable canals almost throughout, whereas the proposed line is free from such competition.

6. There is, perhaps, I may also mention, no possible project of the kind in the district in regard to which there exists such complete unanimity of opinion as to its paying character among officials and non-officials alike. In his letter of the 8th August last (a copy of which is enclosed), the Chairman of the Chamber of Commerce, Cocanada, writes: "The Chamber warmly support your project. The benefits which a steam tramway would confer on the district are immense. The country would be opened up and a great impetus given to trade with the hill tracts and, undoubtedly, a large and increasingly paying traffic would reward the enterprise." The Chairman of the Native Chamber of Commerce—a gentleman possessing a thorough knowledge of the conditions of trade throughout the district—after consulting his Chamber, not only endorses these views, but gives tangible proof of the genuineness of his belief by offering himself to take shares to the value of Rs. 25,000. The cashier of the local branch of the Madras Bank, who is also a man of considerable knowledge and experience in such matters, has also furnished me with a memorandum on the subject in which he states that about 150,000 bags of cane-jaggery and as many bags of gingelly, myrabolams and the various kinds of grain, &c., are being annually brought down to Samalkot and Cocanada by bandy from the tract the railway is intended to serve at a cost of 2 to 3 annas per bag according to distance, and that the receipts calculated on the existing traffic alone would amount to Rs. 40,000 to Rs. 50,000 per annum without mentioning the passenger traffic or, apparently, the traffic in the reverse direction.

7. I am glad to note also that the project has evoked great enthusiasm in the places which the proposed line is intended to serve and copies of the proceedings of public meetings held in those places urging the necessity of taking the project in hand at an early date have been received by me. This is the more gratifying as it was wholly unexpected. Some of the principal landholders, through whose estates the line will pass, are also, I understand, prepared to take payment for their lands, which it may be necessary to acquire in shares.

8. The contract in point of facilities of communication and in the general condition of the people between the deltaic and the Rampa agency tracts of the district is, I need hardly say, very great. The deltaic and coast tracts possess numerous roads and canals which have not only proved in the highest degree beneficial to the people, but very profitable to the State. Roads, railways and canals are, however, alike practically unknown to the people of the agency tracts, and the chief markets are as yet directly inaccessible to them. Valuable produce is, in consequence, in many localities suffered to go to waste for want of a market. By opening the proposed line, a step will be taken towards removing the obstacles which at present impede, to a certain extent, commercial intercourse between the hill tracts and the plains and which diminish the value of the produce raised and so discourage agriculture in the former. Not only will such a line probably develop the trade of these regions in the course of a few years to an extent which cannot now be gauged from want of data to go upon, but the people of the agency tracts who are as yet very backward will be brought into closer contact with a higher civilization. Becoming less rude, it is to be hoped they will become concurrently less inclined to break out in rebellion against the State with small excuse.

9. Another advantage and one more directly affecting the Government itself is that the proposed line will lead to the development of the forests in the neighbourhood of Yeleswaram (which are extensive) and so lead to an increase in the forest revenue. Light railways have been stated by the Government of the North-Western Provinces and Oudh to be the most important adjunct to a well-considered policy of forest development. It has therefore expressed its conviction that the policy of improving communications in the interests of the forest revenue is sound and that it would even pay to open out the forests by means of light railways of the smallest gauge and worked only in the dry season (*vide* page 354 of the *Indian Agriculturist*, dated 2nd December 1895). Moreover, in the event of any disturbance in the hill tracts, the value of such a line as that contemplated cannot be over-estimated. Its construction will therefore place Government in a more secure and advantageous position to promptly suppress any disturbances.

10. On a careful consideration of all these circumstances, the District Board unanimously came to the conclusion at a meeting held on the 10th August last, that the construction of the proposed line would be advantageous from every point of view, sanctioned an expenditure of Rs. 1,000 towards the cost of a preliminary survey and plan with estimate, and called upon the District Engineer to prepare the same. This work has been in the main completed, but as the work was stopped by the resignation of Assistant Engineer Mr. F. H. Longhurst to whom the work was entrusted, the plans are not quite ready. The detailed estimates and plans will of course, on completion, be submitted to Government through the proper channel, and this, I trust, will be very shortly. It is, however, roughly estimated that the total cost will be Rs. 6,76,000, or in round figures 7 lakhs, which cannot, of course, be met from the ordinary revenues of the District Board, nor is it easy to raise the entire outlay by local private subscription. The people are "either too little advanced in intelligence to appreciate the end or not sufficiently practised in conjoint action to be capable of the means." There is no developed system of co-operation amongst the natives of the district; but, were Government to give a helping hand, the people will, I hope, not be slow to move in the matter. I am the more hopeful of this, because my original idea, as set forth in my memorandum, was to raise the necessary capital or part of it with the sanction of Government by means of debentures, being altogether hopeless of inducing the public to take any share in the risks judging by my experience elsewhere, but I have since had reason to change this view; for, first, one and, then, another leading man came forward with the suggestion that shares would be preferred to debentures—a view which the District Board fully endorses. The District Board has accordingly resolved, as already stated in the budget report, to undertake the project (1) by raising a loan of 3 lakhs at $4\frac{1}{4}$ per cent. interest from Government, (2) by raising 3 lakhs by means of public subscription—the shareholders having the right of nominating an equal number of directors with the District Board and the District Board President to be Chairman of the Board, and (3) by contributing the remainder that may be required from the District fund.

11. The land-cess of the district amounts to Rs. 5,28,000 per annum, so that 4·64 pies in the rupee of it would meet the interest on 3 lakhs at $4\frac{1}{4}$ per cent., but as the project promises to be fairly remunerative from the start, it is believed that the earnings, once the line is opened, will more than cover the above interest and that no charge at all will ever fall upon the District fund. On the contrary, it is confidently expected by the Board that the project will more than pay its way and so prove ultimately a source of additional revenue.

The same reasons which justify the policy of State guarantees in the case of the construction of the main lines of railway—a policy which has been productive of signal service to the country—apply with greater force in the case of encouraging local enterprises of the kind now proposed. The object in both cases is the same—the development of the material resources of the country—and I trust, therefore, that Government will be pleased to accord its assistance, especially as the Board does not apply for a grant-in-aid or even ask that Government, though likely to be largely benefited indirectly, should take a share in the risks, but limits its prayer to a loan of a portion of the capital required on terms by no means unremunerative, from a purely commercial point of view, to the State, having regard to the present price of Government paper. The Board, once the line is open and indeed for that matter before, can easily afford to pay off a portion of the loan every year in addition to the interest. These annual instalments, of course, Government must fix, but I would suggest Rs. 10,000 per annum, the Board being at liberty to pay off more, if able to do so. Neither Government nor the Board will lose anything by this transaction. On the contrary, both, it may be confidently anticipated, will be gainers in every way if the undertaking is properly conducted, not only financially, but also indirectly by promoting the welfare and convenience of the inhabitants of an important and extensive tract of country.

12. The Board is confident that there will be no difficulty in raising 3 lakhs from the general public, of which the more progressive and intelligent section certainly entertain no doubt about the success of the undertaking. Should it, however, fail to receive local support to this extent, the result must be attributed to ignorance on the part of local capitalists of the benefits of co-operative action and distrust of the Western modes of investment, but I trust that, if only 2 lakhs are locally subscribed, Government will see its way to making its loan 4 lakhs instead of 3 on the security of the District Board revenues.

13. There is another aspect of this scheme to which also I attach the greatest importance, viz., the moral effect which the undertaking is calculated to have, if (as all anticipate) successful, in stimulating a spirit of industrial enterprise in the people. A successful work planned and executed by local agency, carried out and maintained at the cost of funds locally raised, and managed and supervised by representatives of the people of the district, cannot fail to prove a valuable lesson to the people and suggest to them the advantage of emulation. If it should lead to the people of the district taking an interest in joint-stock undertakings of the kind intended for the development and benefit of the district, it will have served a most useful end; for, though this appears to me the scheme best calculated to attain success from the first, there are many others of the same kind which would, I believe, also pay handsomely, such as a similar line from Cocanada to Kottapalli through Drákshárama in the Rámachandrapur taluk. The Chairman of the Chamber of Commerce has written as follows on this view of the question in his letter, dated 24th September 1895 (of which a copy is enclosed):—

> "The Chamber will be very pleased, indeed, if the District Board's proposal be acted upon and half of the capital of the Tramway Company be issued to the public. It will, undoubtedly, be a great advantage to the district if the inhabitants can be brought to understand the value of co-operation, for there are many openings for other joint-stock concerns which might be successfully launched were it not for the want of initiative of the people."

This is only too true.

14. Tanjore has already taken the lead in the matter of constructing the Máyavaram-Mutupet Railway with the aid of a contribution from Provincial funds, and I cannot conceive why a similar but much less ambitious project should not prove an

equal success in this district. That line is a feeder to the South Indian Railway, whilst the one now proposed will be a valuable feeder to the East Coast Railway, which too is a State undertaking, but I doubt if Government is so directly interested and likely to benefit by the Máyavaram-Mutupet line as by the one proposed here, which will be not only of strategical value to it in controlling the agency tracts, but also benefit it directly to a very large extent in reference to its Forest revenues.

15. I have, therefore, the honour to request that Government will be pleased to accord its sanction to the project in question and to the loan applied for by the Board. An application in respect of the 2 lakhs taken credit for from Government for the year 1896–97, is herewith submitted in the form prescribed by the rules framed under section 5 of the Local Authorities Loans Act No. 11 of 1879. A rough sketch of the proposed line of railway is also enclosed for the information of Government.

ENCLOSURE No. 1 to above.

MEMORANDUM by the President, District Board, Gódávari, dated 21st June 1895.

When the East Coast Railway was constructed, I think a very serious error was made in aligning it, so as to pass through Samalkot in place of Peddápur, but the mistake having been made, I do not think it at all probable that it will ever be rectified at any reasonable date by a change of alignment or the construction of a branch; for such a branch on the broad gauge could not pay sufficiently in the shape of interest to justify the cost.

2. At the same time I feel pretty well convinced that, although a broad gauge would not pay, yet in all probability a steam tramway or very light railway would pay very handsomely not only to Peddápur but carried on *viâ* Jaggampéta to Yeleswaram. When I drove to Jaggampéta in April, I was surprised at the number of bandies I met. It has always to be remembered, too, that a cheap and easy means of transport encourages and develops traffic, both goods and passengers, as well as tends to divert to itself traffic now following other routes, as under present circumstances more convenient. As Yeleswaram and Lingamparti alone have a population of about 11,000 for a tramway, they form a very important terminal point and it is also likely that the construction of a steam tramway would lead to the development of a considerable trade between Yeleswaram and the agency tracts beyond, whilst the cost of construction would be light (as it would, as far as possible, compatible with safety and usefulness, follow the present public road) and the country is not a difficult one, so that it would be possible, probably to secure a maximum gradient of 1 in 100 without much difficulty. What land it might be necessary to acquire would not be of a very valuable kind and of great extent, so could be got cheap, whilst the most important work, the bridging of the Yeleru, has been already carried out, for I would propose to take it over the Yerraram bridge, which the District Engineer states is quite equal to carrying a 9 or 10 ton locomotive at low speed.

3. I do not, however, at present venture to propose the immediate undertaking of the work, but am inclined to make its ultimate construction hinge on the discovery of coal in paying quantities in Bhadráchalam. If the exploration now being carried on these, results in the discovery of coal of fair quality in paying quantities, as there appears to be good reasons for hoping, we might look forward to getting coal at Rs. 10 per ton and with fuel available at that figure, such a tramway or light railway as I have proposed above would, I am confident, pay interest at a very satisfactory rate, say 6 per cent. at least, and quite possibly double on a capital not exceeding 3 lakhs. No doubt, with a tram line open to Yelsewaram, we could get wood fuel in abundance at a very cheap rate, but wood is costly to carry and has not the same steam-raising properties as coal.

4. The question of raising the capital is not one, however, which it is necessary to consider at present, though, I fancy, the District Board could easily afford the necessary capital to make the line to Peddápur and borrow enough to carry it on to Yeleswaram, by guaranteeing 4 per cent. interest under a condition to pay off the debenture holders of other shareholders gradually by redeeming bonds to the extent of, say, Rs. 5,000 or Rs. 10,000 a year to be selected by lot. All that I now wish the Board to do is to pass a resolution ordering a survey for a steam tramway or light railway line from Samalkot *viâ* Peddápur and Jaggampéta to Yeleswaram, with a rough estimate of the cost of construction, if made to carry a 10-ton locomotive with a maximum gradient of 1 in 100 and also a rough estimate of the working expenses with coal fuel at Rs. 10 per ton; at the same time, I request an allotment of Rs. 1,000 from the general provision under surveys and plans to meet the cost of making such a survey. Whether the District Board construct the line or not, the advantages of such a survey and estimate are obvious as, if the District Board are not willing to undertake the work, it is very possible some private firm might, though personally I should like the District Board to follow the lead of the Tanjore District Board and construct it itself as the most likely body to work such a scheme for the public benefit.

ENCLOSURE No. 2 to above.

STATEMENT showing the Extent of Traffic carried on along the proposed line from Samalkot to Yeleswaram *viâ* Peddápur and Jaggampéta.

Principal articles of import.	Place from which imported.	Imports. 1892–93.	Imports. 1893–94.	Imports. 1894–95.	1894–95.
Oil-seed stuff ..	Cocanada to Peddápur ..	10,500	10,000	9,800	126,000
	Kothapatnam ..				
	Guntúr ..				
	Gunúdr ..				24,000
Oil seeds ..	Bezwad ..	21,000	19,500	21,000	
	Jaggayyapéta ..				8,070
	Kammam ..				6,500
	Metta, &c. ..				
	Rajahmundry ..				7,300
	Bhimadole ..				
Grain ..	Ellore ..	26,000	25,500	22,500	
	Ganapavaram ..				2,850
	Adivi Kothi, &c. ..				
Salt ..	Cocanada ..	4,950	5,150	4,750	10,000
Cloths ..	Do. ..	660	650	600	6,000
Cotton thread ..	Do. ..	550	500	500	950
Pepper, &c. ..	Do. ..	500	450	400	950
Metals, such as brass, iron, &c.	Do. ..	660	660	600	
Rice ..	Samalkot to Yeleswaram ..	6,000	6,000	6,000	400
Salt ..	Do. ..	5,000	5,000	5,000	300
Castor oil ..	Do. ..	600	600	600	400
Gingelly oil ..	Do. ..	500	500	500	
Metals, such as brass vessels, iron, &c. ..	Do. ..	300	250	300	5,050
Cloths ..	Do. ..	200	200	200	2,000
					2,000
					1,500
					500
					2,000
					2,000
* Bandies.					1,000
					400 *
					15,000
					10,000

STATEMENT showing the Extent of Traffic carried on along the proposed line from Samalkot to Yeleswaram *viâ* Peddápur and Jaggampéta.

Principal articles of export.	Place to which exported.	Exports. 1892–93.	Exports. 1893–94.	Exports. 1894–95.	1894–95.
Factory jaggery ..	Cocanada from Peddápur.	Bales of 164 lb. each. 123,000	124,000	126,000	
	Yelerru ..				
Peddapuri sugar and jaggery in store.	Guntúr ..	26,000	25,500	24,000	
	Jaggayyapéta ..				
Gingelly ..	Cocanada ..	10,500	9,500	8,070	
Pulses, such as red-gram, &c. ..	Cocanada ..	8,000	8,500	6,500	
	Bikkavolu ..				
	Rajahmundry ..				7,300
	Ellore ..	7,000	9,000		
	Tuni ..				
Tamarind ..	Anakapalle ..				
	Vizagapatam ..	2,950	3,050	2,850	
Ragi or cholí ..	Samalkot from Yeleswaram	10,050	10,000	10,000	
Tamarind ..	Do. ..	5,050	6,000	6,000	
Myrabolams ..	Do. ..	1,000	1,050		
Bela bark and Tangedu bark	Do. ..	1,000	1,000		
Soapnut (కుంకుడు) ..					
	Do. ..	500	550		
Horns ..	Do. ..	300	400		
Wax ..	Do. ..	500	450		
Omum nut (వాము) ..					
Oil-seeds ..	Do. ..	6,000	6,050		
Horse-gram ..	Do. ..	1,000	1,500		
White millet ..	Do. ..	2,000	2,000		
Gingelly ..	Do. ..	2,500	2,000		
Soapnut (కుంకుడు) ..	Do. ..	550	500		
	Do. ..	2,000	2,000		
Kamalaphalams ..	Do. ..	2,000	2,000		
Brinjals ..	Do. ..	1,000	1,000		
Mango fruits ..	Do. ..		400		
Bamboos ..	Do. ..	20,000	15,000		
Jaggery ..	Peddápur from Jaggampéta and Samalkot ..	10,000	10,000		
Jaggery ..					

Articles and passengers that passed through the traffic stations at Jaggampéta and Kattipudi in 1889–90, as per accounts prepared by the then establishment.

		1889–90	
Passengers ..	Through Jaggampéta and Kattipudi ..	65,556	
	Do. ..	2,576	
Domestic animals, &c.	Do. ..	* 137,861	
Rice ..	Do. ..	* 166,779	
Pulses, &c. ..	Do. ..	* 24,493	
Jaggery ..	Do. ..	* 306,385	
Other articles	Do. ..		

* Maunds.

ENCLOSURE No. 4 to above.

From—The Chairman, Chamber of Commerce, Cocanada.
To—The President, District Board, Gódávari.
Dated—8th August 1895.

I have the honour to inform you that the Chamber have taken into consideration the very interesting memorandum prepared by you on the possibility and advisability of constructing a steam tramway or light railway between Samalkot and Peddápur with an extension to Yeleswaram through Jaggampéta.

The Chamber warmly support your project. The benefits which a steam tramway would confer on the district are immense. The country would be opened up and a great impetus given to trade with the hill tracts and, undoubtedly, a large and increasingly paying traffic would reward the enterprise.

The Chamber also agree with you that the line should be constructed and maintained by the District Board. Having ample funds at their disposal or at any rate having ample credit to raise money at a low rate of interest, the Board are in the best position to work the line economically and in the interests of the public, much more so than any private company could possibly be.

The Chamber would like to encourage the District Board to undertake the work at once, *i.e.*, as soon as the survey is completed and the necessary financial arrangements have been made, and not to wait until it be proved that coal can be procured from the Upper Gódávari at Rs. 10 per ton. Coal at Rs. 10 per ton is not necessary, the Chamber think, for the success of the undertaking, when there are large suppliers and ample reserves of fuel at Yeleswaram, the terminus of the line. The cost of this fuel will be found, the Chamber think, to compare very favourably with coal at Rs. 10. It can be had for the cost of collecting it *plus* a small Government charge. This charge Government might be asked to forego and might very well agree to do so in view of the public nature of the work and as an encouragement to the promoters.

The Chamber would like to recommend that the line be confined entirely to the Public roads. In Italy, to name only one country, this is done. It reduces the cost of construction enormously. The lines are simply laid down on the side of the road and the people and animals soon become accustomed to the passage of the trains. No cuttings of any sort are required. It would be a pity to tie the Engineers to a gradient not exceeding 1 in 100. In Italy where these light steam tramways are much in vogue, very steep gradients are met with.

ENCLOSURE No. 5 to above.

From—The Chairman, Chamber of Commerce, Cocanada.
To—The President, District Board, Gódávari.
Dated—24th September 1895.

I have the honour to acknowledge receipt of your letter of the 10th instant regarding the construction of a steam tramway to connect Samalkot and Yeleswaram by way of Peddápur and Jaggampéta. Your letter was considered at a meeting of the Chamber held this morning and I have been requested to send you the following reply:—

"The Chamber will be very pleased, indeed, if the District Board's proposal be acted upon and half of the capital of the tramway company be issued to the public. It will, undoubtedly, be of great advantage to the district if the inhabitants can be brought to understand the value of co-operation; for there are many openings for other joint stock concerns which might be successfully launched, were it not for the want of initiative of the people. At the same time the members of the Chamber cannot conceal from themselves that much tact will be required to render the subscription a success. The prospect of 6 per cent. will not tempt the larger capitalists who are accustomed to lend to zemindars at 9 per cent., and the smaller men who usually invest their savings in gold ornaments will be difficult to get at. However, the object of the District Board is worthy of all praise, and if the President and members use their influence with some of the leading merchants, lawyers and native Government servants, there is no reason why the new departure should not prove a great success.

The idea of allowing the shareholders to nominate half the directors is an excellent one, several influential people will find in it a great incentive to interest themselves in the undertaking.

The Chamber are pleased to learn that there is no necessity of a higher gradient than 1 in 100.

ENCLOSURE No. 6 to above.

APPLICATION of the District Board, Gódávari, for a Loan from Government under section 5 of the Local Authorities Loans Act, No. 11 of 1879.

The work or works for the construction or repair of which the loan is required and an estimate of the cost thereof.	The amount which it is proposed to borrow.	The fund or funds on the security of which it is proposed to borrow.	The law or laws under which the said fund or funds is or are levied, received or held.	The period for which the loan is required, the number and amount of the instalments, if any, in which it is proposed to receive such instalment and the instalments, if any, in which it is proposed to repay the loan.	A detailed account of the revenue and expenditure of the local authority for the three last years.	Existing prior charges upon the funds of the local authority.
Construction of a light railway from Samalkot to Yeleswaram *viâ* Peddápur and Jaggampéta, estimated to cost about 7 lakhs of rupees.	Rs. 3,00,000	Gódávari District Fund.	The Madras Local Boards Act, V of 1884.	The loan is required for a period of thirty years. It is proposed to be taken in two instalments—one of Rs. 2,00,000 in the official year 1896-97, and the other of Rs. 1,00,000 in the year 1897-98—and repaid with interest at 4½ per cent. Interest is to be payable every year and the principal in thirty equal annual instalments.	Attached hereto.	None.

ENCLOSURE No. 7 to above.

From—The Chairman, Native Chamber of Commerce, Cocanada.
To—The President, District Board, Gódávari.
Dated—3rd February 1896, No. 1.

With reference to your letter, No. 1435/D.B. of 1895, dated 18th January 1896, I have the honour to enclose herein copy of a resolution passed by the Chamber at a meeting held on the 2nd instant, from which it will be seen that the Chamber cordially supports the Samalkot-Yeleswaram light railway project proposed by you. The Chamber fully appreciates your desire to associate the natives of this district in the management of this concern, and it is hoped that this will be the fore-runner of many similar undertakings. The people of this country are accustomed to look to Government for lead even in such matters and, if the proposed project should prove successful, the people will realize the benefits of joint stock companies. Of all the branch lines that can be thought of in this district, there is perhaps no line which gives such a sure promise of success as the proposed one, and the Chamber trusts that Government will see its way to sanction the same and grant the loan applied for.

ENCLOSURE No. 8 to above.

COPY of Proceedings of the special meeting of the Native Chamber of Commerce of Cocanada, held on Saturday, the 2nd February 1896, at 6-30 P.M.

1. Read letter dated 18th January 1896, from the President, Gódávari District Board, asking the opinion of this Chamber on the Board's proposal of constructing a light railway from Samalkot to Yeleswaram *viâ* Peddápur and Jaggampéta.

Resolution—Resolved that this Chamber accords its cordial support to the proposed project which will not only prove a financial success in the opinion of this Chamber, but will also confer a great boon upon the people of this district, especially upon the people of the agency tracts.

Endt. by the Secy. to Govt., L. and M. Dept., dated 23rd March 1896, Ref. No. 378.

The President is requested to submit a copy of the District Board's resolution dated 10th August 1895, referred to in paragraph 10 of his letter and also copies of its subsequent resolutions on the subject. He is also requested to forward the detailed account of the revenue and expenditure of the District Board for the last three years, which has not been attached to the application as stated in it and to expedite the submission of the list of villages referred to in paragraph 5.

From—the President, District Board, Gódávari.
To—The Secretary to Government, L. and M. Dept., Madras.
Dated—9th April 1896, Dis. No. 726/D.B.

With reference to your memo., No. 378, dated 23rd March 1896, I have the honour to submit herewith—

(1) Copies of the District Board's resolution, dated 10th August 1895, as also the subsequent ones regarding the proposed light railway;
(2) A detailed account (sent separately) of the revenue and expenditure of the District Board for the last three years; and
(3) A list of the villages on or near the line surveyed for the light railway.

Enclosure No. 1 to above.

Extract from the Proceedings of the District Board, Gódávari, passed at its meeting held at Cocanada on 10th August 1895.

8. Read this office No. 1435/D.B., dated 29th June 1895, circulating among the members of the Board President's memorandum regarding the establishment of a tramway or a light railway between Samalkot and Yeleswaram *viâ* Peddápur and Jaggampéta.

The Board sanctions a preliminary survey and estimate and allots Rs. 1,000 for the same from the reserve.

As far as possible, the existing roadway should be utilized. Where, however, important villages which it is desirable to serve lie off the existing road, it should be aligned to as to serve them better.

The report with plan and estimate should be submitted by the 12th November next.

Enclosure No. 2 above.

Extract from the Proceedings of the District Board, Gódávari, passed at its meeting held at Rajahmundry on 10th December 1895.

1. Read draft Revised estimate for 1895–96 and the Budget estimate for 1896–97 of the District Board, Gódávari, as revised with reference to the recommendations of the Sub-committee appointed for the purpose.

Resolution—Passed.

The following are the new proposals provided for in the District Board's Budget for 1896-97 as per recommendations of the Sub-committee.

* * *

6. To make a provision for the proposed light railway from Cocanada to Yeleswaram *viâ* Peddapur.

Resolution—Sanctioned.

2. Read draft consolidated Revised estimate for 1895–96 and the Budget estimate for 1896–97 as revised with reference to the recommendations of the said Sub-committee.

Resolution—Passed as amended by the Sub-committee.

List of Villages with population on or near the line surveyed for the Light Railway.

Name of village.	Number of population.	Name of village.	Number of population.
1. Timmapuram	637	21. Gorripalem	375
2. Annaram Jaddangy ...	508	22. Jaggampéta	3,802
3. Ramaniahpeta ...	283	23. Mallisala	1,249
4. Yeleswaram	4,945	24. Machapudy	1,311
5. Lingamparty	2,888	25. Tallur	1,445
6. Peraram	703	26. Ragampeta	908
7. Sripuram	1,421	27. Borrampalem	426
8. Prattipaud	2,093	28. Mallapilly	1,597
9. Tirumalai	862	29. Katravulapally ...	2,994
10. Velanka	1,315	30. Nayakampally ...	484
11. Kirlampudy	3,934	31. Surampalem	451
12. Geddanapally ...	1,582	32. Jagganna Timmapuram	1,003
13. Yerraram	1,363	33. Kattamuru	4,238
14. Somaram	840	34. Gudivada	889
15. Kristnavaram ...	867	35. Peddápuram	13,658
16. Burugapudy	2,628	36. Ragampeta	1,777
17. Tamarada	2,370	37. Vadlamuru	1,517
18. Gonada	1,581	38. Gorinta	1,449
19. Ramavaram	649	39. Samarlakota	6,887
20. Marripaka	377	40. Bhimavaram	5,051

Endorsement by the L. and M. Dept., dated 29th May 1896, No. 606.

Referred to the Public Works Department, Railway Branch, for favour of remarks. A copy of a note by the Honourable Mr. Bliss accompanies.

Enclosure.

Note by the Honourable Mr. Bliss, C.I.E., dated 18th May 1896.

The scheme is at present in far too sketchy a state for any orders to be passed on it. They don't even give us the gauge of the proposed railway. Still, we may as well hear what the Railway Branch of the Public Works Department thinks about it. An obvious defect is that the terminus at Samalkot would involve a second break of bulk in a very short distance. I should say that, if the scheme is to succeed, a third rail should be laid down from Samalkot to Cocanada and the light railway trains run over it, or else that the light railway should be on the broad gauge, however light the rails and engines may be made for economy's sake.

We cannot, of course, give a loan in 1896–97, as we have not provided for it in our budget.

Endorsement by the Consulting Engineer for Rys., dated 6th June 1896, No. 1737.

Referred to the Manager, East Coast Railway, for favour of remarks.

From—The President, District Board, Gódávari.
To—The Secretary to Govt., Local and Municipal Department.
Dated—1st June 1896, Ref. on Cur. No. 800/D.B.

I have the honour to forward herewith plans, sections, bridge drawings and designs for station buildings together with the Engineer's report on the proposed light railway from Samalkot to Yeleswaram *viâ* Peddápur and Jaggampéta, and to request you will be good enough to forward them to the Secretary to Government, Railway Department, for sanction.

Endorsement by the L. and M. Dept., dated 24th June 1896, No. 722.

Referred in continuation of endorsement No. 606, dated 29th May 1896, to the Public Works (Railway) Department for favour of remarks.

From—The Manager, East Coast Ry.
To—The Consulting Engineer for Railways, Madras.
Dated—Waltair, 19th August 1896, No. 6552.

With reference to your No. 1737, dated 6th June 1896, and its accompaniments herewith returned, regarding the construction of a light railway from Samalkot to Yeleswaram *viâ* Peddápur and Jaggampéta, I have the honour to forward herewith a note on this subject together with a copy of one by the Traffic Superintendent of this line.

Enclosure No. 1 to above.

Note by the Manager, East Coast Ry., on the Proposed Branch line from Samalkot.

No information has been given as to the gauge proposed, weight and description of rail, sleepers, &c.—all items of importance that require to be settled before any proper estimate of cost can be arrived at.

2. Presumably, the proposal is to construct a light tram line on a narrow gauge to be worked by locomotives quite independent of the existing railway. If this is the case, no provision has been made for engines, rolling-stock, workshops, staff quarters, station machinery, &c.

3. The terminus of the proposed branch has, I see, been located on the canal embankment so that it will not be, and is not intended to be, a feeder to the East Coast Railway. A certain amount of traffic from this district now finds its way to the railway by carts, but the greater part of it is delivered into boats and conveyed to Cocanada by the canal. The loss of the present traffic to the East Coast Railway would be inconsiderable, as it is carried only a short distance at an unremunerative rate.

4. Whether the greater part of the traffic from the surrounding district could be secured for conveyance over the branch line depends a good deal on the cost of carriage by rail as compared to transit by carts.

5. The rate at which the branch could afford to carry at again depends on the capital outlay and the quantity of goods to be carried.

6. Before offering an opinion on the probable financial success of the scheme, it will be necessary to have a more complete estimate of the capital outlay required to construct the line. Also, if it is intended to work the branch by independent agency, a further estimate of the probable working expenses should be prepared.

7. I am inclined to think a short branch of this nature is more likely to give a better return on the capital, if it is constructed on the broad gauge and handed over to the main line agency to work on the favourable terms offered by Government.

8. As a narrow gauge, it could hardly pay if worked by a separate agency; but if it is intended to raise a large capital for the purpose of extending the system to all parts of the district similar to the railways in Guzerat, then I think it will be worthy of every support.

Enclosure No. 2 to above.

Note by Traffic Superintendent, dated Waltair, 14th August 1896.

Light Railway from Samalkot to Yeleswaram viâ *Peddápur and Jaggampéta.*

Mr. Bliss' note sounds the key note of the whole scheme. If this tramway is to terminate at Samalkot on a different gauge to the East Coast Railway, it becomes, according to the district board's own showing in their No. 1435/D.B. of 3rd March 1896, a distinct competitor with the East Coast Railway, and besides this, by causing a break of bulk, it, to my thinking, absolutely ruins its prospects. Taking this view that this light railway is to commence at Yeleswaram and terminate at Samalkot a distance of 20 miles and have its terminus, as the plan shows, on the canal banks, its projectors are sure that it will be a financial success, simply on the profits obtained by the carriage of the traffic between Yeleswaram and intermediate stations and Samalkot, the same being there delivered either on to the East Coast Railway, or on to the canal for carriage to destination. The bulk of the traffic, or at any rate, so large a quantity of it, that the remainder may be neglected, moves between Yeleswaram and intermediate stations, and Cocanada, and the District Board in their letter state that they will make sufficient profits in the carriage of this traffic to pay a satisfactory dividend on a capital of 7 lakhs and will be able, year after year to pay off certain of their debenture or shareholders by lot. These prospects are based entirely on the supposition (to quote their own words) that they will get all this traffic at a little more than half the cart rate, that is, taking their figures, that the cart carries traffic for 2 pies a bag a mile, which is equal to 1 pie a maund a mile, they expect to get the traffic over this tramway at a little more than ½ pie a maund a mile. A casual look into any railway's goods tariff, or an inquiry from any Traffic Manager will tend to show, that railway and tramways consider themselves very fortunate if they can obtain traffic, of the classes which use this route, at rates varying from $\frac{1}{5}$th to $\frac{1}{3}$th of a pie per maund a mile, and from my experience of the traffic of this railway, under exactly similar circumstances to those under which the tramway will be placed, makes me unhesitatingly say that it will be several years before it will obtain anything like the bulk of the traffic, and even then I doubt if a $\frac{1}{10}$th of a pie per maund per mile, accompanied with large concessions of "no demurrage" and other heavy risks, will fetch it. If you take it that the cart can carry from Yeleswaram to Cocanada port in almost one night, and deliver the traffic at the merchant's door, and will bring his rate down, in competition with the railway, to certainly ½ of a pie a maund a mile, do you think that the traffic will cart itself to the tramway station at Yeleswaram, to undergo the trouble of booking and loading into the tramway there, break bulk or be transhipped into the railway or the canal boats at Samalkot, then go by rail or canal to Cocanada port, and then again bear the expenses of carting from the railway station to the godowns, or of handling from the boats to the godowns, and all this to cover a journey of 30 miles. My experience makes me think otherwise, and if even it is induced to take this round-about route, the sacrifice of rate and revenue that will be necessary to induce it to do so will ruin the financial prospects of any undertaking.

I am certain that none of it will go by railway from Samalkot, under these circumstances; except what little we now get at the time of the year when the canals are closed; and if it were to go by canal, the whole scheme becomes a competitor of the East Coast Railway. The vested interests of the gumasta who gets his commission on the engaging of the carts and canal boats is a factor that has been overlooked. It has been a most potent factor in keeping traffic off the East Coast Railway.

After full inquiry through my traffic canvassers and extended investigations on the spot, I am convinced that the proposal in this form will not benefit the East Coast Railway a single particle and be a distinct financial failure in itself, and even if it succeeded to one-third the extent, the District Board hopes, it would, as mentioned in its own letter, do a great deal of harm to the East Coast Railway's traffic in firewood from Kottapalli and Pithápuram and building-stone from Durgada.

The essence of the financial success of such a scheme is, that it should work on exactly the same lines as its competitors and take up and deliver traffic as near as possible from the same points as they do, making up in speed and safety any impossibilities in this direction. The tramway in the form above referred to utterly fails in these essential qualities. In support of what I have said above, I can quote several instances, if desired, where the railway has had exactly similar competition by carts without the additional factor of the very cheap carriage by canal and where the offer of an $\frac{1}{8}$ pie per maund per mile and brisk canvassing has failed for three years to obtain a single bag.

To proceed to the second view, viz., the one mentioned by Mr. Bliss, C.I.E., that the tramway should have a third line on the East Coast Railway and run its own traffic to Cocanada port. Supposing this to be done, does this tramway intend to have the same delivery sheds as the East Coast Railway, or does it intend to switch off somewhere near Cocanada port and get more into the heart of the business centre of the town? I know of no one centre that will obviate very extensive carting to some at least of the principal godowns, and I think you will agree with me, judging from our efforts in this direction, such a scheme would considerably raise the capital cost of the undertaking. Whichever it does, it will, I am certain, not be able to get the traffic at a figure higher than a $\frac{1}{10}$ pie per maund per mile, which, on the whole length, Yeleswaram to Cocanada port, would amount to 3 pies per maund or half an anna a bag. It will also have, as the East Coast Railway does, to erect sufficient sheds to store the traffic for days without charging demurrage. Out of this ½ anna a bag, it will have to give the East Coast Railway 80 per cent. of the earnings for the 10 miles, Samalkot to Cocanada port, which will come to very nearly 1 pie per maund, or 2 pies a bag. It will also have to bear its share of the expenses of the switching arrangements and the delivery agency at Cocanada and the joint station working at Samalkot, which will certainly come to another pie a bag. Will it, out of the remaining 3 pies a bag, be able to pay the working expenses of the whole tramway and pay a satisfactory interest on a capital which has been estimated at 7 lakhs, but which, as your note shows, when they have made a proper estimate, is likely to be double that figure. I certainly think it will not. The only other scheme left and the only one that seems to me feasible at all is, that if the branch line to Yeleswaram is considered necessary for the general benefit of the country, it passes through or for strategical purposes, &c., as the Collector says, it should be constructed as cheaply as possible from old rails and materials on the standard gauge, the working agency and the stock of the East Coast Railway should be used. There should be no expensive arrangements of shareholders, boards and meetings; in short, if the railway is at all to be built, that it be a part and parcel of the East Coast Railway system. The District Board in their letter to Government lay stress on the fact that it will be a valuable feeder to the East Coast Railway; it will be nothing of the sort. All the traffic of the district it is intended to serve which goes any distance on the East Coast Railway to Vizagapatam or Bezwada already comes to the railway. The remainder, if it were brought to the railway, in spite of what I have said above, would be at the best, singularly unremunerative traffic, as it would go such a short distance to Cocanada port.

The District Board also laid great stress on the unanimity of the opinion of all the leading merchants and Chambers of Commerce and the enthusiasm with which the prospects of this line are generally hailed. The chorus no doubt in favour of the scheme is full and loud as the record shows, but the music distinctly dwindles down to "very soft" when the singers in the chorus are asked to take shares, and though this is speciously argued away under the general heads of want of the knowledge of co-operation and ignorance of the western methods of investment of money, it is to my mind much too significant to be passed over so lightly, and judging from three years' active canvassing for the East Coast Railway, I am certain it would be found that the greatest enthusiasts in favour of this scheme will be the hardest to get to put any of their traffic on the tramway, and I am certain it is this under current of feeling which prevents them from taking shares largely in the concern. To sum up the whole of the District Board's proposals. They, without very deep investigation into the matter, and blinding their eyes wilfully or negligently to the lessons daily taught by the East Coast Railway, which every one who travels may read, and relying on a very insufficient estimate of cost, have created great enthusiasm about this tramway scheme, which enthusiasm stops short when the question of investing any appreciable amount of their capital comes in, and they ask the Government of Madras to make up for this lack of enthusiasm by lending them 7 lakhs which will not be half enough to carry out a scheme that, in the opinion of experts, in the crude form in which they put it forward, must end in disastrous failure. I can think of no scheme more calculated to put back for years the creation of private enterprise, which the District Board seems so anxious to foster than this scheme if carried out. If the Government has the money for feeder lines, the East Coast Railway can point out several very remunerative ones on which the money can be well spent.

To conclude, I will take the District Board's figures in the returns submitted by them of the traffic which they say will use this tramway. The total traffic they give that runs from Peddápur to Cocanada port and *vice versa* is 234,800 bags or 469,600 maunds.

Peddápur to Cocanada = 13½ to 14 miles at $\frac{1}{10}$ pie per maund ...	rs.	3,424
Deduct 80 per cent. of the earnings, between Samalkot and Cocanada		1,954
Amount earned by tramway ...		1,470 (*a*)
		4

Now take the local traffic from Yeleswaram to Cocanada port and *vice versa* given in the return.
Total traffic = 62,050 bags = 1,24,100 maunds.

Yeleswaram to Cocanada port, 30 miles at $\frac{1}{16}$ pie per maund	...	Rs.	1,939
Deduct 80 per cent. from Samalkot to Cocanada port	... ...		514
Total earnings by tramway	...		1,425 (*b*)

Total traffic from Jaggampéta to Cocanada port and *vice versa*, 10,000 bags or 20,000 maunds.

Jaggampéta to Cocanada port, 25 miles at $\frac{1}{16}$ pie per maund	...	Rs.	260
Deduct 80 per cent. for 10 miles from Samalkot to Cocanada port	...		82
Total earnings by tramway	...		178 (*c*)

The total of (*a*) (*b*) and (*c*) is Rs. 3,073. At a liberal estimate, suppose the passenger traffic is double of this amount. The total then will be Rs. 6,146 + 3,073 = Rs. 9,219; deduct from this 50 per cent. for the working expenses, the profit will amount to Rs. 4,609, which on a capital of 14 lakhs makes As. 5-3 per cent.; therefore, the District Board is going to pay satisfactory interest on its capital and also repay to Government Rs. 10,000 a year of the capital lent out of Rs. 4,609, or As. 5-3 per cent., I do not see where it is to come from.

Report by the Assistant Engineer in charge, of the Survey for the proposed light railway from Samalkot to Yeleswaram *viâ* Peddápur and Jaggampéta.

The District Board having proposed to build a light railway of 2′ 6″ gauge running from Samalkot to Yeleswaram and the survey and plans having been completed, I have now to report as follows:—

As far as the construction of the line goes, there are no engineering difficulties to be contended with. For the first 9 miles the line runs over hard, dry gravel soil. On this portion of the line there is no bridge over two of 40-feet span. From mile 9, the formation of the ground is not so favourable, being extremely low in places and continually flooded during the monsoon. In consequence of this, it has been found necessary to put in a number of curves between miles 9 and 15; there are also some curves between miles 6 and 9 which have been put in for the same purpose, *i.e.*, in order that the line may run as far as possible on the high ground, thus saving a great deal of high banking and also a number of small bridges and culverts which otherwise would have been necessary to carry off the flood water. From mile 13, where the Jaggampéta station is situated, the road runs by the northern side of the great Northern trunk road up to the bridge over the Yeleru at Yerraram, mile 19. Consequently in only a few places, has it been found necessary to put in bridges, as in most cases, the great Northern trunk road culverts have simply been extended. From Yerraram to Yeleswaram, mile 23, the line runs parallel to the Yerraram-Juddangy road; in this case there are no bridges, simply extension of road culverts.

It will be seen from the above, that there would be no difficulty whatever in constructing the line. Exception may, perhaps, be taken to some of the gradients; these, for the most part, have been put in to avoid deep cutting and in some places to carry the line on to tank bunds, the average height of bank being 5 feet and the highest 12 feet. It may be thought that it would have been better to run the line from Samalkot straight up at right angles to the East Coast, instead of running as we do, for some distance, parallel to it and then curving to the north and east. I would, however, point out that this alignment has been chosen in order to avoid richly cultivated gardens, a large tank and also a number of pucka and kutcha houses which would have had to have been demolished during the construction of the line and for which heavy compensation would have had to be paid. As it is, the line for the first 4 miles runs over absolutely waste land for which very little compensation will be required. The line including rolling-stock will cost Rs. 24,600 per mile,—the rolling-stock proposed to be used is the same as that used on the Morve State Railway which has given great satisfaction. I have not reported as to the traffic likely to be available for the line, this having been dealt with exhaustively by the District Board President, in his memorandum to the Secretary to the Government, Local and Municipal department, on the proposed light railway. Subjoined will be found a detailed description of the proposed line from Samalkot to Yeleswaram.

Mile 0·1.—The line starts from 300 feet to the north of Samalkot, East Coast line, to which it runs parallel in a western direction for 575 feet. From this point, it curves away to the north with a gradient of 1 in 140 rise. It crosses a steel rolled girder bridge of 30-feet span over a nulla at mile 0·25. This bridge is approximately the same as the bridge over the same nulla on the East Coast Railway, which is two spans of 12 feet; the soil here is 2 feet of red earth, subsoil gravel. From this point the line curves to the north and then back towards the east on the level. Mile 0·71 crosses a bridge of 15-feet span, and at mile 0·83 another bridge of 15-feet span. These two nullas unite and pass under the first-mentioned bridge of 30-feet span. From this point, the line curves gradually to the west with a fall of 1 in 150, and then rises 1 in 180, where it crosses Samalkot-Peddápur road at mile 1·2,100 feet. Mile 2 crosses a bridge of 2-feet span, soil as before. Opposite to this bridge, there are two culverts of 6 feet each waterway. These culverts are not sufficient during the monsoon and it has therefore been considered necessary to give the railway bridge 8 feet extra waterway. The line still curves gradually to the west on a gradient of 1 in 290 rise. There is a bridge of 15-feet span at mile 3·7, this being

necessary in order to carry off the drainage which comes down from near the taluk cutcherry of Peddápur—top and subsoil gravel. Curving away to the north over a gradient 1 in 59 fall, it crosses Peddápur station at mile 3·2,400 feet on the level still curving to the north on a gradient 1 in 74 fall. The line crosses a bridge of 10-feet span at mile 3–71; this bridge is to allow passage of water from a tank to the west of the line. The area under irrigation from this tank is 100 acres—soil red earth and gravel. From this point, the line curves to the west on a gradient 1 in 224 fall, crossing a bridge two of 20 feet girders at mile 4·13. This bridge is proposed to take the discharge from the tank at Peddápur in case of an accident to the tank bund. There are also two culverts of 3 feet-span over two irrigation channels from the tank—top soil red-earth, and subsoil gravel. Curving back towards the north on a fall of 1 in 120, and then to the west on the same fall (these curves are put in in order to avoid old Peddápur city) the line crosses two spans of 40 feet girders at mile 4·93. This bridge is to allow the discharge from the tank of old Peddápur. Two culverts of 3 feet each are also provided over two irrigation channels; irrigated area 150 acres. The line from this point (mile 5) curves to the west over 1 in 84 rise and then 1 in 140; at mile 5·4,050 feet, the line crosses a bandy-track from Kattamur village; at mile 6·08, it crosses a bridge of 15 feet girder over the supply channel to a large tank east of the line. At mile 6·1,030 feet, there is provided a place for crossing and stopping trains by signal for the convenience to the inhabitants of Kattamur village. Curving to the west over 1 in 227 rise followed by 1 in 369 fall, it crosses a 15-feet span over the supply channel of the large tank to the east of the line—top soil 3 feet red-earth, subsoil gravel. At mile 7 the line crosses another 15-feet span provided for the discharge of the tank to the west. Curving to the west on a grade 1 in 88 rise in order to avoid a large tank, it continues curving to the west on a grade of 1 in 62 rise and still to the west 1 in 218 rise; these three curves are put in to avoid heavy banking which would otherwise be necessary. The line here crosses a culvert of 10 feet waterway over the supply channel of Timmapur tank. Curving still, to the west on a gradient of 1 in 431 fall, it crosses Jaggampéta-Peddápur road at mile 7·1,920 feet, crosses over a 10-feet span at mile 8·27. This span is over an additional supply channel to Timmapur tank. From this point, the line bears away to the north over gradients of 1 in 61 rise, 1 in 150 rise, level and then 1 in 71 fall, and crosses a bridge of 15 feet girder at mile 8·47 over a drain. This drain crosses the Local Fund road through a culvert of 8-feet span which is insufficient. Curving to the west on a grade of 1 in 71 fall and 1 in 140 rise (these two curves are in order to avoid the irrigation tank of Katravulapalli village), it here crosses a bridge of 30 feet girder at mile 8·96 for the discharge of an irrigation tank—irrigated area 81 acres, soil black cotton. At mile 9·07, there is another bridge of 30-feet span from Katravulapalli village. Corresponding to this on the road there is a road-dam 60 feet. There is anotner crossing place for trains at 9·600 feet for the convenience of Katravulapalli people. Bearing away to the west, the line passes Katravulapalli village road at mile 9·2,000 feet. At mile 9·77, a bridge of one span of 40 feet girder is provided for the discharge of a drainage area of 3 square miles. The Local Fund road, here, is frequently washed away by the floods. Beyond this bridge two curves are put in to avoid the low ground and heavy banking, mile 10·14, and there is a bridge of 20-feet span provided in the low ground as the Local Fund road suffers here badly; soil, black cotton. The line bears from here to the west over a grade of 1 in 533 crossing a bridge of 30-feet span over the supply channel of Ragamma tank. This tank has two waste weirs of 15 feet each. Bearing away to north on a gradient of 1 in 270 rise and 1 in 93 fall, the line points towards Jaggampéta and crosses a bridge of 10-feet span at mile 11·81 over an irrigation channel and a culvert of 10-feet span which allows water from the north of Local Fund road to flow into Jegulagandy drain. The irrigated area of this tank is 40 acres. At mile 11·85, the line passes over Jegulagandy drain by a bridge of 1 of 40-feet span. The catchment basin is 3 square miles. One bridge of 15 feet, 1 culvert of 6 feet and 1 road-dam of 80 feet are provided on the Local Fund road. Not only the drainage from this river goes through, but a great portion of the drainage from the north—soil black cotton. Bearing away slightly to the north over a grade of 1 in 506 rise, it crosses a bridge of 1 of 30-feet span at mile 12·91 and also two culverts of 5-feet span each. This is allowed for the irrigation of the land from Jaggampéta tank—irrigated area 120 acres. At mile 12·68 and 12·77, the line crosses over two bridges of 15-feet span each. These are provided to permit the irrigation of land from a tank to the north of the great Northern trunk road. Opposite these bridges in the great Northern trunk road is a road-dam 60 feet long. As one-half of the drainage passes parallel to the Local Fund road, it consequently does not affect the line. Curving away to the east over a gradient of 1 in 150 rise and then level, the line crosses the great Northern trunk road at mile 12·4,800 feet. From this point the line passes to the north of great Northern trunk road towards east running through Jaggampéta station at mile 13·330 feet. From here to Yerraram bridge, the line is carried simply close to the great Northern trunk road. The culverts on the road have all been extended in order to carry the railway except in the undermentioned places:—

At mile 12·96, a bridge of one span of 10 feet girder has been put in, the corresponding openings on the road being 2 of 3 feet. At mile 13·50, a 15 feet span has been put in opposite to which on the road are two of 6 feet each culverts. At mile 17·29, where the line crosses Dussalam drain which has a catchment area of 5 square miles, a bridge of four spans of 40 feet girders has been provided. The great Northern trunk road crosses this drain by a bridge of two spans of 30 feet. Attached is a road-dam of 100 feet. Even this is insufficient, the road being frequently washed away. At mile 18·93, there is one 15-feet span opposite to the 10-feet span on the road. At mile 19·1,950 feet the line crosses through Yerraram station. On leaving this station, it

crosses Yerraram bridge of fifteen spans of 36 feet each. This bridge being to standard dimensions is capable of easily carrying any load that can be got on a 2′ 6″ line. After passing the bridge, the line bears to the north and continues in that direction running alongside the Yerraram-Juddangy road until it reaches the terminal station at Yeleswaram, mile 23·35. On the Yerraram-Juddangy road, there are thirteen culverts of 3-feet span each which have been extended to allow the line being run over them. Station buildings, station machinery buildings, permanent-way and rolling-stock have not been taken into consideration in this report, as the abstracts sent herewith clearly show the design and give all necessary information.

PROPOSED LIGHT RY. FROM SAMALKOT TO YELESWARAM.

2′ 6″ GAUGE (23·35 MILES).

Abstract of Cost of Railway.

Heads of Account.	Total cost.			
	Sub-heads.		Main heads.	
	Total cost.	Rate per mile.	Total cost.	Rate per mile.
	Rs.	Rs.	Rs.	Rs.
I. Survey expenses	1,000	42	1,000	42
II. Land	5,000	214	5,000	214
III. Formation	..	..	37,120	1,590
1. Earthwork	37,120	1,590	..	..
IV. Bridge work	..	..	59,308	2,540
1. Bridges	49,656	2,127	..	..
2. Culverts	9,652	413	..	..
V. Electric telegraph	9,700	415	9,700	415
VI. Ballast and permanent-way	..	..	1,89,216	8,146
1. Ballast	8,580	363	..	..
2. Permanent-way	1,80,636	7,783	..	..
VII. Station and buildings	..	..	68,680	2,938
1. Stations and offices	9,147	392	..	..
2. Workshop and Store buildings, &c.	9,756	418	..	..
3. Staff quarters	10,355	443	..	..
4. Station machinery	40,451	1,732	..	..
VIII. Rolling stock	..	..	1,93,129	8,271
1. Locomotive	55,420	2,373	..	..
2. Carriages and wagons	1,37,709	5,898	..	..
IX. General charges	..	..	10,500	449
1. Engineering establishment	7,000	299	..	..
2. Audit and Account	1,500	64	..	..
3. Locomotive	2,086	86	..	..
Total ..	5,74,668	..	5,74,668	24,600

Abstract of Bridge Quantities.

Mile.	Name of bridge.	Excavation.	Sand.	Concrete.	Masonry.	Pointing.	Arching.	Iron work.	Timber.	Coping.	Dry filling.	Pitching.	Total.
		C.FT.	C.FT.	C.FT.	C.FT.	SQ.FT.	C.FT.	TONS.	C.FT.	C.FT.	C.FT.	C.FT.	C.FT.
0·25	1 Girder .. 30 feet.	2,000	..	500	1,300	500	..	2·06	12	57	1,000	700	..
0·46	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	..
0·47	1 ,, .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	..
0·71	1 Girder .. 15 ,,	3,000	..	800	1,200	500	..	0·46	8	77	1,500	400	..
0·83	1 ,, .. 15 ,,	4,000	..	1,300	2,100	700	..	0·46	8	75	2,000	400	..
2·09	1 ,, .. 20 ,,	1,000	..	3,500	1,600	600	..	0·65	9	83	500	550	..
3·07	1 ,, .. 15 ,,	3,000	..	800	1,200	500	..	0·46	8	77	1,500	400	..
3·71	1 ,, .. 10 ,,	3,000	..	900	2,000	800	..	0·24	6	83	1,500	400	..
3·89	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	..
4·13	2 Girders .. 20 ,,	3,000	..	1,100	3,600	1,300	..	1·30	18	98	1,500	1,500	..
4·33	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	..
4·85	1 ,, .. 3 ,,	2 000	..	700	600	400	86	..	..	48	1,000	..	..
4·93	2 Girders .. 40 ,,	6,000	..	800	2,400	700	..	9·96	28	75	3,000	3,600	..
5·04	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	..
6·68	1 Girder .. 15 ,,	3,000	..	800	1,900	800	..	0·46	8	86	1 500	500	..
6·90	1 ,, .. 15 ,,	3,000	..	800	1,200	500	..	0·46	8	77	1,500	400	..
7·00	1 ,, .. 15 ,,	2,000	..	700	1,450	500	..	0·46	8	67	1,000	350	..
7·36	2 Arches .. 5 ,,	400	..	1,400	1,700	900	151	..	..	108	200	400	..
8·04	2 ,, .. 5 ,,	400	..	1,400	1,700	900	151	..	..	108	200	400	..

Abstract of Bridge Quantities—cont.

Mile.	Name of bridge.	Excavation.	Sand.	Concrete.	Masonry.	Pointing.	Arching.	Iron work.	Timber.	Coping.	Dry filling.	Pitching.	Total.
		C.FT.	C.FT.	C.FT.	C.FT.	SQ.FT.	C.FT.	TONS.	C.FT.	C.FT.	C.FT.	C.FT.	C.FT.
8·27	1 Girder .. 10 feet.	1,000	..	1,200	1,800	700	..	0·24	6	75	500	300	
8·47	1 ,, .. 15 ,,	4,000	..	1,300	2,100	700	..	0·46	8	75	2,000	400	
8·91	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	
8·96	1 Girder .. 30 ,,	3,000	1,000	800	1,900	200	..	2·06	12	73	1,500	1,000	
8·98	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	
9·07	1 Girder .. 30 ,,	3,000	1,000	700	1,550	500	..	2·06	12	67	1,500	850	
9·77	1 ,, .. 40 ,,	4,000	8,000	1,200	1,800	600	..	4·98	14	72	2,000	1,000	
10·41	1 ,, .. 20 ,,	1,000	800	3,500	1,600	600	..	0·65	9	83	500	550	
10·71	1 ,, .. 30 ,,	3,000	1,000	1,400	2,150	900	..	2·06	12	96	1,500	900	
11·65	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	
11·81	1 Girder .. 10 ,,	2,000	..	1,000	1,400	500	..	0·24	6	65	1,000	300	
11·85	1 ,, .. 40 ,,	11,000	8,000	1,800	4,500	1,000	..	4·98	14	92	5,500	2,000	
12·11	1 ,, .. 30 ,,	1,500	900	1,250	1,900	500	151	2 06	12	62	750	600	
12·42	2 Arches .. 5 ,,	400	..	1,400	1,700	900	151	..	..	108	200	400	
12·54	2 ,, .. 5 ,,	400	..	1,400	1,700	900	151	..	..	108	200	400	
12·68	1 Girder .. 15 ,,	3,000	500	800	1,200	500	..	0·46	8	77	1,500	400	
12·77	1 ,, .. 15 ,,	3,000	500	800	1,200	500	..	0·46	8	77	1,500	400	
12·96	1 ,, .. 10 ,,	2,000	500	1,000	1,400	500	..	0·24	6	65	1,000	300	
13·15	1 ,, .. 15 ,,	3,000	500	800	1,200	500	..	0·46	8	77	1,500	400	
13·16	1 Open top .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
13·26	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
13·36	1 ,, .. 6 ,,	550	..	500	300	300	..	..	12	32	75	..	
13·23	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
13·56	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
13·71	1 ,, .. 4 ,,	500	..	400	300	300	..	..	10	32	250	..	
13·80	1 ,, .. 4 ,,	500	..	300	200	200	..	..	9	28	250	..	
13·84	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
13 94	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
14·15	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
14·25	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
14·40	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
14·65	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
14·69	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
14·90	1 ,, .. 6 ,,	500	..	500	300	300	..	..	12	32	250	..	
14·98	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
15·20	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
15·29	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
15·46	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
15·90	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
16·00	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
16·20	1 ,, .. 6 ,,	500	..	500	300	300	..	..	12	32	250	..	
16·32	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
16·36	1 ,, .. 6 ,,	500	..	500	300	300	..	..	12	32	250	..	
16·87	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
17·01	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
17·29	4 Girders .. 40 ,,	24,000	3,500	3,300	4,850	1,400	..	19·92	56	77	1,200	75	
17·46	1 Open top .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
18·36	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
18·93	1 Girder .. 15 ,,	3,000	500	800	1,200	500	..	0·46	8	77	1,500	400	
18·95	1 ,, .. 10 ,,	3,000	500	900	2,000	800	..	0·24	6	83	1,500	400	
19·12	1 Open top .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
19·24	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
19·28	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
19·37	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
19·74	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
19·93	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
20·06	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
20·16	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
20·67	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
21·72	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
22·02	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
22·80	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
23·14													
	Total, Quantity ..	147,250	27,200	49,650	60,325	32,200	1,288	59·00	719	4,180	73,625	20,975	
	Rates ..	2-14-6	3°/₀	13°/₀	16°/₀	8°/₀	75°/₀	..	1-9-0	50°/₀	3°/₀	7°/₀	
	Amount ..	418	816	6,454	9,652	966	966	32,310	1,123	2,090	220	1,468	56,483
												Contingencies 5 per cent ..	2,825
												Grand Total ..	59,308

Bridge Abstract.

Type of Bridge. Class.	No.	Spans.	Total number of spans.	Waterway.
Open tops	20	3 feet	20	60
	15	4 ,, ...	15	60
	5	6 ,, ...	5	30
Arched culverts	8	3 feet	8	24
	4	5 feet (4 of 2 spans)	8	40
	1	10 feet	1	10
Girder bridge	4	10 feet	4	40
	11	15 feet	11	165
	3	20 { 2 of 1 span	2	40
		{ 1 of 2 spans	2	40
	5	30 feet	5	150
	4	40 feet { 2 of 1 span	2	80
		{ 1 of 2 spans	2	80
		{ 1 of 4 spans	4	160
		Total for whole line ..	..	979
		Average per mile ..	..	41·92

Station Buildings Abstract.

Name of station.	Class.	Mileage.	Distance apart.	Station building.	Goods-shed.	Passengers' platform. Length.	Passengers' platform. Height above rails.	Station-masters' quarters.	Menials' quarters.	Well diam. (c)
			MILES.	S. FT.	S. FT.	FT.	FT.	NO. S. FT.	NO. S. FT.	FT.
Samalkot	1	0	0	2,124	689	200	1	1 940	7 1,365	12
Peddápur	2	3½	3½	1,633	689	150	1	1 940	5 975	..
Jaggampéta	2	13 1/16	9 9/16	1,633	689	200	1	1 940	5 975	12
Erraram	2	19½	6 7/16	1,633		150	1	1 940	5 975	..
Yeleswaram	1	23¼	3¾	2,124	689	200	1	1 940	7 1,365	12

Curve Abstract.

Angle of Curvature or Radius.	Number of each.	Total length, miles.
15°16′ (R = 375)	1	0·05
10°54′ (R = 525)	1	0·15
9°32′ (R = 600)	5	0·54
8°29′ (R = 675)	1	0·2
7°0′ (R = 825)	2	0·11
6°20′ (R = 900)	6	0·87
4°46′ (R = 1,200)	2	0·43
3°50′ (R = 1,500)	5	0·84
3°10′ (R = 1,800)	4	0·66
2°43′ (R = 2,100)	1	0·11
2°23′ (R = 2,400)	2	0·32
2°7′ (R = 2,700)	1	0·08
1°54′ (R = 3,000)	6	0·61
1°16′ (R = 4,500)	3	0·40
Flatter than 1° = 0	16	2·35
Total ..	56	7·74

Gradient Abstract.

Inclination.	Number of each.	Total length, miles.	Percentage of total length of line.
1 in 59 = 1·69 per cent. ..	1	0·25	1 07
1 in 64 = 1·56 ,, ..	1	0·11	0·47
1 in 71 = 1·40 ,, ..	1	0·23	0·98
1 in 75 = 1·33 ,, ..	1	0·34	1·46
1 in 76 = 1·31 ,, ..	1	0·19	0·81
1 in 82 = 1·22 ,, ..	1	0·08	0·34
1 in 83 = 1·20 ,, ..	1	0·46	1·97
1 in 84 = 1·19 ,, ..	1	0·57	2·44
1 in 86 = 1·16 ,, ..	1	0·13	0·56
1 in 88 = 1·13 ,, ..	1	0·31	1·33
1 in 89 = 1·12 ,, ..	1	0·21	0·90
1 in 93 = 1·07 ,, ..	1	0·13	0·56
1 in 94 = 1·06 ,, ..	1	0·27	1·16
1 in 100 = 1·00 ,, ..	1	0·12	0·51
1 in 106 = 0·94 ,, ..	1	0·31	1·33
1 in 129 = 0·78 ,, ..	1	0·43	1·84
1 in 133 = 0·75 ,, ..	2	0·53	2·27
1 in 140 = 0·71 ,, ..	2	0·56	2·40
1 in 146 = 0·68 ,, ..	1	0·09	0·39
1 in 150 = 0·66 ,, ..	1	0·11	0·47
1 in 155 = 0·65 ,, ..	4	1·08	4·62
1 in 158 = 0·63 ,, ..	1	0·34	1·46
1 in 160 = 0·63 ,, ..	1	0·15	0·64
1 in 162 = 0·62 ,, ..	1	0·09	0·39
1 in 175 = 0·57 ,, ..	1	0·55	2·35
1 in 180 = 0·55 ,, ..	1	0·35	1·50
1 in 200 = 0·50 ,, ..	1	0·15	0·64
1 in 218 = 0·46 ,, ..	1	0·47	2·01
1 in 220 = 0·45 ,, ..	1	0·88	3·77
1 in 227 = 0·44 ,, ..	1	0·39	1·67
1 in 250 = 0·40 ,, ..	1	0 19	0·81
1 in 210 = 0·37 ,, ..	1	0·31	1·33
1 in 290 = 0·35 ,, ..	1	0·62	2 65
1 in 294 = 0·34 ,, ..	1	0·96	4·11
1 in 337 = 0·30 ,, ..	1	1·04	4·45
1 in 338 = 0·30 ,, ..	1	0·20	0·86
1 in 342 = 0·29 ,, ..	1	0·65	2·78
1 in 350 = 0·29 ,, ..	1	0·27	1·16
1 in 369 = 0·27 ,, ..	1	0·36	1·54
1 in 431 = 0·23 ,, ..	1	0·41	1·76
1 in 500 = 0·20 ,, ..	1	0·23	0·99
1 in 533 = 0·19 ,, ..	1	0·83	3·55
1 in 566 = 0·18 ,, ..	1	0·55	2·36
1 in 800 = 0·13 ,, ..	1	0·31	1·33
1 in 900 = 0·11 ,, ..	1	0·68	2·92
Flatter than 1 in 1,000 including level. ..	1	5·86	25·08
Total ..	..	23·35	99·99

Station Machinery.

Name of station.	Station ashpits.	Water columns. Number.	Water columns. Diameter.	Water tank. Capacity in cubic feet.	Well. Diameter.	Hand pump or water lift.	Switches 9 feet stock rails 12.	Crossings 1 in 5.	Home signals.	Distant signals.	Platform weighing machines. Number.	Platform weighing machines. Capacity.	Engine-shed area.	Local ashpits.	Engine turntable.
			INCH.									TONS.			
Samalkot	1	1	4	75	12	1	10	10	1	2	2	1	2,500	2	1
Peddápur	..	..	..	..	..	..	3	3	1	2	1	1	..	..	..
Jaggampéta	1	1	4	75	12	1	4	4	1	2	1	1	..	..	..
Erraram	..	..	..	..	..	..	3	3	1	2	1	1	..	..	..
Yeleswaram	1	1	4	75	12	1	10	10	1	2	2	1	1,400	1	1

Articles required from England.

Description.	Quantity.	English cost. F.O.B.	English cost. Total.	Rate of exchange.	English cost in rupees.	Indian charges.	Total.
		RS.	RS.		RS.	RS.	RS.
Permanent-way	30 miles.	8,820	8,820	1 £ (18 Rupees).	1,58,760	15,876	1,74,636
Station machinery	as per list	2,043	2,043		36,774	3,677	40,451
Plant and workshop machinery ..	Lump sum	389	389		7,000	700	7,700
Locomotives	4 Nos.	2,799	2,799		50,382	5,038	55,420
Coaching stock	18 ,,	3,470	3,470		62,460	6,246	68,706
Goods stock	42 ,,	3,485	3,485		62,730	6,273	69,003
Total ..	..	21,006	21,006	..	3,78,106	37,810	4,15,916

Note by the Consulting Engineer for Rys. on the proposed Ry. from Samalkot on the East Coast Ry. to Yeleswaram, dated Ootacamund, 18th September 1896.

Alignment.—The junction station at Samalkot is placed 300 feet from the East Coast Railway; before the line is actually constructed, the junction arrangements will have to be considered with the East Coast Railway authorities. There should be an island platform for transferring passengers and a tranship siding for goods.

2. The deviation from mile 0 to 2 is said to be necessary in order to avoid some gardens, a tank, and a number of houses; but there is a road shown on the plan from 22 chains to opposite mile 2, which could apparently be made use of. This portion should be carefully considered before construction is commenced; it would be worth while to incur a slightly heavier initial cost if a more direct line can be secured.

3. From mile 8 to 13 it would seem that a shorter and more economical line could be got by following the road as much as possible. If the road authority raises no objection, the line could be placed on the road as is done in the Darjeeling and Morvi Railways, and also I believe in Barsi road tramway.

4. From mile 13 to the terminus the line has been placed at one side of the road: here, too, considerable expenses would be saved by using the road itself. If the culverts are not strong enough, they might either be replaced by girders or deviations could be made where they occur and the culverts could be lengthened.

5. *Grading.*—There are five gradients steeper than 1 in 80: their total length is 1·12 mile, the steepest is 1 in 59 at mile $3\frac{1}{4}$ running into Peddápur station. This could be altered to 1 in 100 by going into 11 feet of cutting at the deepest part, or 1 in 80 at most.

6. A grade of 1/84 between miles 5 and 6 could be altered to 1 in 100 without much extra expenses.

7. The short grades of 1 in 64 and 1 in 71 between miles 8 and 9 and that of 1 in 82 between miles 9 and 10 could also be flattened without much extra earthwork. A grade of 1 in 76 at the 17th mile could easily be flattened to 1 in 100.

8. The ruling gradient should not be steeper than 1 in 80, and probably 1 in 100 could be got by careful surveying and grading; it will prove more economical in the long run to pay a little more for earthwork (which is only $\frac{1}{15}$th of the total) and to so reduce working expenses.

9. *Bridgework.—Extensions of culverts* 3, 4 and 6 feet. The road is carried on timber baulks; it would probably be just as cheap to use girders made of old rails and would give more headway.

10. *Girder bridges.*—The height from floor to girder in several of the bridges is quite out of proportion to the span. The height of seven of the bridges should be increased: the span could then, probably, be diminished. If the height is kept, the same smaller spans should be used.

11. Nothing is said in the report about materials, but if good stone can be got cheaply, it would be preferable to convert a good many of the girders into arched bridges.

12. *Station buildings.*—Booking office, waiting shed, goods shed, passengers' platform have been provided for. The roofs are of corrugated iron and are carried on old rails. The accommodation is sufficient for a railway of this kind.

13. *Staff quarters.*—Stationmasters' and menials' quarters are provided for.

14. *Station machinery.*—Watering arrangements are provided at the terminal stations and at the midway station of Jaggampéta, and engine sheds at the terminal stations.

Home and distant signals are allowed for at all stations. I think the distants might be done away with.

No plans of stations are given, but it appears that a loop and a dead end has been allowed for at each station.

Turn tables at the terminal stations are also provided.

15. *Permanent-way.*—No description is given and no mention is made of ballast.

16. *Rolling-stock.*—Four locomotives, 18 passenger carriages and 42 goods wagons have been estimated for: to begin with, 2 locomotives would be sufficient, 12 carriages and 20 wagons.

17. *Fencing and plant*—have not been allowed for: the former is not necessary.

18. *Estimate.*—The total is Rs. 5,74,668 for the 23·35 miles: the rate per mile is Rs. 24,600. I have little doubt that the line could be made for this. The Morvi Railway (original length 26 miles) on the same gauge was estimated to cost Rupees 23,600 per mile laid with 19 lb. rails on steel sleepers. The actual cost some years after opening when 29 lb. rails had been substituted for 50 miles (the line being now 94 miles long) was Rs. 23,460 per mile.

The Morvi line was laid mostly at one side of the road by the date in question (December 1894); it had been much improved by curves being eliminated and grades flattened.

19. To return to the estimate in detail—*Survey, Land, Formation*—no alteration required.

20. *Bridgework.*—This could be reduced if the line were laid on the district road, assuming the culverts to be strong enough.

21. *Electric telegraph.*—Omit; the line could be very well run on the staff system.

22. *Ballast and permanent-way.*—If 19 lb. rails are used which would be good enough to start with, the rate could be reduced to Rs. 7,700 per mile.

23. *Stations and buildings.*—The stations and staff quarters need not be built at once. The line would only be worked in daylight at first, and the staff could very well be housed in the villages and the stations could be mere huts. On the Morvi line after the line had been opened for some years, the amount expended on this head was only Rs. 415 per mile. I should think Rs. 1,000 per mile would be ample.

24. *Rolling-stock.*—The Morvi estimate (or rather actual statement) gives Rupees 4,000 per mile against the District Engineer's Rs. 8,271. If the stock noted in paragraph 16 as sufficient to start with is provided, Rs. 4,000 a mile would be sufficient.

25. *Plant*—Rs. 200 per mile should be entered.

The estimate could be reduced as under:—

Telegraph	Rs.	415	per mile.
Ballast and permanent-way	„	446	„
Stations and buildings	„	2,938	„
Rolling-stock	„	4,000	„
	„	6,799	„
Plant	„	201	„
	„	7,000	„

This would give a mileage rate for the whole line of Rs. 18,000.

Note by the Consulting Engineer for Rys., on the Light Ry., from Samalkot to Yeleswaram *viâ* Peddápur and Jaggampéta, dated Ootacamund, 21st September 1896.

This branch line was brought forward by Mr. V. A. Brodie, President of Gódávari District Board, in March 1896.

2. The proposal was for a light railway (gauge not specified) to run from Yeleswaram along or close to the district road to the East Coast Railway station at Samalkot and to place the terminus between the railway station and the canal, so that goods could take either means of transit to Cocanada or elsewhere.

3. It was proposed to construct and work the line by local agency, and to raise the necessary capital (roughly estimated at 7 lakhs) by—

(1) A loan at $4\frac{1}{2}$ per cent. from Government of	Rs.	3,00,000
(2) Public subscription	„	3,00,000
(3) Contribution from District fund	„	1,00,000
		7,00,000

4. It was urged that—

(1) Engineering difficulties would be small.
(2) It would be a valuable feeder to the East Coast Railway.
(3) It was well supported by both the European and Native Chambers of Commerce of Cocanada.
(4) It would open up a rich district.
(5) The traffic was large and would pay sufficient interest on the capital.

At a meeting of the District Board Rs. 1,000 was voted for a survey for a 2′ 6″ gauge railway which has now been made, and plans and estimates have been submitted.

5. Meanwhile, Mr. Brodie's letter with accompaniments was sent to the Manager, East Coast Railway, for report.

6. The Manager reports that the loss to the East Coast Railway by goods, which formerly came to Samalkot station in carts and will now go by canal is inconsiderable. He hesitates to express any opinion on the financial prospects of the railway and advocates a light railway on the broad gauge worked by the East Coast Railway.

7. The East Coast Railway Traffic Manager (Mr. Pope) considers that it will be a competitor and not a feeder to the East Coast Railway, and that owing to the short distance from Cocanada goods will still go by cart if the line is to be built to a different gauge, and the line will be a financial failure. Even if a third rail is laid to Cocanada, he thinks it will still fail to pay a reasonable interest on capital. He does not discuss the proposal of a light railway on the broad gauge.

8. The estimate and plans have now been submitted. A note by the Acting Consulting Engineer is attached. The District Engineer estimates the cost at Rupees 5,74,668 for a length of 23·35 miles, or Rs. 24,600 per mile. If the line were made as cheaply as possible in the first instance, as recommended in the note attached, it is estimated that Rs. 18,600 per mile would be sufficient: this is assuming that there should be no staff quarters, and that station buildings, etc., should be reduced to their simplest expression. It would be safe to take Rs. 23,000 per mile (a little less than the Morvi statement of actual expenditure). This would put the cost of the line at Rs. 5,37,000.

9. In order to earn 4 per cent. on this capital, the net earnings must be Rs. 17·7 per mile per week, or allowing working expenses at 50 per cent., gross earnings must not be less than Rs. 35·4 per mile per week.

10. The statement of traffic given by the Collector shows :—

Between Peddápur and Samalkot	478,000	maunds.	4½	miles.
Yeleswaram and Samalkot	125,000	„	24	„
Jaggampéta and Samalkot	20,000	„	14	„

This is equal to 5,431,000 maund miles.

11. The Traffic Manager, East Coast Railway, takes 1·10 pie as the probable rate at which goods would have to be carried to overcome cart competition. He has such an obvious bias against the proposed scheme that I think this may be accepted with reserve, and 1·5 pie may be taken as a basis for calculation.

12. On this assumption the goods traffic would then earn (if it all came on the railway) Rs. 5,660 per annum. Taking the passenger traffic to be equal to the goods, the gross receipts will be Rs. 11,320 per annum, or about Rs. 9 per mile per week, whereas it ought to earn nearly four times this amount to pay 4 per cent. on the capital.

13. Even this is a sanguine estimate, for the Peddápur traffic is the biggest item, and it is not at all likely that any of it will come on to the railway, if bulk is to be broken at Samalkot; another alternative is to build a light line on the broad gauge and work it with East Coast Railway rolling-stock.

14. If this were done, probably this traffic would be secured; but in that case the cost of the line would be trebled and this idea may be dismissed from consideration.

15. There remains the proposal put forward by the Hon'ble Mr. Bliss to lay down a third rail to Cocanada.

16. The East Coast Railway is laid, for the most part, with Vignolles rails and pea-pod steel sleepers; it would be impossible to put in a third rail, and the only plan would be to lay the 2′ 6″ track between the East Coast Railway rails, which would be exceedingly inconvenient, as it would make both roads very difficult to pack.

17. The only feasible plan seems to be to replace the steel sleepers with wooden and lay a third (75 lb.) rail. (This would be necessary to keep the rails the same height). It is difficult to estimate the cost of this operation. It may be put down roughly at Rs. 1,00,000 for the 10 miles to Cocanada. Assuming that the delivery sheds of the East Coast Railway can be used, the total cost of the line from Yeleswaram to Cocanada will be Rs. 6,37,000.

18. The goods receipts may be calculated as under :—

Between Yeleswaram and Cocanada	125,000	maunds.	34	miles.
„ Jaggampéta and „	20,000	„	24	„
„ Peddápur and „	478,000	„	14½	„

This amounts to 11,661,000 maund miles = Rs. 12,147 per annum at ⅛th pie per maund per mile.

Add passenger traffic assumed equal in amount:

Annual gross receipts	Rs. 24,294
„ net „	„ 12,147

(assuming working to be 50 per cent.)

To this must be added the toll that would be charged by the East Coast Railway for allowing the branch traffic to use their line and goods accommodation. This would have to be settled by the Government of India. The Traffic Manager assumes that the branch would have to give 80 per cent. of its earnings, but where he gets this figure I do not know.

19. Neglecting this item for the present, Rs. 12,147 will give a return of less than 2 per cent. on the assumed capital of Rs. 6,37,000.

20. It generally happens, no doubt, that when a line is opened, traffic rapidly develops, and it is possible that more careful statistics may show a better result, but on those now submitted it would seem a very risky venture to construct the line on any gauge.

21. The Collector might be informed that the estimated traffic will not pay a reasonable interest on the capital required for either a 2′ 6″ gauge, a light broad gauge or an extension of the 2′ 6″ to Cocanada. He might be asked to collect further statistics if he is still sanguine that sufficient traffic is forthcoming.

From—The Consulting Engineer for Railways, Madras.
To—The President, District Board, Gódávari.
Dated—2nd October 1896, No. 1469 D.

Ref. on Cur. No. 1435/D.B., dated 3rd Mar. 1895.
Dis. No. 726/D.B., dated 9th April 1896.
„ 728/D.B. „ 13th „ „
Ref. on Cur. No. 800/D.B., dated 1st June 1896.

With reference to your letters noted in the margin on the proposed light railway from Samalkot to Yeleswaram *viâ* Peddápur and Jaggampéta, I am directed to inform you that the estimated traffic will not pay a reasonable interest on the capital required for either a 2′ 6″ gauge, a light broad gauge or an extension of the 2′ 6″ gauge to Cocanada, and I am to request that you will be so good as to collect further statistics if you are still sanguine that sufficient traffic is forthcoming.

From—The President, District Board, Gódávari.
To—The Secretary to Government, Local and Municipal Department.
Dated—19th November 1896, Ref. on Cur. No. 800/D.B.

In continuation of my letter, Ref. on Cur. No. 800/D.B., dated 1st June 1896, I have the honour to submit, herewith, a plan and report for a deviation of the proposed light railway line at Peddápur and request that the same may be forwarded, with original plans and estimates, to the Secretary, Railway Department, Government of India, for favour of sanctioning the deviation.

Enclosure.

Report on the proposed Re-alignment through Peddápur of the Gódávari District Board Light Railway.

As the principal merchants and land owners of Peddápur taluk objected to the station site as being too far away from the business portions of the town, it was decided by the President of the District Board, V. A. Brodie, Esq., that a site near the taluk cutcherry should, if possible, be obtained; in consequence of which I made a survey and have succeeded in bringing the line to within 500 feet of the cutcherry, the gradients both in and out of the station have been reduced, and the cost has been kept down as much as possible by utilizing the village road from the station to the point where the new line joins the old. The extra cost is caused by the heavy cutting coming into the station. This was unavoidable in order to make a decent gradient, which being brought down to 1 in 125, the original sections showing 1 in 59. The extra cost incurred will, with compensation, amount to Rs. 14,000 about. Tracings of both plan and sections for the deviation are attached.

Endt. by the L. and M. Dept., dated 8th December 1896, No. 1471.

Transferred to the Public Works Department in continuation of endorsement No. 722, dated 24th June 1896.

From—The Consulting Engineer for Railways, Madras.
To—The President, District Board, Gódávari.
Dated—15th January 1897, No. 236 C.

With reference to your letter, Ref. on Cur. No. 800/D.B., dated 19th November 1896, submitting for sanction a plan and report for a deviation of the proposed light railway from Samalkot to Yeleswaram at Peddápur, I am directed to invite your attention to Public Works Department No. 1469 D., dated 2nd October 1896, in which you were informed that Government was not disposed to consider the scheme referred to above, unless further statistics of traffic should show a better prospect of a reasonable interest on capital being secured. This being so, the necessity for further expenditure on detailed surveys seems unnecessary. The money would be better spent in making careful arrangements for estimating traffic. Your request that the deviation plan, together with the original plans, should be forwarded to the Government of India, is therefore not understood.

From—The President, District Board, Cocanada.
To—The Secretary to Government, Local and Municipal Department.
Dated—Gódávari, 16th November 1897, Ref. on Cur. No. 153 D.B.

In reference to the Public Works Department Nos. 1469 D., dated 2nd October 1896, and 236 C., dated 15th January 1897, I have the honour to submit herewith further statistics of traffic collected, as directed in the letters above referred to. I am quite hopeful from the information therein contained that the proposed railway would pay a reasonable rate of interest on the capital invested from the start and therefore trust that Government will be pleased to see its way to recommending its sanction.

Endt. by the L. and M. Dept., dated 11th December 1897, No. 1292.

Transferred to the Public Works Department.

Order—No. 1157 R., dated 17th December 1897.

Recorded.

(True Extract.)

Francis J. E. Spring,
Joint Secretary.

To the Consulting Engineer for Railways, with statistics in original.

Exd. C. Parthasarathy.

P. Govindarajulu
Serial No. 19

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers:—

From—The President, District Board, Gódávari.
To—The Secretary to Govt., L. and M. Dept.
Dated—3rd March 1896, Ref. on Cur. No. 1435/D.B. of 1895.

As promised in paragraph 20 of the covering letter of the District Board's budget for 1896-97, I have the honour to submit the following report on the proposed light railway from Samalkot to Yeleswaram *viâ* Peddápuram and Jaggammapéta.

2. When the East Coast Railway was constructed, a serious error appears to have been made in aligning it, so as to pass through Samalkot instead of Peddápuram, but the mistake having been committed, a change of alignment is not now possible on paying conditions, nor is it likely that a branch to Peddápuram on the broad gauge would pay any better. But I entertain no doubt whatever about the remunerative character of a light railway (which I now think preferable to a steam tramway) between Samalkot and Yeleswaram—the chief centre of trade in agency produce of the district, though itself situated in one of the richest, most highly cultivated and populous tracts of the district outside the delta.

3. In the first place, the cost of construction will be low. Material can be cheaply conveyed to Samalkot (the starting point) from Cocanada by either rail or canal, and the country to be traversed presents no natural difficulties. There are no hills to be avoided or tunnelled, no swamps to be crossed entailing high embankments and none but small streams to be bridged with the single exception of the Yeleru river, and to cross this it is proposed to utilize the existing Yerraram bridge on the grand trunk road which the District Engineer certifies to be quite strong enough for the purpose. The cost of acquiring the land required for the line will also be small; for, though the District Engineer has found it advisable to depart from the original idea of utilizing the existing road, yet keeping as he proposes to the west of it, the line will pass almost entirely through dry lands which, in this part of the Peddápuram taluk, do not command a high market value. Possibly, it may be remarked that *viâ* Jaggammapéta is a round-about way of going from Samalkot and Peddápuram to Yeleswaram, but Jaggammapéta is a populous and important village where four roads meet, and it is necessary and advisable to pass by it in order to tap the agency traffic from Kottapalli, which comes next to Yeleswaram as an agency trade centre, north of the Gódávari. This course is also desirable in the interests of cheap construction, for to proceed direct from Peddápuram, would be to pass through the richly cultivated valley of the Yeleru, which the line as now proposed skirts, and this would entail considerable expenditure on land acquisition and, besides, subject the line to the danger of inundation and damage from floods.

4. In the next place, traffic prospects are excellent. As stated in my original memorandum on the subject (of which I enclose a copy), though in some respects it is not altogether accurate, as, when I drafted it originally, I had been less than two months in the district), I was greatly struck during my last jamabandi tour in the Peddápuram taluk by the enormous number of carts passing along the road from Yeleswaram to Peddápuram. At the weekly market held at Yeleswaram, it is estimated by competent judges that produce worth more than Rs. 10,000 on an average is brought for sale from the interior agency tracts, including certain tracts lying in the Vizagapatam district. This consists principally of tamarind, myrabolams, soap nuts,

nux vomica, honey, wax, and oranges, &c., which are exported to Cocanada and other places in the district. In exchange for this produce, the hillmen purchase oilseeds, grain, salt, cloth, gingelly oil, castor oil and other articles brought from the coast. There is also a large export of jaggery and other produce from the surrounding country and a considerable trade in timber, which would, I have no doubt, develop enormously, could it only be easily and cheaply (in comparison with its bulk and value) carried to the railway or canal at Samalkot. Proceeding from Yeleswaram at Yerraram, the line connects with the grand trunk road and would get considerable traffic by it from Prattipadu and the country to the west of it, whilst Jaggammapéta where it again leaves the grand trunk road, as already stated, is a big village where considerable traffic comes in from the Kottapalli and Murari directions. Again, Peddápuram is not only a place with a large population of 13,658, but an important commercial centre from which an enormous quantity of jaggery and other produce of the very fertile Yeleru valley is exported to different parts of the district, chiefly to Cocanada for export to foreign ports. A statement showing approximately the quantity of goods carried along the route of the proposed line for the three years 1892–93, 1893–94 and 1894–95 prepared by the Tahsildar of Peddápuram, in consultation with the leading local merchants who are fully acquainted with the trade and traffic of the tract the line will serve, is herewith submitted. In 1889–90 two gumastas were employed to register the cart traffic at Jaggammapéta and Kattipudi for one year, and an abstract prepared from the said register is also appended to the above statement. That all this traffic will be diverted to the proposed railway which will afford cheaper and safer facilities of transport is beyond doubt, and it should also attract a good deal which now goes to Pithápuram. The cart-owners now charge a hire of 2 pies per bag per mile, while the railway will probably charge little more than a half. The opening of such a line is also certain to originate a large trade in firewood and building-stone between Yeleswaram and Cocanada where both are in great demand.

5. There is also a large passenger traffic to be taken into account. It cannot be inconsiderable as the proposed line passes through important and populous villages (as per list* enclosed) and, besides, will of course serve a large population residing within a few miles of it throughout its course on both sides. Possibly, it may be said that traffic on the East Coast Railway in this district has so far disappointed expectations, but this is simply because the railway runs alongside navigable canals almost throughout, whereas the proposed line is free from such competition.

* Will be submitted on receipt of the same from the District Board Engineer.

6. There is, perhaps, I may also mention, no possible project of the kind in the district in regard to which there exists such complete unanimity of opinion as to its paying character among officials and non-officials alike. In his letter of the 4th August last (a copy of which is enclosed), the Chairman of the Chamber of Commerce, Cocanada, writes: "The Chamber warmly support your project. The benefits which a steam tramway would confer on the district are immense. The country would be opened up and a great impetus given to trade with the hill tracts and, undoubtedly, a large and increasingly paying traffic would reward the enterprise." The Chairman of the Native Chamber of Commerce—a gentleman possessing a thorough knowledge of the conditions of trade throughout the district—after consulting his Chamber, not only endorses these views, but gives tangible proof of the genuineness of his belief by offering himself to take shares to the value of Rs. 25,000. The cashier of the local branch of the Madras Bank who is also a man of considerable knowledge and experience, in such matters has also furnished me with a memorandum on the subject in which he states that about 1,50,000 bags of cane-jaggery and as many bags of gingelly, myrabolams and the various kinds of grain, &c., are being annually brought down to Samalkot and Cocanada by bandy from the tract the railway is intended to serve, at a cost of 2 to 3 annas per bag according to distance, and that the receipts calculated on the existing traffic alone would amount to Rs. 40,000 to Rs. 50,000 per annum without mentioning the passenger traffic or, apparently, the traffic in the reverse direction.

7. I am glad to note also that the project has evoked great enthusiasm in the places which the proposed line is intended to serve and copies of the proceedings of public meetings held in those places urging the necessity of taking the project in hand

at an early date have been received by me. This is the more gratifying as it was wholly unexpected. Some of the principal land holders, through whose estates the line will pass, are also, I understand, prepared to take payment for their lands, which it may be necessary to acquire in shares.

8. The contract in point of facilities of communication and in the general condition of the people between the deltaic and the Rampa agency tracts of the district is, I need hardly say, very great. The deltaic and coast tracts possess numerous roads and canals which have not only proved in the highest degree beneficial to the people, but very profitable to the State. Roads, railways and canals are, however, alike practically unknown to the people of the agency tracts, and the chief markets are as yet directly inaccessible to them. Valuable produce is, in consequence, in many localities suffered to go to waste for want of a market. By opening the proposed line, a step will be taken towards removing the obstacles which at present impede, to a certain extent, commercial intercourse between the hill tracts and the plains and which diminish the value of the produce raised and so discourage agriculture in the former. Not only will such a line probably develop the trade of these regions in the course of a few years to an extent which cannot now be gauged from want of data to go upon, but the people of the agency tracts who are as yet very backward will be brought into closer contact with a higher civilization. Becoming less rude, it is to be hoped they will become concurrently less inclined to break out in rebellion against the state with small excuse.

9. Another advantage and one more directly affecting the Government itself, is that the proposed line will lead to the development of the forests in the neighbourhood of Yeleswaram (which are extensive) and so lead to an increase in the Forest revenue. Light railways have been stated by the Government of the North-Western Provinces and Oudh to be the most important adjunct to a well considered policy of forest development. It has therefore expressed its conviction that the policy of improving communications in the interests of the Forest revenue is sound and that it would even pay to open out the forests by means of light railways of the smallest gauge and worked only in the dry season (*vide* page 354 of the *Indian Agriculturist*, dated 2nd December 1895). Moreover, in the event of any disturbance in the hill tracts the value of such a line as that contemplated cannot be over-estimated. Its construction will therefore place Government in a more secure and advantageous position to promptly suppress any disturbances.

10. On a careful consideration of all these circumstances, the District Board unanimously came to the conclusion at a meeting held on the 10th August last, that the construction of the proposed line would be advantageous from every point of view, sanctioned an expenditure of Rs. 1,000 towards the cost of a preliminary survey and plan with estimate, and called upon the District Engineer to prepare the same. This work has been in the main completed, but as the work was stopped by the resignation of Assistant Engineer Mr. F. H. Longhurst to whom the work was entrusted, the plans are not quite ready. The detailed estimates and plans will of course, on completion, be submitted to Government through the proper channel, and this, I trust, will be very shortly. It is, however, roughly estimated that the total cost will be Rs. 6,76,000, or in round figures seven lakhs, which cannot, of course, be met from the ordinary revenues of the District Board, nor is it easy to raise the entire outlay by local private subscription. The people are "either too little advanced in intelligence to appreciate the end or not sufficiently practised in conjoint action to be capable of the means." There is no developed system of co-operation amongst the natives of the district; but, were Government to give a helping hand, the people will, I hope, not be slow to move in the matter. I am the more hopeful of this, because my original idea, as set forth in my memorandum, was to raise the necessary capital or part of it with the sanction of Government by means of debentures, being altogether hopeless of inducing the public to take any share in the risks judging by my experience elsewhere, but I have since had reason to change this view; for, first, one and, then, another leading man came forward with the suggestion that shares would be preferred to debentures—a view which the District Board fully endorses. The District Board has accordingly resolved, as already stated in the budget report, to undertake the project (1) by raising a loan of 3 lakhs at $4\frac{1}{4}$ per cent. interest from Government, (2) by raising 3 lakhs by means of public subscription—the shareholders having the right of nominating an

4

equal number of directors with the District Board and the District Board President to be Chairman of the Board; and (3) by contributing the remainder that may be required from the District fund.

11. The land-cess of the district amounts to Rs. 5,28,000 per annum, so that 4·64 pies in the rupee of it would meet the interest on 3 lakhs at 4¼ per cent., but as the project promises to be fairly remunerative from the start, it is believed that the earnings, once the line is opened, will more than cover the above interest and that no charge at all will ever fall upon the District fund. On the contrary, it is confidently expected by the Board that the project will more than pay its way and so prove ultimately a source of additional revenue.

The same reasons which justify the policy of State guarantees in the case of the construction of the main lines of railway—a policy which has been productive of signal service to the country—apply with greater force in the case of encouraging local enterprises of the kind now proposed. The object in both cases is the same—the development of the material resources of the country—and I trust, therefore, that Government will be pleased to accord its assistance, especially as the Board does not apply for a grant-in-aid or even ask that Government, though likely to be largely benefited indirectly, should take a share in the risks, but limits its prayer to a loan of a portion of the capital required on terms by no means unremunerative, from a purely commercial point of view, to the State, having regard to the present price of Government paper. The Board, once the line is open and indeed for that matter before, can easily afford to pay off a portion of the loan every year in addition to the interest. These annual instalments, of course, Government must fix, but I would suggest Rs. 10,000 per annum, the Board being at liberty to pay off more, if able to do so. Neither Government nor the Board will lose anything by this transaction. On the contrary, both, it may be confidently anticipated, will be gainers in every way if the undertaking is properly conducted, not only financially but also indirectly by promoting the welfare and convenience of the inhabitants of an important and extensive tract of country.

12. The Board is confident that there will be no difficulty in raising 3 lakhs from the general public, of which the more progressive and intelligent section certainly entertain no doubt about the success of the undertaking. Should it, however, fail to receive local support to this extent, the result must be attributed to ignorance on the part of local capitalists of the benefits of co-operative action and distrust of the Western modes of investment, but I trust that, if only 2 lakhs are locally subscribed, Government will see its way to making its loan 4 lakhs instead of 3 on the security of the District Board revenues.

13. There is another aspect of this scheme to which also I attach the greatest importance viz., the moral effect which the undertaking is calculated to have, if (as all anticipate) successful, in stimulating a spirit of industrial enterprise in the people. A successful work planned and executed by local agency, carried out and maintained at the cost of funds locally raised, and managed and supervised by representatives of the people of the district, cannot fail to prove a valuable lesson to the people and suggest to them the advantage of emulation. If it should lead to the people of the district taking an interest in joint-stock undertakings of the kind intended for the development and benefit of the district, it will have served a most useful end; for, though this appears to me the scheme best calculated to attain success from the first, there are many others of the same kind which would, I believe, also pay handsomely, such as a similar line from Cocanada to Kottapalli through Drákshárámam in the Rámachandrapuram taluk. The Chairman of the Chamber of Commerce has written as follows on this view of the question in his letter, dated 24th September 1895 (of which a copy is enclosed):—

> "The chamber will be very pleased, indeed, if the District Board's proposal be acted upon and half of the capital of the Tramway Company be issued to the public. It will, undoubtedly, be a great advantage to the district if the inhabitants can be brought to understand the value of co-operation, for there are many openings for other joint-stock concerns which might be successfully launched were it not for the want of initiative of the people."

This is only too true.

14. Tanjore has already taken the lead in the matter of constructing the Máyavaram-Mutupet Railway with the aid of a contribution from Provincial funds, and I cannot conceive why a similar but much less ambitious project should not prove an equal success in this district. That line is a feeder to the South Indian Railway, whilst the one now proposed will be a valuable feeder to the East Coast Railway, which too is a State undertaking, but I doubt if Government is so directly interested and likely to benefit by the Máyavaram-Mutupet line as by the one proposed here, which will be not only of strategical value to it in controlling the agency tracts, but also benefit it directly to a very large extent in reference to its Forest revenues.

15. I have, therefore, the honour to request that Government will be pleased to accord its sanction to the project in question and to the loan applied for by the Board. An application in respect of the 2 lakhs taken credit for from Government for the year 1896-97, is herewith submitted in the form prescribed by the rules framed under section 5 of the Local Authorities Loans Act No. 11 of 1879. A rough sketch of the proposed line of railway is also enclosed for the information of Government.

ENCLOSURE No. 1 to above.

MEMORANDUM by the President, District Board, Gódávari, dated 21st June 1895.

When the East Coast Railway was constructed, I think a very serious error was made in aligning it, so as to pass through Samalkot in place of Peddápuram, but the mistake having been made, I do not think it at all probable that it will ever be rectified at any reasonable date by a change of alignment or the construction of a branch; for such a branch on the broad gauge could not pay sufficiently in the shape of interest to justify the cost.

2. At the same time I feel pretty well convinced that, although a broad gauge would not pay, yet in all probability a steam tramway or very light railway would pay very handsomely not only to Peddápuram but carried on *viâ* Jaggammapéta to Yeleswaram. When I drove to Jaggammapéta in April, I was surprised at the number of bandies I met. It has always to be remembered, too, that a cheap and easy means of transport encourages and develops traffic, both goods and passengers, as well as tends to divert to itself traffic now following other routes, as under present circumstances more convenient. As Yeleswaram and Lingamparti alone have a population of about 11,000 for a tramway, they form a very important terminal point and it is also likely that the construction of a steam tramway would lead to the development of a considerable trade between Yeleswaram and the agency tracts beyond, whilst the cost of construction would be light (as it would, as far as possible, compatible with safety and usefulness, follow the present public road) and the country is not a difficult one, so that it would be possible, probably to secure a maximum gradient of 1 in 100 without much difficulty. What land it might be necessary to acquire would not be of a very valuable kind and of great extent, so could be got cheap, whilst the most important work, the bridging of the Yeleru, has been already carried out, for I would propose to take it over the Yerraram bridge, which the District Engineer states is quite equal to carrying a 9 or 10 ton locomotive at low speed.

3. I do not, however, at present venture to propose the immediate undertaking of the work, but am inclined to make its ultimate construction hinge on the discovery of coal in paying quantities in Bhadráchalam. If the exploration now being carried on these, results in the discovery of coal of fair quality in paying quantities, as there appears to be good reasons for hoping, we might look forward to getting coal at Rs. 10 per ton and with fuel available at that figure, such a tramway or light railway as I have proposed above would, I am confident, pay interest at a very satisfactory rate, say 6 per cent. at least, and quite possibly double on a capital not exceeding 3 lakhs. No doubt, with a tram line open to Yelsewaram, we could get wood fuel in abundance at a very cheap rate, but wood is costly to carry and has not the same steam-raising properties as coal.

4. The question of raising the capital is not one, however, which it is necessary to consider at present, though, I fancy, the District Board could easily afford the necessary capital to make the line to Peddápuram and borrow enough to carry it on to Yeleswaram, by guaranteeing 4 per cent. interest under a condition to pay off the debenture holders of other shareholders gradually by redeeming bonds to the extent of, say, Rs. 5,000 or Rs. 10,000 a year to be selected by lot. All that I now wish the Board to do is to pass a resolution ordering a survey for a steam tramway or light railway line from Samalkot *viâ* Peddápuram and Jaggammapéta to Yeleswaram, with a rough estimate of the cost of construction, if made to carry a 10-ton locomotive with a maximum gradient of 1 in 100 and also a rough estimate of the working expenses with coal fuel at Rs. 10 per ton; at the same time, I request an allotment of Rs. 1,000 from the general provision under surveys and plans to meet the cost of making such a survey. Whether the District Board construct the line or not, the advantages of such a survey and estimate are obvious as, if the District Board are not willing to undertake the work, it is very possible some private firm might, though personally I should like the District Board to follow the lead of the Tanjore District Board and construct it itself as the most likely body to work such a scheme for the public benefit.

Enclosure No. 2 to above.

STATEMENT showing the Extent of Traffic carried on along the proposed line from Samalkot to Yelesvaram *viâ* Peddapuram and Jaggammapeta.

Principal articles of export.	Place to which exported.	Exports. 1892-93.	Exports. 1893-94.	Exports. 1894-95.	Principal articles of import.	Place from which imported.	Imports. 1892-93.	Imports. 1893-94.	Imports. 1894-95.
Factory jaggery	Coconada	Bales of 164 lb. each. 123,000	124,000	126,000					
Peddapuri sugar and jaggery in store.	Yelavu								
	Guntur	26,000	25,500	24,000	Oil-seed stuff	From Cocoanada	10,600	10,000	9,800
	Jaggayyapeta					Kothapatnam			
Gingelly	Cocoanada	10,500	9,500	8,000		Guntur			
Pulses, such as red-gram, &c. ..	Cocoanada	8,900	8,500	6,500	Oil seeds	Bezwad	21,000	19,500	21,000
Tamarind	Rajahmundry	7,000	9,000	7,300		Jaggayyapeta			
	Ellore					Kamanam			
	Tuni					Rajahmundry			
Ragi or chodi ..	Ankayapalle	2,950	3,050	2,850	Grain	Metta, &c.			
	Vizagapatnam					Ellore	26,000	25,500	22,500
						Bhimadole			
						Ganapavaram			
						Adivi Kothi, &c.			
					Salt	Cocanada	4,950	5,150	4,750
					Cloths	Do.	650	650	600
					Cotton thread	Do.	600	600	600
					Pepper, &c.	Do.	650	600	600
					Metals, such as brass, iron, &c.	Do.	600	600	400
Tamarind	To Samalkot	10,050	10,000	10,000	Rice	From Samalkot	6,000	6,000	6,000
Myrtobalans	Do.	5,050	6,000	6,000	Salt	Do.			
Hala bark and Tangedu bark ..	Do.	1,000	1,050	950	Castor oil	Do.	6,000	6,000	6,000
Soapnut (*Sapindus trifoliatus*) ..	Do.	1,000	1,000	950	Gingelly oil	Do.	600	600	600
Horns	Do.	600	550	400	Metals, such as brass vessels, iron, &c.	Do.	300	250	300
Wax	Do.	300	400	300			600	500	600
Omica nuts (*Terminalia Chebula*) ..	Do.	500	450	400	Cloths	Do.	200	200	200
Oil-seeds	Do.	6,000	6,050	6,050					
Horse-gram	Do.	1,000	1,600	2,000					
White millet	Do.	2,000	2,000	2,000					
Gingelly	Do.	2,500	2,000	1,500					
Soapnut (*Sapindus trifoliatus*) ..	Do.	550	500						
Kamalaphalans	Do.	2,000							
Brinjals	Do.								
Mango fruits	Do.								
Bamboos	Do.								
Jaggery		10,000	10,000	10,000					

To Peddapuram and Samalkot.

Jaggery .. .. — Articles and passengers that passed through the traffic stations at Jaggammapeta and Kattipudi in 1889-90, as per accounts prepared by the then establishment. 1889-90: 66,656

Passengers .. .. — Through Jaggammapeta and Kattipudi: 2,576

Domestic animals, &c. .. .. — Do. do. do. .. .. * 187,861

Rice .. .. — Do. do. do. .. .. * 166,779

Fruits, &c. .. .. — Do. do. do. .. .. * 24,493

Jaggery .. .. — Do. do. do. .. .. * 306,385

Cloths articles

* Maunds.

ENCLOSURE No. 3 to above.

List of Villages through which the Light Railway passes.

1. Timmapuram.
2. Annaram Jaddanghy.
3. Ramaniahpeta.
4. Yeleswaram.
5. Lingamparty.
6. Peraram.
7. Sripuram.
8. Prattipaud.
9. Tirumalai.
10. Velanka.
11. Kirlampudy.
12. Geddanapally.
13. Yerraram.
14. Somaram.
15. Kristnavaram.
16. Burugapudy.
17. Tamarada.
18. Gonada.
19. Ramavaram.
20. Marripaka.
21. Gorripalem.
22. Jaggammapéta.
23. Mallisala.
24. Machapudy.
25. Tallur.
26. Ragampeta.
27. Borrampalem.
28. Mallapilly.
29. Katravulapally.
30. Nayakampally.
31. Surampalem.
32. Jagganna Timmapuram.
33. Kattamuru.
34. Gudivada.
35. Peddápuram.
36. Ragampeta.
37. Vadlamuru.
38. Gorinta.
39. Samalkot.
40. Bhímavaram.

ENCLOSURE No. 4 to above.

From—The Chairman, Chamber of Commerce, Cocanada.
To—The President, District Board, Gódávari.
Dated—8th August 1895.

I have the honour to inform you that the Chamber have taken into consideration the very interesting memorandum prepared by you on the possibility and advisability of constructing a steam tramway or light railway between Samalkot and Peddápuram with an extension to Yeleswaram through Jaggammapéta.

The Chamber warmly support your project. The benefits which a steam tramway would confer on the district are immense. The country would be opened up and a great impetus given to trade with the hill tracts and, undoubtedly, a large and increasingly paying traffic would reward the enterprise.

The Chamber also agree with you that the line should be constructed and maintained by the District Board. Having ample funds at their disposal or at any rate having ample credit to raise money at a low rate of interest, the Board are in the best position to work the line economically and in the interests of the public, much more so than any private company could possibly be.

The Chamber would like to encourage the District Board to undertake the work at once, *i.e.*, as soon as the survey is completed and the necessary financial arrangements have been made, and not to wait until it be proved that coal can be procured from the Upper Gódávari at Rs. 10 per ton. Coal at Rs. 10 per ton is not necessary, the Chamber think, for the success of the undertaking, when there are large suppliers and ample reserves of fuel at Yeleswaram, the terminus of the line. The cost of this fuel will be found, the Chamber think, to compare very favourably with coal at Rs. 10. It can be had for the cost of collecting it *plus* a small Government charge. This charge Government might be asked to forego and might very well agree to do so in view of the public nature of the work and as an encouragement to the promoters.

The Chamber would like to recommend that the line be confined entirely to the Public roads. In Italy, to name only one country, this is done. It reduces the cost of construction enormously. The lines are simply laid down on the side of the road and the people and animals soon become accustomed to the passage of the trains. No cuttings of any sort are required. It would be a pity to tie the Engineers to a gradient not exceeding 1 in 100. In Italy where these light steam tramways are much in vogue, very steep gradients are met with.

Enclosure No. 5 to above.

From—The Chairman, Chamber of Commerce, Cocanada.
To—The President, District Board, Gódávari.
Dated—24th September 1895.

I have the honour to acknowledge receipt of your letter of the 10th instant regarding the construction of a steam tramway to connect Samalkot and Yeleswaram by way of Peddápuram and Jaggammapéta. Your letter was considered at a meeting of the Chamber held this morning and I have been requested to send you the following reply:—

"The Chamber will be very pleased, indeed, if the District Board's proposal be acted upon and half of the capital of the tramway company be issued to the public. It will, undoubtedly, be of great advantage to the district if the inhabitants can be brought to understand the value of co-operation; for there are many openings for other joint stock concerns which might be successfully launched, were it not for the want of initiative of the people. At the same time the members of the Chamber cannot conceal from themselves that much tact will be required to render the subscription a success. The prospect of 6 per cent. will not tempt the larger capitalists who are accustomed to lend to zemindars at 9 per cent., and the smaller men who usually invest their savings in gold ornaments will be difficult to get at. However, the object of the District Board is worthy of all praise, and if the President and members use their influence with some of the leading merchants, lawyers and native Government servants, there is no reason why the new departure should not prove a great success.

The idea of allowing the shareholders to nominate half the directors is an excellent one, several influential people will find in it a great incentive to interest themselves in the undertaking.

The Chamber are pleased to learn that there is no necessity of a higher gradient than 1 in 100.

Enclosure No. 6 to above.

Application of the District Board, Gódávari, for a Loan from Government under section 5 of the Local Authorities Loans Act, No. 11 of 1879.

The work or works for the construction or repair of which the loan is required and an estimate of the cost thereof.	The amount which it is proposed to borrow.	The fund or funds on the security of which it is proposed to borrow.	The law or laws under which the said fund or funds is or are levied, received or held.	The period for which the loan is required, the number and amount of the instalments, if any, in which it is proposed to receive such instalment and the instalments, if any, in which it is proposed to repay the loan.	A detailed account of the revenue and expenditure of the local authority for the ~~three~~ last preceding years.	Existing prior charges upon the funds of the local authority.
Construction of a light railway from Samalkot to Yeleswaram *viâ* Peddápuram and Jaggammapéta, estimated to cost about 7 lakhs of rupees.	Rs. 3,00,000	Gódávari District Fund.	The Madras Local Boards Act, V of 1884.	The loan is required for a period of thirty years. It is proposed to be taken in two instalments—one of Rs. 2,00,000 in the official year 1896–97, and the other of Rs. 1,00,000 in the year 1897–98—and repaid with interest at 4¼ per cent. Interest is to be payable every year and the principal in thirty equal annual instalments.	Attached hereto.	None.

Enclosure No. 7 to above.

From—The Chirman, Native Chamber of Commerce, Cocanada.
To—The President, District Board, Gódávari.
Dated—3rd February 1896, No. 1.

With reference to your letter, No. 1435/D.B. of 1895, dated 18th January 1896, I have the honour to enclose herein copy of a resolution passed by the Chamber at a meeting held on the 2nd instant, from which it will be seen that the Chamber cordially supports the Samalkot-Yeleswaram light railway project proposed by you. The Chamber fully appreciates your desire to associate the natives of this district in the management of this concern, and it is hoped that this will be the fore-runner of many similar undertakings. The people of this country are accustomed to look to Government for lead oven in such matters and, if the proposed project should prove successful, the people will realize the benefits of joint stock companies. Of all the branch lines that can be thought of in this district, there is perhaps no line which gives such a sure promise of success as the proposed one, and the Chamber trusts that Government will see its way to sanction the same and grant the loan applied for.

ENCLOSURE No. 8 to above.

COPY of Proceedings of the special meeting of the Native Chamber of Commerce of Cocanada, held on Saturday, the 2nd February 1896, at 6-30 P.M.

1. Read letter dated 18th January 1896, from the President, Gódávari District Board, asking the opinion of this Chamber on the Board's proposal of constructing a light railway from Samalkot to Yeleswaram *viâ* Peddápuram and Jaggammapéta.

Resolution—Resolved that this Chamber accords its cordial support to the proposed project which will not only prove a financial success in the opinion of this Chamber, but will also confer a great boon upon the people of this district, especially upon the people of the agency tracts.

Endorsement thereon by the Secretary to Govt., L. and M. Dept., dated 23rd March 1896. Ref. No. 378.

The President is requested to submit a copy of the District Board's resolution dated 10th August 1895, referred to in paragraph 10 of his letter and also copies of its subsequent resolutions on the subject. He is also requested to forward the detailed account of the revenue and expenditure of the District Board for the last three years, which has not been attached to the application as stated in it and to expedite the submission of the list of villages referred to in paragraph 5.

From—the President, District Board, Gódávari.
To—The Secretary to Govt., L. and M. Dept., Madras.
Dated—9th April 1896, Dis. No. 726/D.B.

With reference to your memo., No. 378, dated 23rd March 1896, I have the honour to submit herewith—

(1) Copies of the District Board's resolution, dated 10th August 1895, as also the subsequent ones regarding the proposed light railway;
(2) A detailed account (sent separately) of the revenue and expenditure of the District Board for the last three years; and
(3) A list of the villages on or near the line surveyed for the light railway.

ENCLOSURE No. 1 to above.

EXTRACT from the Proceedings of the District Board, Gódávari, passed at its meeting held at Cocanada on 10th August 1895.

8. Read this office No. 1458/D.B., dated 29th June 1895, circulating among the members of the Board President's memorandum regarding the establishment of a tramway or a light railway between Samalkot and Yeleswaram *viâ* Peddápuram and Jaggammapéta.

The Board sanctions a preliminary survey and estimate and allots Rs. 1,000 for the same from the reserve.

As far as possible, the existing roadway should be utilized. Where, however, important villages which it is desirable to serve lie off the existing road, it should be aligned to as to serve them better.

The report with plan and estimate should be submitted by the 12th November next.

ENCLOSURE No. 2 to above.

EXTRACT from the Proceedings of the District Board, Gódávari, passed at its meeting held at Rajahmundry on 10th December 1895.

1. Read draft revised estimate for 1895–96 and the Budget estimate for 1896–97 of the District Board, Gódávari, as revised with reference to the recommendations of the Sub-committee appointed for the purpose.

Resolution—Passed,

The following are the new proposals provided for in the District Board's Budget for 1896-97 as per recommendations of the Sub-committee.

* * *

6. To make a provision for the proposed light railway from Cocanada to Yeleswaram *viâ* Peddápuram.

Resolution—Sanctioned.

2. Read draft consolidated Revised estimate for 1895–96 and the Budget estimate for 1896–97 as revised with reference to the recommendations of the said Sub-committee.

Resolution—Passed as amended by the Sub-committee.

ENCLOSURE.

List of Villages with population on or near the line surveyed for the Light Railway.

Name of village.	Number of population.	Name of village.	Number of population.
1. Timmapuram ...	637	11. Kirlampudy	3,934
2. Annaram Jaddangy ...	508	12. Geddanapally ...	1,582
3. Ramaniahpeta ...	283	13. Yerraram ...	1,363
4. Yeleswaram ...	4,945	14. Somaram ...	840
5. Lingamparty ...	2,888	15. Kristnavaram ...	867
6. Peraram	703	16. Burugapudy ...	2,628
7. Sripuram	1,421	17. Tamarada ...	2,370
8. Prattipaud	2,093	18. Gonada	1,581
9. Tirumalai	~~286~~	19. Ramavaram	649
10. Velanka	1,315	20. Marripaka	377
[illegible]peta ...	3,802	32. Jagganna Timmapuram	1,003
23. Mallisala	1,249	33. Kattamuru	4,238
24. Machapudy	1,311	34. Gudivada	889
25. Tallur	1,445	35. Peddápuram	13,658
26. Ragampeta	908	36. Ragampeta	1,777
27. Borrampalem	426	37. Vadlamuru	1,517
28. Mallapilly	1,597	38. Gorinta	1,449
29. Katravulapally ...	2,994	39. Samalkot	6,887
30. Nayakampally ...	484	40. Bhimavaram	5,051

Endorsement ~~thereon~~ by ~~the Secretary to Govt.~~, L. and M. Dept., dated ~~Fort St. George,~~ 29th May 1896, No. 606.

Referred to the Public Works Department, Railway Branch, for favour of remarks.

2. A copy of a note by the Honorable Mr. Bliss accompanies.

ENCLOSURE.

Note by the Honourable Mr. Bliss, C.I.E., dated 18 May 1896.

The scheme is at present in far too "sketchy" a state for any orders to be passed on it. They don't even give us the gauge of the proposed railway. Still, we may as well hear what the Railway Branch of the Public Works Department thinks about it. An obvious defect is that the terminus at Samalkot would involve a second break of bulk in a very short distance. I should say that, if the scheme is to succeed, a third rail should be laid down from Samalkot to Cocanada and the light railway trains run over it, or else that the light railway should be on the broad gauge, however light the rails and engines may be made for economy's sake.

We cannot, of course, give a loan in 1896–97, as we have not provided for it in our budget.

Endorsement ~~thereon~~ by the Consulting Engineer for Rys., dated 6th June 1896, No. 1737.

Referred to the Manager, East Coast Railway, for favour of remarks.

From—The President, District Board, Gódávari.
To—The Secretary to Govt., L. and M. Dept.
Dated—1st June 1896, Ref. on Cur. No. 800/D.B.

I have the honour to forward herewith plans, sections, bridge drawings and designs for station buildings together with the Engineer's report on the proposed light railway from Samalkot to Yeleswaram *viâ* Peddápuram and Jaggamm[illegible]péta, and to request you will be good enough to forward them to the Secretary to Government, Railway Department, for sanction.

* Sent separately.

The packet contains—

(1) 5 Railway plans plotted in 5 miles length.
(2) 5 Sections plotted in 5 miles length.
(3) 21 Bridge drawings.
(4) 2 Station building designs.
(5) 8 Abstract estimates prepared in accordance with Government Orders on railway construction.
(6) 1 Engineer's report.

Endorsement ~~thereon~~ by the ~~Secretary to Govt.~~, L. and M. Dept., dated ~~Fort St. George,~~ 24th June 1896, No. 722.

Referred in continuation of endorsement No. 606, dated 29th May 1896, to the Public Works (Railway) Department for favour of remarks.

From—The Manager, East Coast Ry.
To—The Consulting Engineer for Rys.
Dated—Waltair, 19th August 1896, No. 6552.

With reference to your No. 1737, dated 6th June 1896, and its accompaniments herewith returned, regarding the construction of a light railway from Samalkot to Yeleswaram *viâ* Peddápuram and Jaggammaptéa, I have the honour to forward herewith a note on this subject together with a copy of one by the Traffic Superintendent of this line.

Enclosure No. 1 to above.

Note by the Manager, East Coast Ry. on the Proposed Branch line from Samalkot.

No information has been given as to the gauge proposed, weight and description of rail, sleepers, &c.—all items of importance that require to be settled before any proper estimate of cost can be arrived at.

2. Presumably, the proposal is to construct a light tram line on a narrow gauge to be worked by locomotives quite independent of the existing railway. If this is the case, no provision has been made for engines, rolling-stock, workshops, staff quarters, station machinery, &c.

3. The terminus of the proposed branch has, I see, been located on the canal embankment so that it will not be, and is not intended to be, a feeder to the East Coast Railway. A certain amount of traffic from this district now finds its way to the railway by carts, but the greater part of it is delivered into boats and conveyed to Cocanada by the canal. The loss of the present traffic to the East Coast Railway would be inconsiderable, as it is carried only a short distance at an unremunerative rate.

4. Whether the greater part of the traffic from the surrounding district could be secured for conveyance over the branch line depends a good deal on the cost of carriage by rail as compared to transit by carts.

5. The rate at which the branch could afford to carry at again depends on the capital outlay and the quantity of goods to be carried.

6. Before offering an opinion on the probable financial success of the scheme, it will be necessary to have a more complete estimate of the capital outlay required to construct the line. Also, if it is intended to work the branch by independent agency, a further estimate of the probable working expenses should be prepared.

7. I am inclined to think a short branch of this nature is more likely to give a better return on the capital, if it is constructed on the broad gauge and handed over to the main line agency to work on the favourable terms offered by Government.

8. As a narrow gauge, it could hardly pay if worked by a separate agency; but if it is intended to raise a large capital for the purpose of extending the system to all parts of the district similar to the railways in Guzerat, then I think it will be worthy of every support.

Enclosure No. 2 to above.

Note by Traffic Superintendent, dated Waltair, 14th August 1896.

Light Railway from Samalkot to Yelaswaram via *Peddápuram and Jaggammapéta.*

Mr. Bliss' note sounds the key note of the whole scheme. If this tramway is to terminate at Samalkot on a different gauge to the East Coast Railway, it becomes, according to the district board's own showing in their No. 1435/D.B of 3rd March 1896, a distinct competitor with the East Coast Railway, and besides this, by causing a break of bulk, it, to my thinking, absolutely ruins its prospects. Taking this view that this light railway is to commence at Yeleswaram and terminate at Samalkot a distance of 20 miles and have its terminus, as the plan shows, on the canal banks, its projectors are sure that it will be a financial success, simply on the profits obtained by the carriage of the traffic between Yeleswaram and intermediate stations and Samalkot, the same being there delivered either on to the East Coast Railway, or on to the canal for carriage to destination. The bulk of the traffic, or at any rate, so large a quantity of it, that the remainder may be neglected, moves between Yeleswaram and intermediate stations, and Cocanada, and the District Board in their letter state that they will make sufficient profits in the carriage of this traffic to pay a satisfactory dividend on a capital of 7 lakhs and will be able, year after year to pay off certain of their debenture or shareholders by lot. These prospects are based entirely on the supposition (to quote their own words) that they will get all this traffic at a little more than half the cart rate, that is, taking their figures, that the cart carries traffic for 2 pies a bag a mile, which is equal to one pie a maund a mile, they expect to get the traffic over this tramway at a little more than ½ pie a maund a mile. A casual look into any railway's goods tariff, or an inquiry from any Traffic Manager will tend to show, that railway

The District Board also laid great stress on the unanimity of the opinion of all the leading merchants and Chambers of Commerce and the enthusiasm with which the prospects of this line are generally hailed. The chorus no doubt in favour of the scheme is full and loud as the record shows, but the music distinctly dwindles down to "very soft" when the singers in the chorous are asked to take shares, and though this is speciously argued away under the general heads of want of the knowledge of co-operation and ignorance of the western methods of investment of money, it is to my mind much too significant to be passed over so lightly, and judging from three years' active canvassing for the East Coast Railway, I am certain it would be found that the greatest enthusiasts in favour of this scheme will be the hardest to get to put any of their traffic on the tramway, and I am certain it is this under current of feeling which prevents them from taking shares largely in the concern. To sum up the whole of the District Board's proposals. They, without very deep investigation into the matter, and blinding their eyes wilfully or negligently to the lessons daily taught by the East Coast Railway, which every one who travels may read, and relying on a very insufficient estimate of cost, have created great enthusiasm about this tramway scheme, which enthusiasm stops short when the question of investing any appreciable amount of their capital comes in, and they ask the Government of Madras to make up for this lack of enthusiasm by lending them 7 lakhs which will not be half enough to carry out a scheme that, in the opinion of experts, in the crude form in which they put it forward, must end in disastrous failure. I can think of no scheme more calculated to put back for years the creation of private enterprise, which the District Board seems so anxious to foster than this scheme if carried out. If the Government has the money for feeder lines, the East Coast Railway can point out several very remunerative ones on which the money can be well spent.

To conclude, I will take the District Board's figures in the returns submitted by them of the traffic which they say will use this tramway. The total traffic they give that runs from Peddápuram to Cocanada port and *vice versa* is 234,800 bags or 469,600 maunds.

	Rs.
Distance, Peddápuram to Cocanada port = 13½ to 14 miles at $\frac{1}{10}$ pie per maund	3,424
Deduct 80 per cent. of the earnings, distance from Samalkot to Cocanada port	1,954
Amount earned by tramway ...	1,470 (*a*)

Now take the local traffic from Yelesweram to Cocanada port and *vice versa* given in the return.

Total traffic = 62,050 bags = 1,24,100 maunds.

	Rs.
Distance from Yelesweram to Cocanada port, 30 miles at $\frac{1}{10}$ pie per maund	1,939
Deduct 80 per cent. from Samalkot to Cocanada port	514
Total earnings by tramway ...	1,425 (*b*)

Total traffic from Jaggammapéta to Cocanada port and *vice versa*, 10,000 bags or 20,000 maunds.

	Rs.
Distance from Jaggammapéta to Cocanada port, 25 miles at $\frac{1}{10}$ pie per maund	260
Deduct 80 per cent. for 10 miles from Samalkot to Cocanada port ...	82
Total earnings by tramway ...	178 (*c*)

necessary in order to carry ... Peddápuram—top and subsoil gravel. Curving away to the north ... crosses Peddápuram station at mile 3–2,400 feet on the level still curving to the north on a gradient 1 in 74 fall. The line crosses a bridge of 10-feet span at mile 3–71; this bridge is to allow passage of water from a tank to the west of the line. The area under irrigation from this tank is 100 acres—soil red earth and gravel. From this point, the line curves to the west on a gradient 1 in 224 fall, crossing a bridge two of 20-feet girders at mile 4–13. This bridge is proposed to take the discharge from the tank at Peddápuram in case of an accident to the tank bund. There are also two culverts of 3 feet span over two irrigation channels from the tank.—top soil red-earth, and subsoil gravel. Curving back towards the north on a fall of 1 in 120, and then to the west on the same fall (these curves are put in in order to avoid old Peddápuram city) the line crosses two spans of 40 feet girders at mile 4–93. This bridge is to allow the discharge from the tank of old Peddápuram. Two culverts of 3 feet each are also provided over two irrigation channels; irrigated area 150 acres. The line from this point (mile 5)

The total of (*a*) (*b*) and (*c*) is Rs. 3,073. At a liberal estimate, suppose the passenger traffic is double of this amount. The total then will be Rs. 6,146 + 3,073 = Rs. 9,219; deduct from this 50 per cent. for the working expenses, the profit will amount to Rs. 4,609, which on a capital of 14 lakhs makes As. 5-3 per cent.; therefore, the District Board is going to pay satisfactory interest on its capital and also repay to Government Rs. 10,000 a year of the capital lent out of Rs. 4,609, or As. 5-3 per cent., I do not see where it is to come from.

S. Pomeroy Hunter

Report by the Assistant Engineer in charge of the Survey, on the proposed light railway from Samalkot to Yeleswaram *viâ* Peddápuram and Juggammapéta.

The District Board having proposed to build a light railway of 2′ 6″ gauge running from Samalkot to Yeleswaram and the survey and plans having been completed, I have now to report as follows:—

As far as the construction of the line goes, there are no engineering difficulties to be contended with. For the first 9 miles the line runs over hard, dry gravel soil. On this portion of the line there is no bridge over two of 40-feet span. From mile 9, the formation of the ground is not so favourable, being extremely low in places and continually flooded during the monsoon. In consequence of this, it has been found necessary to put in a number of curves between miles 9 and 15; there are also some curves between miles 6 and 9 which have been put in for the same purpose, *i.e.*, in order that the line may run as far as possible on the high ground, thus saving a great deal of high banking and also a number of small bridges and culverts which otherwise would have been necessary to carry off the flood water. From mile 13, where the Jaggammapéta station is situated, the road runs by the northern side of the great Northern trunk road up to the bridge over the Yeleru at Yerraram, mile 19. Consequently in only a few places, has it been found necessary to put in bridges, as in most cases, the great Northern trunk road culverts have simply been extended. From Yerraram to Yeleswaram, mile 23——, the line runs parallel to the Yerraram-Juddangy road; in this case there are no bridges, simply extension of road culverts.

It will be seen from the above, that there would be no difficulty whatever in constructing the line. Exception may, perhaps, be taken to some of the gradients; these, for the most part, have been put in to avoid deep cutting and in some places to carry the line on to tank bunds, the average height of bank being 5 feet and the highest 12-feet. It may be thought that it would have been better to run the line from Samalkot straight up at right angles to the East Coast, instead of running as we do, for some distance, parallel to it and then curving to the north and east. I would, however, point out that this alignment has been chosen in order to avoid richly cultivated gardens, a large tank and also a number of pucka and kutcha houses which would have had to have been demolished during the construction of the line and for which heavy compensation would have had to be paid. As it is, the line for the first 4 miles runs over absolutely waste land for which very little compensation will be required. The line including rolling-stock will cost Rs. 24,600 per mile,—the rolling-stock proposed to be used is the same as that used on the Morve State Railway which has given great satisfaction. I have not reported as to the traffic likely to be available for the line, this having been dealt with exhaustively by the District Board President, in his memorandum to the Secretary to the Government, Local and Municipal department, on the proposed light railway. Subjoined will be found a detailed description of the proposed line from Samalkot to Yeleswaram.

Mile 0–1.—The line starts from 300 feet to the north of Samalkot, East Coast line, to which it runs parallel in a western direction for 575 feet. From this point, it curves away to the north with a gradient of 1 in 140 rise. It crosses a steel rolled girder bridge of 30-feet span over a nulla at mile 0–25. This bridge is approximately the same as the bridge over the same nulla on the East Coast Railway, which is two spans of 12-feet; the soil here is 2 feet of red earth, subsoil gravel. From this point the line curves to the north and then back towards the east on the level. Mile 0–71 crosses a bridge of 15-feet span, and at mile 0–83 another bridge of 15-feet span. These two nullas unite and pass under the first-mentioned bridge of 30-feet span. From this point, the line curves gradually to the west with a fall of 1 in 150, and then rises 1 in 180, where it crosses Samalkot-Peddápuram road at mile 1–2,100 feet. Mile 2 crosses a bridge of 20-feet span, soil as before. Opposite to this bridge, there are two culverts of 6 feet each waterway. These culverts are not sufficient during the monsoon and it has therefore been considered necessary to give the railway bridge 8 feet extra waterway. The line still curves gradually to the west on a gradient of 1 in 290 rise. There is a bridge of 15-feet span at mile 3–7, this being necessary in order to carry off the drainage which comes down from near the taluk cutcherry of Peddápuram—top and subsoil gravel. Curving away to the north over a gradient 1 in 59 fall, it crosses Peddápuram station at mile 3–2,400 feet on the level still curving to the north on a gradient 1 in 74 fall. The line crosses a bridge of 10-feet span at mile 3–71; this bridge is to allow passage of water from a tank to the west of the line. The area under irrigation from this tank is 100 acres—soil red earth and gravel. From this point, the line curves to the west on a gradient 1 in 224 fall, crossing a bridge two of 20-feet girders at mile 4–13. This bridge is proposed to take the discharge from the tank at Peddápuram in case of an accident to the tank bund. There are also two culverts of 3 feet span over two irrigation channels from the tank.—top soil red-earth, and subsoil gravel. Curving back towards the north on a fall of 1 in 120, and then to the west on the same fall (these curves are put in in order to avoid old Peddápuram city) the line crosses two spans of 40 feet girders at mile 4–93. This bridge is to allow the discharge from the tank of old Peddápuram. Two culverts of 3 feet each are also provided over two irrigation channels; irrigated area 150 acres. The line from this point (mile 5)

curves to the west over 1 in 84 rise and then 1 in 140; at mile 5-4,050 feet, the line crosses a bandy-track from Kattamur village; at mile 6-08, it crosses a bridge of 15 feet girder over the supply channel to a large tank east of the line. At mile 6-1,030 feet, there is provided a place for crossing and stopping trains by signal for the convenience to the inhabitants of Kattamur village. Curving to the west over 1 in 227 rise followed by 1 in 369 fall, it crosses a 15 feet span over the supply channel of the large tank to the east of the line—top soil 3 feet red-earth, subsoil gravel. At mile 7 the line crosses another 15 feet span provided for the discharge of the tank to the west. Curving to the west on a grade 1 in 88 rise in order to avoid a large tank, it continues curving to the west on a grade of 1 in 62 rise and still to the west 1 in 218 rise; these three curves are put in to avoid heavy banking which would otherwise be necessary. The line here crosses a culvert of 10 feet waterway over the supply channel of Timmapuram tank. Curving still, to the west on a gradient of 1 in 131 fall, it crosses Jaggammapéta-Peddápuram road at mile 7-1,920 feet, crosses over a 10 feet span at mile 8-27. This span is over an additional supply channel to Timmapuram tank. From this point, the line bears away to the north over gradients of 1 in 61 rise, 1 in 150 rise, level and then 1 in 71 fall, and crosses a bridge of 15 feet girder at mile 8-47 over a drain. This drain crosses the Local Fund road through a culvert of 8 feet span which is insufficient. Curving to the west on a grade of 1 in 71 fall and 1 in 140 rise (these two curves are in order to avoid the irrigation tank of Katravulapalli village), it here crosses a bridge of 30-feet girder at mile 8-96 for the discharge of an irrigation tank—irrigated area 81 acres, soil black cotton. At mile 9-07, there is another bridge of 30-feet span from Katravulapalli village. Corresponding to this on the road there is a road-dam 60 feet. There is another crossing place for trains at 9-600 feet for the convenience of Katravulapalli people. Bearing away to the west, the line passes Katravulapalli village road at mile 9-2,000 feet. At mile 9-77, a bridge of one span of 40-feet girder is provided for the discharge of a drainage area of 3 square miles. The Local Fund road, here, is frequently washed away by the floods. Beyond this bridge two curves are put in to avoid the low ground and heavy banking, mile 10-14, and there is a bridge of 20 feet span provided in the low ground as the Local Fund road suffers here badly; soil, black cotton. The line bears from here to the west over a grade of 1 in 533 crossing a bridge of 30 feet span over the supply channel of Ragamma tank. This tank has two waste weirs of 15 feet each. Bearing away to north on a gradient of 1 in 270 rise and 1 in 93 fall, the line points towards Jaggammapéta and crosses a bridge of 10 feet span at mile 11-81 over an irrigation channel and a culvert of 10 feet span which allows water from the north of Local Fund road to flow into Jegulagandy drain. The irrigated area of this tank is 40 acres. At mile 11-85, the line passes over Jegulagandy drain by a bridge of 1 of 40 feet span. The catchment basin is 3 square miles. One bridge of 15 feet, 1 culvert of 6 feet and 1 road-dam of 80 feet are provided on the Local Fund road. Not only the drainage from this river goes through, but a great portion of the drainage from the north—soil black cotton. Bearing away slightly to the north over a grade of 1 in 566 rise, it crosses a bridge of 1 of 30 feet span at mile 12-91 and also two culverts of 5-feet span each. This is allowed for the irrigation of the land from Jaggammapéta tank—irrigated area 120 acres. At mile 12-68 and 12-77, the line crosses over two bridges of 15 feet span each. These are provided to permit the irrigation of land from a tank to the north of the great Northern trunk road. Opposite these bridges in the great Northern trunk road is a road-dam 60 feet long. As one-half of the drainage passes parallel to the Local Fund road, it consequently does not affect the line. Curving away to the east over a gradient of 1 in 150 rise and then level, the line crosses the great Northern trunk road at mile 12-4,800 feet. From this point the line passes to the north of great Northern trunk road towards east running through Jaggammapéta station at mile 13-330 feet. From here to Yerraram bridge, the line is carried simply close to the great Northern trunk road. The culverts on the road have all been extended in order to carry the railway except in the undermentioned places:—

At mile 12-96, a bridge of one span of 10-feet girder has been put in, the corresponding openings on the road being 2 of 3 feet. At mile 13-50, a 15-feet span has been put in opposite to which on the road are two of 6 feet each culverts. At mile 17-29, where the line crosses Dussalam drain which has a catchment area of 5 square miles, a bridge of four spans of 40 feet girders has been provided. The great Northern trunk road crosses this drain by a bridge of two spans of 30 feet. Attached is a road-dam of 100 feet. Even this is insufficient, the road being frequently washed away. At mile 18-93, there is one 15-feet span opposite to the 10 feet span on the road. At mile 19-1,950 feet the line crosses through Yerraram station. On leaving this station, it crosses Yerraram bridge of fifteen spans of 36-feet each. This bridge being to standard dimensions is capable of easily carrying any load that can be got on a 2' 6" line. After passing the bridge, the line bears to the north and continues in that direction running alongside the Yerraram-Juddangy road until it reaches the terminal station at Yeleswaram, mile 23-35. On the Yerraram-Juddangy road, there are thirteen culverts of 3-feet span each which have been extended to allow the line being run over them. Station buildings, station machinery buildings, permanent-way and rolling-stock have not been taken into consideration in this report, as the abstracts sent herewith clearly show the design and give all necessary information.

ENCLOSURE No. 4 to above.

PROPOSED LIGHT RY. FROM SAMALKOT TO YELESWARAM.

2' 6" GAUGE (23·35 MILES).

Abstract of Cost of Railway.

Heads of Account.	Total cost.			
	Sub-heads.		Main heads.	
	Total cost.	Rate per mile.	Total cost.	Rate per mile.
	RS.	RS.	RS.	RS.
I. Survey expenses	1,000	42	1,000	42
II. Land	5,000	214	5,000	214
III. Formation	..	..	37,120	1,590
1. Earthwork	37,120	1,590	..	..
IV. Bridge work	..	..	59,308	2,540
1. Bridges	49,656	2,127	..	..
2. Culverts	9,652	413	..	..
V. Electric telegraph	9,700	415	9,700	415
VI. Ballast and permanent-way	..	..	1,89,216	8,146
1. Ballast	8,580	363	..	..
2. Permanent-way	1,80,636	7,783	..	..
VII. Station and buildings	..	..	68,680	2,938
1. Stations and offices	9,147	392	..	..
2. Workshop and Store buildings, &c.	9,756	418	..	..
3. Staff quarters	10,355	443	..	..
4. Station machinery	40,451	1,732	..	..
VIII. Rolling stock	..	..	1,93,129	8,271
1. Locomotive	55,420	2,373	..	..
2. Carriages and wagons	1,37,709	5,898	..	..
IX. General charges	..	..	10,500	449
1. Engineering establishment	7,000	299	..	..
2. Audit and Account	1,500	64	..	..
3. Locomotive	2,086	86	..	..
Total	5,74,668	..	5,74,668	24,600

ENCLOSURE No. 5 to above.

Abstract of Bridge Quantities.

Mile.	Name of bridge.	Excavation.	Sand.	Concrete.	Masonry.	Pointing.	Arching.	Iron work.	Timber.	Coping.	Dry filling.	Pitching.	Total.
		C.FT.	C.FT.	C.FT.	C.FT.	SQ.FT.	C.FT.	TONS.	C.FT.	C.FT.	C.FT.	C.FT.	C.FT.
0·25	1 Girder .. 30 feet.	2,000	..	500	1,300	500	..	2·06	12	57	1,000	700	..
0·46	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	..
0·47	1 ,, .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	..
0·71	1 Girder .. 15 ,,	3,000	..	800	1,200	500	..	0·46	8	77	1,500	400	..
0·83	1 ,, .. 15 ,,	4,000	..	1,300	2,100	700	..	0·46	8	75	2,000	400	..
2·09	1 ,, .. 20 ,,	1,000	..	3,500	1,600	600	..	0·65	9	83	500	550	..
3·07	1 ,, .. 15 ,,	3,000	..	800	1,200	500	..	0·46	8	77	1,500	400	..
3·71	1 ,, .. 10 ,,	3,000	..	900	2,000	800	..	0·24	6	83	1,500	400	..
3·89	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	..
4·13	2 Girders .. 20 ,,	3,000	..	1,100	3,600	1,300	..	1·30	18	98	1,500	1,500	..
4·33	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	..
4·85	1 ,, .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	..
4·93	2 Girders .. 40 ,,	6,000	..	800	2,400	700	..	9·96	28	75	3,000	3,600	..
5·04	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	..
6·08	1 Girder .. 15 ,,	3,000	..	800	1,900	800	..	0·46	8	86	1,500	500	..
6·90	1 ,, .. 15 ,,	3,000	..	800	1,200	500	..	0·46	8	77	1,500	400	..
7·00	1 ,, .. 15 ,,	2,000	..	700	1,450	500	..	0·46	8	67	1,000	350	..
7·36	2 Arches .. 5 ,,	400	..	1,400	1,700	900	151	..	..	108	200	400	..
8·04	2 ,, .. 5 ,,	400	..	1,400	1,700	900	151	..	..	108	200	400	..

Abstract of Bridge Quantities—cont.

Mile.	Name of bridge.	Excavation.	Sand.	Concrete.	Masonry.	Pointing.	Arching.	Iron work.	Timber.	Copying.	Dry filling.	Pitching.	Total.
		C.FT.	C.FT.	C.FT.	C.FT.	SQ.FT.	C.FT.	TONS.	C.FT.	C.FT.	C.FT.	C.FT.	C.FT.
8·27	1 Girder .. 10 feet.	1,000	..	1,200	1,800	700	..	0·24	6	75	500	300	
8·47	1 ,, .. 15 ,,	4,000	..	1,300	2,100	700	..	0·46	8	75	2,000	400	
8·91	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	
8·96	1 Girder .. 30 ,,	3,000	1,000	800	1,900	200	..	2·06	12	73	1,500	1,000	
8·98	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	
9·07	1 Girder .. 30 ,,	3,000	1,000	700	1,550	500	..	2·06	12	67	1,500	850	
9·77	1 ,, .. 40 ,,	4,000	3,000	1,200	1,800	600	..	4·98	14	72	2,000	1,000	
10·41	1 ,, .. 20 ,,	1,000	800	3,500	1,600	600	..	0·65	9	83	500	550	
10·71	1 ,, .. 30 ,,	3,000	1,000	1,400	2,150	900	..	2·06	12	96	1,500	900	
11·65	1 Arch .. 3 ,,	2,000	..	700	600	400	86	..	..	48	1,000	..	
11·81	1 Girder .. 10 ,,	2,000	..	1,000	1,400	500	..	0·24	6	65	1,000	300	
11·85	1 ,, .. 40 ,,	11,000	3,000	1,300	4,500	1,000	..	4·98	14	92	5,500	2,000	
12·11	1 ,, .. 30 ,,	1,500	900	1,250	1,900	500	151	2·06	12	62	750	600	
12·42	2 Arches .. 5 ,,	400	..	1,400	1,700	900	151	..	..	108	200	400	
12·54	2 ,, .. 5 ,,	400	..	1,400	1,700	900	151	..	..	108	200	400	
12·68	1 Girder .. 15 ,,	3,000	500	800	1,200	500	..	0·46	8	77	1,500	400	
12·77	1 ,, .. 15 ,,	3,000	500	800	1,200	500	..	0·46	8	77	1,500	400	
12·96	1 ,, .. 10 ,,	2,000	500	1,000	1,400	500	..	0·24	6	65	1,000	300	
13·15	1 ,, .. 15 ,,	3,000	500	800	1,200	500	..	0·46	8	77	1,500	400	
13·16	1 Open top .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
13·26	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
13·36	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
13·23	1 ,, .. 6 ,,	550	..	500	300	300	..	..	12	32	75	..	
13·56	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
13·71	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
13·80	1 ,, .. 4 ,,	500	..	400	300	300	..	..	10	32	250	..	
13·84	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
13·94	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
14·15	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
14·25	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
14·40	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
14·65	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
14·69	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
14·90	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
14·98	1 ,, .. 6 ,,	500	..	500	300	300	..	..	12	32	250	..	
15·20	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
15·29	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
15·46	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
15·90	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
16·00	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
16·20	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
16·32	1 ,, .. 6 ,,	500	..	500	300	300	..	..	12	32	250	..	
16·36	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
16·87	1 ,, .. 6 ,,	500	..	500	300	300	..	..	12	32	250	..	
17·01	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
17·29	4 Girders .. 40 ,,	21,000	3,500	3,300	4,350	1,400	..	19·92	56	77	1,200	75	
17·46	1 Open top .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
18·36	1 ,, .. 4 ,,	500	..	300	200	200	..	..	10	28	250	..	
18·93	1 Girder .. 15 ,,	3,000	500	800	1,200	500	..	0·46	8	77	1,500	400	
18·95	1 ,, .. 10 ,,	3,000	500	900	2,000	800	..	0·24	6	83	1,500	400	
19·12	1 Open top .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
19·24	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
19·28	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
19·37	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
19·74	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
19·93	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
19·06	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
20·16	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
20·67	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
21·72	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
22·02	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
22·80	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
23·14	1 ,, .. 3 ,,	500	..	300	125	200	..	..	9	28	250	..	
	Total, Quantity ..	147,250	27,200	49,650	60,325	32,200	1,288	59·00	719	4,180	73,625	20,975	
	Rates ..	2-14-6	3°/₀	13°/₀	16°/₀	3°/₀	75°/₀	..	1-9-0	50°/₀	3°/₀	7°/₀	
	Amount ..	418	816	6,454	9,652	966	966	32,310	1,123	2,090	220	1,468	56,483
											Contingencies per cent ..		2,825
											Grand Total ..		59,308

Enclosure No. 6 to above.

Bridge Abstract.

Type of Bridge. Class.	No.	Spans.	Total number of spans.	Waterway.
Open tops	20	3 feet	20	60
	15	4 ,, ...	15	60
	5	6 ,, ...	5	30
Arched Culverts	8	3 feet	8	24
	4	5 feet (4 of 2 spans)	8	40
	1	10 feet	1	10
Girder bridge	4	10 feet	4	40
	11	15 feet	11	165
	3	20 { 2 of 1 span .. .. / 1 of 2 spans	2	40
			2	40
	5	30 feet	5	150
	4	40 feet { 2 of 1 span .. .. / 1 of 2 spans .. .. / 1 of 4 spans	2	80
			2	80
			4	160
		Total for whole line ..	..	979
		Average per mile ..	..	41·92

Enclosure No. 7 to above.

Station Buildings Abstract.

Name of station.	Class.	Mileage.	Distance apart.	Station building.	Goods-shed.	Passengers' platform. Length.	Passengers' platform. Height above rails.	Station-masters' quarters.		Menials' quarters.		Well diam. (c)
			MILES.	S. FT.	S. FT.	FT.	FT.	NO.	S. FT.	NO.	S. FT.	FT.
Samalkot	1	0	0	2,124	689	200	1	1	940	7	1,365	12
Peddápuram	2	3½	3½	1,633	689	150	1	1	940	5	975	..
Jaggampéta	2	13 1/16	9 1/16	1,633	689	200	1	1	940	5	975	12
Yerraram	2	19½	6 7/16	1,633	..	150	1	1	940	5	975	..
Yeleswaram	1	23¼	3¾	2,124	689	200	1	1	940	7	1,365	12

Enclosure No. 8 to above.

Curve Abstract.

Angle of Curvature or Radius.	Number of each.	Total length, miles.
15°16′ (R = 375)	1	0·05
10°54′ (R = 525)	1	0·15
9°32′ (R = 600)	5	0·54
8°29′ (R = 675)	1	0·22
7°0′ (R = 825)	2	0·11
6°20′ (R = 900)	6	0·87
4°46′ (R = 1,200)	2	0·43
3°50′ (R = 1,500)	5	0·84
3°10′ (R = 1,800)	4	0·66
2°43′ (R = 2,100)	1	0·11
2°23′ (R = 2,400)	2	0·32
2°7′ (R = 2,700)	1	0·08
1°54′ (R = 3,000)	6	0·61
1°16′ (R = 4,500)	3	0·40
Flatter than 1° = 0	16	2·35
Total ..	56	7·74

No. 1157 R., 17TH DECEMBER 1897.

ENCLOSURE No. 9 to above.

Gradient Abstract.

Inclination.	Number of each.	Total length, miles.	Percentage of total length of line.
1 in 59 = 1·69 per cent. ..	1	0·25	1·07
1 in 64 = 1·56 ,, ..	1	0·11	0·47
1 in 71 = 1·40 ,, ..	1	0·23	0·98
1 in 75 = 1·33⅓ ,, ..	1	0·34	1·46
1 in 76 = 1·31 ,, ..	1	0·19	0·81
1 in 82 = 1·22 ,, ..	1	0·08	0·34
1 in 83 = 1·20 ,, ..	1	0·46	1·97
1 in 84 = 1·19 ,, ..	1	0·57	2·44
1 in 86 = 1·16 ,, ..	1	0·13	0·56
1 in 88 = 1·13 ,, ..	1	0·31	1·33
1 in 89 = 1·12 ,, ..	1	0·21	0·90
1 in 93 = 1·07 ,, ..	1	0·13	0·56
1 in 94 = 1·06 ,, ..	1	0·27	1·16
1 in 100 = 1·00 ,, ..	1	0·12	0·51
1 in 106 = 0·94 ,, ..	1	0·31	1·33
1 in 129 = 0·78 ,, ..	1	0·43	1·84
1 in 133 = 0·75 ,, ..	2	0·53	2·27
1 in 140 = 0·71 ,, ..	1	0·56	2·40
1 in 146 = 0·68 ,, ..	1	0·09	0·39
1 in 150 = 0·66 ,, ..	4	0·11	0·47
1 in 155 = 0·65 ,, ..	1	1·08	4·62
1 in 158 = 0·63 ,, ..	1	0·34	1·46
1 in 160 = 0·63 ,, ..	1	0·15	0·64
1 in 162 = 0·62 ,, ..	1	0·09	0·39
1 in 175 = 0·57 ,, ..	1	0·55	2·35
1 in 180 = 0·55 ,, ..	1	0·35	1·50
1 in 200 = 0·50 ,, ..	1	0·15	0·64
1 in 218 = 0·46 ,, ..	1	0·47	2·01
1 in 220 = 0·45 ,, ..	1	0·88	3·77
1 in 227 = 0·44 ,, ..	1	0·39	1·67
1 in 250 = 0·40 ,, ..	1	0·19	0·81
1 in 210 = 0·37 ,, ..	1	0·31	1·33
1 in 290 = 0·35 ,, ..	1	0·62	2·65
1 in 294 = 0·34 ,, ..	1	0·96	4·11
1 in 337 = 0·30 ,, ..	1	1·04	4·45
1 in 338 = 0·30 ,, ..	1	0·20	0·86
1 in 342 = 0·29 ,, ..	1	0·65	2·78
1 in 350 = 0·29 ,, ..	1	0·27	1·16
1 in 369 = 0·27 ,, ..	1	0·36	1·54
1 in 431 = 0·23 ,, ..	1	0·41	1·76
1 in 500 = 0·20 ,, ..	1	0·23	0·99
1 in 533 = 0·19 ,, ..	1	0·83	3·55
1 in 566 = 0·18 ,, ..	1	0·55	2·36
1 in 800 = 0·13 ,, ..	1	0·31	1·33
1 in 900 = 0·11 ,, ..	1	0·68	2·92
Flatter than 1 in 1,000 including level.	..	5·86	25·08
Total ..	..	23·35	99·99

ENCLOSURE No. 10 to above.

Station Machinery.

Name of station.	Station nabpits.	Water columns. Number.	Water columns. Diameter.	Water tank. Capacity in cubic feet.	Well. Diameter.	Hand pump or water lift.	Switches 9 feet stock nails 12.	Crossings 1 in 6.	Home signals.	District signals.	Platform weighing machines. Number.	Platform weighing machines. Capacity.	Engine-shed area.	Local nabpits.	Engine turntable.
			INCH.									TONS.			
Samalkot	1	1	4	75	12	1	10	10	1	2	2	1	2500	2	1
Peddápuram	..	..	..	..	..	..	3	3	1	2	1	1	..	..	..
Jaggammapéta	..	1	4	75	12	1	4	4	1	2	1	1	..	..	..
Erraram	..	..	..	..	..	..	3	3	1	2	1	1	..	..	..
Yeleswaram	1	1	4	75	12	1	10	10	1	2	2	1	1,400	1	1

Articles required from England.

Description.	Quantity.	English cost. F. O. B.	English cost. Total.	Rate of exchange.	English cost in rupees.	Indian charges.	Total.	Per mile.
		RS.	RS.		RS.	RS.	RS.	RS.
Permanent-way	30 miles.	8,820	8,820	1 £ (18 Rupees).	1,58,760	15,876	1,74,636	5,821·2
Station machinery	as per list	2,043	2,043		36,774	3,677	40,451	..
Plant and workshop machinery	Lumpsum	389	389		7,000	700	7,700	..
Locomotives	4 Nos.	2,799	2,799		50,382	5,038	55,420	..
Coaching stock	18 ,,	3,470	3,470		62,460	6,246	68,706	..
Goods stock	42 ,,	3,485	3,485		62,730	6,273	69,003	..
Total ..	..	21,006	21,006	..	3,78,106	37,810	4,15,916	..

ENCLOSURE No. 11 to above.

NOTE by the Consulting Engineer for Rys. on the proposed Ry. from Samalkot on the East Coast Ry. to Yeleswaram, dated Ootacamund, 18th September 1896.

Alignment.—The junction station at Samalkot is placed 300 feet from the East Coast Railway; before the line is actually constructed, the junction arrangements will have to be considered with the East Coast Railway authorities. There should be an island platform for transferring passengers and a tranship siding for goods.

2. The deviation from mile 0 to 2 is said to be necessary in order to avoid some gardens, a tank, and a number of houses; but there is a road shown on the plan from 22 chains to opposite mile 2, which could apparently be made use of. This portion should be carefully considered before construction is commenced; it would be worth while to incur a slightly heavier initial cost if a more direct line can be secured.

3. From mile 8 to 13 it would seem that a shorter and more economical line could be got by following the road as much as possible. If the road authority raises no objection, the line could be placed on the road as is done in the Darjeeling and Morvi Railways, and also I believe in Barsi road tramway.

4. From mile 13 to the terminus the line has been placed at one side of the road: here, too, considerable expenses would be saved by using the road itself. If the culverts are not strong enough, they might either be replaced by girders or deviations could be made where they occur and the culverts could be lengthened.

5. *Grading.*—There are five gradients steeper than 1 in 80: their total length is 1·12 mile, the steepest is 1 in 59 at mile $3\frac{1}{4}$ running into Peddápuram station. This could be altered to 1 in 100 by going into 11 feet of cutting at the deepest part, or 1 in 80 at most.

6. A grade of 1/84 between miles 5 and 6 could be altered to 1 in 100 without much extra expenses.

7. The short grades of 1 in 64 and 1 in 71 between miles 8 and 9 and that of 1 in 82 between miles 9 and 10 could also be flattened without much extra earth-work. A grade of 1 in 76 at the 17th mile could easily be flattened to 1 in 100.

8. The ruling gradient should not be steeper than 1 in 80, and probably 1 in 100 could be got by careful surveying and grading; it will prove more economical in the long run to pay a little more for earthwork (which is only $\frac{1}{15}$th of the total) and to so reduce working expenses.

9. *Bridgework.—Extensions of culverts* 3, 4 and 6 feet. The road is carried on timber baulks; it would probably be just as cheap to use girders made of old rails and would give more headway.

10. *Girder bridges.*—The following are noted:—

No. of spans.	Span in feet.	Mileage.	Height from floor to under girder in feet.
			FT. INS.
1	30	0·25	* 4 0
1	20	2·09	* 6 0
2	40	4·93	* 5 3
1	15	7·00	5 6
1	30	8·96	* 5 6
1	30	9·07	* 5 6
1	40	9·77	* 6 6
1	30	10·71	10 0
1	40	11·85	11 0
1	30	12·11	* 5 0
4	40	17·29	8 6

The height from floor to girder is quite out of proportion to the span. The height of those marked with an asterisk should be increased: the span could then, probably, be diminished. If the height is kept, the same smaller spans should be used.

11. Nothing is said in the report about materials, but if good stone can be got cheaply, it would be preferable to convert a good many of the girders into arched bridges.

12. *Station buildings.*—Booking office, waiting shed, goods shed, passengers' platform have been provided for. The roofs are of corrugated iron and are carried on old rails. The accommodation is sufficient for a railway of this kind.

13. *Staff quarters.*—Stationmasters' and menials' quarters are provided for.

14. *Station machinery.*—Watering arrangements are provided at the terminal stations and at the midway station of Jaggammapeta, and engine sheds at the terminal stations.

Home and distant signals are allowed for at all stations. I think the distants might be done away with.

No plans of stations are given, but it appears that a loop and a dead end has been allowed for at each station.

Turn tables at the terminal stations are also provided.

15. *Permanent-way.*—No description is given and no mention is made of ballast.

16. *Rolling-stock.*—Four locomotives, 18 passenger carriages and 42 goods wagons have been estimated for: to begin with, 2 locomotives would be sufficient, 12 carriages and 20 wagons.

17. *Fencing and plant*—have not been allowed for: the former is not necessary.

18. *Estimate.*—The total is Rs. 5,74,668 for the 23·35 miles: the rate per mile is Rs. 24,600. I have little doubt that the line could be made for this. The Morvi Railway (original length 26 miles) on the same gauge was estimated to cost Rupees 23,600 per mile laid with 19 lb. rails on steel sleepers. The actual cost some years after opening when 29 lb. rails had been substituted for 50 miles (the line being now 94 miles long) was Rs. 23,400 per mile.

The Morvi line was laid mostly at one side of the road by the date in question (December 1894); it had been much improved by curves being eliminated and grades flattened.

19. To return to the estimate in detail—*Survey*, *Land*, *Formation*—no alteration required.

20. *Bridgework.*—This could be reduced if the line were laid on the district road, assuming the culverts to be strong enough.

21. *Electric telegraph.*—Omit; the line could be very well run on the staff system.

22. *Ballast and permanent-way.*—If 19 lb. rails are used which would be good enough to start with, the rate could be reduced to Rs. 7,700 per mile.

23. *Stations and buildings.*—The stations and staff quarters need not be built at once. The line would only be worked in daylight at first, and the staff could very well be housed in the villages and the stations could be mere huts. On the Morvi line after the line had been opened for some years, the amount expended on this head was only Rs. 415 per mile. I should think Rs. 1,000 per mile would be ample.

24. *Rolling-stock.*—The Morvi estimate (or rather actual statement) gives Rupees 4,000 per mile against the District Engineer's Rs. 8,271. If the stock noted in paragraph 16 as sufficient to start with is provided, Rs. 4,000 a mile would be sufficient.

25. *Plant*—Rs. 200 per mile should be entered.

The estimate could be reduced as under:—

	Per mile. Rs.
Telegraph	415
Ballast and permanent-way	446
Stations and buildings	2,938
Rolling-stock	4,000
	6,799
Plant	200
	6,999
	(say), 7,000

This would give a mileage rate for the whole line of Rs. 18,000.

NOTE by the Consulting Engineer for Ry., on the Light Ry., from Samalkot to Yeleswaram *viâ* Peddápuram and Jaggammapéta, dated Ootcamund September 1896.

This branch line was brought forward by Mr. V. A. Brodie, President of Gódávari District Board, in March 1896.

2. The proposal was for a light railway (gauge not specified) to run from Yeleswaram along or close to the district road to the East Coast Railway station at Samalkot and to place the terminus between the railway station and the canal, so that goods could take either means of transit to Cocanada or elsewhere.

3. It was proposed to construct and work the line by local agency, and to raise the necessary capital (roughly estimated at 7 lakhs) by—

	Rs.
(1) A loan at 4¼ per cent. from Government of	3,00,000
(2) Public subscription	3,00,000
(3) Contribution from District fund	1,00,000
	7,00,000

4. It was urged that—

(1) Engineering difficulties would be small.
(2) It would be a valuable feeder to the East Coast Railway.
(3) It was well supported by both the European and Native Chambers of Commerce of Cocanada.
(4) It would open up a rich district.
(5) The traffic was large and would pay sufficient interest on the capital.

At a meeting of the District Board Rs. 1,000 was voted for a survey for a 2'-6" gauge railway which has now been made, and plans and estimates have been submitted.

5. Meanwhile, Mr. Brodie's letter with accompaniments was sent to the Manager, East Coast Railway, for report.

6. The Manager reports that the loss to the East Coast Railway by goods, which formerly came to Samalkot station in carts and will now go by canal is inconsiderable. He hesitates to express any opinion on the financial prospects of the railway and advocates a light railway on the broad gauge worked by the East Coast Railway.

7. The East Coast Railway Traffic Manager (Mr. Pope) considers that it will be a competitor and not a feeder to the East Coast Railway, and that owing to the short distance from Cocanada goods will still go by cart if the line is to be built to a different gauge, and the line will be a financial failure. Even if a third rail is laid to Cocanada, he thinks it will still fail to pay a reasonable interest on capital. He does not discuss the proposal of a light railway on the broad gauge.

8. The estimate and plans have now been submitted. A note by the Acting Consulting Engineer is attached. The District Engineer estimates the cost at Rupees 5,74,668 for a length of 23·35 miles, or Rs. 24,600 per mile. If the line were made as cheaply as possible in the first instance, as recommended in the note attached, it is estimated that Rs. 18,600 per mile would be sufficient: this is assuming that there should be no staff quarters, and that station buildings, etc, should be reduced to their simplest expression. It would be safe to take Rs. 23,000 per mile (a little less than the Morvi statement of actual expenditure). This would put the cost of the line at Rs. 5,37,000.

9. In order to earn 4 per cent. on this capital, the net earnings must be Rs. 17·7 per mile per week, or allowing working expenses at 50 per cent., gross earnings must not be less than Rs. 35·4 per mile per week.

10. The statement of traffic given by the Collector shows :—

	Maunds.	Miles.
Between Peddápuram and Samalkot	478,000	4½
Yeleswaram and Samalkot	125,000	24
Jaggammapéta and Samalkot	20,000	14

This is equal to 5,431,000 maund miles.

11. The Traffic Manager, East Coast Railway, takes 1·10 pie as the probable rate at which goods would have to be carried to overcome cart competition. He has such an obvious bias against the proposed scheme that I think this may be accepted with reserve, and 1·5 pie may be taken as a basis for calculation.

12. On this assumption the goods traffic would then earn (if it all came on the railway) Rs. 5,660 per annum. Taking the passenger traffic to be equal to the goods, the gross receipts will be Rs. 11,320 per annum, or about Rs. 9 per mile per week, whereas it ought to earn nearly four times this amount to pay 4 per cent. on the capital.

13. Even this is a sanguine estimate, for the Peddápuram traffic is the biggest item, and it is not at all likely that any of it will come on to the railway, if bulk is to be broken at Samalkot; another alternative is to build a light line on the broad gauge and work it with East Coast Railway rolling-stock.

14. If this were done, probably this traffic would be secured; but in that case the cost of the line would be trebled and this idea may be dismissed from consideration.

15. There remains the proposal put forward by the Hon'ble Mr. Bliss to lay down a third rail to Cocanada.

16. The East Coast Railway is laid, for the most part, with Vignolles rails and pea-pod steel sleepers; it would be impossible to put in a third rail, and the only plan would be to lay the 2′ 6″ track between the East Coast Railway rails, which would be exceedingly inconvenient, as it would make both roads very difficult to pack.

17. The only feasible plan seems to be to replace the steel sleepers with wooden and lay a third (75 lb.) rail. (This would be necessary to keep the rails the same height). It is difficult to estimate the cost of this operation. It may be put down roughly at Rs. 1,00,000 for the 10 miles to Cocanada. Assuming that the delivery sheds of the East Coast Railway can be used, the total cost of the line from Yeleswaram to Cocanada will be Rs. 6,37,000.

18. The goods receipts may be calculated as under :—

	Maunds.	Miles.
Between Yeleswaram and Cocanada	1,25,000	34
„ Jaggammapéta and „	20,000	24
„ Peddápuram and „	4,78,000	14½

This amounts to 11,661,000 maund miles=Rs. 12,147 per annum at $\frac{1}{5}$th pie per maund per mile.

Add passenger traffic assumed equal in amount:

	Rs.
Annual gross receipts	24,294
„ net „	12,147

(assuming working to be 50 per cent).

To this must be added the toll that would be charged by the East Coast Railway for allowing the branch traffic to use their line and goods accommodation. This would have to be settled by the Government of India. The Traffic Manager assumes that the branch would have to give 80 per cent of its earnings, but where he gets this figure I do not know.

19. Neglecting this item for the present, Rs. 12,147 will give a return of less than 2 per cent. on the assumed capital of Rs. 6,37,000.

20. It generally happens, no doubt, that when a line is opened, traffic rapidly develops, and it is possible that more careful statistics may show a better result, but on those now submitted it would seem a very risky venture to construct the line on any gauge.

21. The Collector might be informed that the estimated traffic will not pay a reasonable interest on the capital required for either a 2′ 6″ gauge, a light broad gauge or an extension of the 2′ 6″ to Cocanada. He might be asked to collect further statistics if he is still sanguine that sufficient traffic is forthcoming.

From—The Consulting Engineer for Rys.
To—The President, District Board, Gódávari.
Dated—2nd October 1895, No. 1469 D.

With reference to your letters noted in the margin on the proposed light railway from Samalkot to Yeleswaram *viâ* Peddápuram and Jaggammapéta, I am directed to inform you that the estimated traffic will not pay a reasonable interest on the capital required for either a 2′ 6″ gauge, a light broad gauge or an extension of the 2′ 6″ gauge to Cocanada, and I am to request that you will be so good as to collect further statistics if you are still sanguine that sufficient traffic is forthcoming.

Ref. on Cur. No. 1435/D.B., dated 3rd Mar. 1895.
Dis. No. 726/D.B., dated 9th April 1896.
„ 728/D.B. „ 13th „ „
Ref. on Cur. No. 800/D.B., dated 1st June 1896.

From—The President, District Board Gódávari.
To—The Secretary to Govt., L. and M. Dept.
Dated—19th November 1896, Ref. on Cur. No. 800/D.B.

In continuation of my letter, Ref. on Cur. No. 800/D.B., dated 1st June 1896, I have the honour to submit, herewith, a plan and report for a deviation of the proposed light railway line at Peddápuram and request that the same may be forwarded, with original plans and estimates, to the Secretary, Railway Department, Government of India, for favour of sanctioning the deviation.

Sent seperately.

To the Consulting Engineer for Railways, with statistics in original.
„ Public Works Department.

ENCLOSURE.

REPORT on the proposed Re-alignment through Peddápuram of the Gódávari District Board Light Railway.

As the principal merchants and land owners of Peddápuram taluk objected to the station site as being too far away from the business portions of the town, it was decided by the President of the District Board, V. A. Brodie, Esq., that a site near the taluk cutcherry should, if possible, be obtained; in consequence of which I made a survey and have succeeded in bringing the line to within 500 feet of the cutcherry, the gradients both in and out of the station have been reduced, and the cost has been kept down as much as possible by utilizing the village road from the station to the point where the new line joins the old. The extra cost is caused by the heavy cutting coming into the station. This was unavoidable in order to make a decent gradient, which being brought down to 1 in 125, the original sections showing 1 in 59. The extra cost incurred will, with compensation, amount to Rs. 14,000 about. Tracings of both plan and sections for the deviation are attached.

Endorsement thereon by the Secretary to Govt., L. and M. Dept., dated Fort St. George, 11th December 1896, No. 1471,

Transferred to the Public Works Department in continuation of endorsement No. 722, dated 24th June 1896.

From—The Consulting Engineer for Rys.
To—The President, District Board, Gódávari.
Dated—15th January 1897, No. 236 C.

With reference to your letter, Ref. on Cur. No. 800/D.B., dated 19th November 1896, submitting for sanction a plan and report for a deviation of the proposed light railway from Samalkot to Yeleswaram at Peddápuram, I am directed to invite your attention to Public Works Department No. 1469 D., dated 2nd October 1896, in which you were informed that Government was not disposed to consider the scheme referred to above, unless further statistics of traffic should show a better prospect of a reasonable interest on capital being secured. This being so, the necessity for further expenditure on detailed surveys seems unnecessary. The money would be better spent in making careful arrangements for estimating traffic. Your request that the deviation plan, together with the original plans, should be forwarded to the Government of India, is therefore not understood.

From—The President, District Board, Coconada.
To—The Secretary to Govt., L. and M. Dept.
Dated—Gódávari, 16th November 1897, Ref. on Cur. No. 153 D.B.

In reference to the Public Works Department Nos. 1469 D., dated 2nd October 1896, and 236 C., dated 15th January 1897, I have the honour to submit herewith further statistics of traffic collected, as directed in the letters above referred to. I am quite hopeful from the information therein contained that the proposed railway would pay a reasonable rate of interest on the capital invested from the start and therefore trust that Government will be pleased to see its way to recommending its sanction.

Endorsement in the L. and M. Dept., dated 11th December 1897, No. 1292.

Transferred to the Public Works Department.

ORDER—No. 1157 R., dated 17th December 1897.

Recorded.

(True Extract.)

Under Secretary.

To the Consulting Engineer for Railways, with statistics in original.
„ Public Works Department.

SERIAL No. 9
SERIAL No. 11
SERIAL No. 18
SERIAL No. 19

1896

Local Fund Department

From

The President

District Board, Godavari

Ref: our Cor: No. 1435/DB/95

Dated 3rd
Despatched 5th March 1896.
Received

Subject.

Requesting a loan of three lacs of rupees for the establishment of a light railway between Samarlakota and Yelesvaram

Ref 378/23/3/96

The President is requested to submit a copy of the District Board's resolution dated 10th August 1895 referred to in para. 1 of his letter and also copies of its subsequent resolutions on the subject. He is also requested to forward the detailed account of the revenue and expenditure of the District Board for the last three years which has not been attached to the application as stated in it and to expedite the submission of the list of villages referred to in para. 5.

V.P. 19/3/96 bwd 20.3.96

Dw P.7 / 5085/96

To The President, District Board, Godavari

A 19/3 V 4/3

Dated 23/3/96

(With Ref.)

Memorandum

28 S. P

When the East-Coast Railway was constructed, I think a very serious error was made in aligning it, so as to pass through Samalkota in place of Peddapur but the mistake having been made, I do not think it at all probable that it will ever be rectified at any reasonable date by a change of alignment or the construction of a branch, for, such a branch on the broad gauge could not pay sufficiently in the shape of interest to justify the cost.

2. At the same time, I feel pretty well convinced that, although a broad gauge would not pay, yet in all probability a steam tramway or very light railway would pay very handsomely not only to Peddapur but carried on via Jaggampeta to Eleswaram. When I drove to Jaggampeta in April I was surprised at the number of bandies I met. It has always to be remembered too that a cheap and easy means of transport encourages and develops traffic both

both goods and passengers as well as
tends, to divert to itself traffic now
following other routes, as under present
circumstances more convenient. As Elesvaram
and Lingampatti alone have a population
of about 11,000, for a tramway they form
a very important terminal point and it
is also likely that the construction of a steam
tramway would lead to the development
of a considerable trade between Elesvaram
and the agency tracts beyond, whilst the
cost of construction would be light (as it
would, as far as possible, compatible with
safety and usefulness, follow the present
public road) and the country is not a
difficult one, so that it would be
possible probably to secure a maximum
gradient of 1 in 100 without much difficulty.
What land it might be necessary to
acquire would not be of a very valuable
kind and of great extent, so could be got
cheap whilst the most important
work, the bridging of the Yelvey has been
already carried out, for I would propose
to take it over the Yerravaram bridge
which

2

which the District Engineer states is
quite equal to carrying a 9 or 10 ton
locomotive at low speed.

3 I do not, however, at present venture
to propose the immediate undertaking
of the work but am inclined to make
its ultimate construction hinge on the
discovery of coal in paying quantities
in Bhadrachellam. If the exploration
now being carried on these results in the
discovery of coal of fair quality in paying
quantities, as there appears to be good
reasons for hoping, we might look
forward to getting coal at Rs10 per ton
and with fuel available at that figure,
such a tramway or light railway as
I have proposed above would, I am
confident, pay interest at a very
satisfactory rate, say 6 percent
at least and quite possibly double
on a capital not exceeding 3 Lakhs.
No doubt, with a tram line open to
Elesvaram we could get wood fuel
in abundance at a very cheap rate,
but wood is costly to carry and has
not

not the same steam raising properties as coal.

4. The question of raising the capital is not one however which it is necessary to consider at present, though, I fancy, the District Board could easily afford the necessary capital to make the line to Peddapur and borrow enough to carry it on to Eleswaram by guaranteeing 4 per cent interest under a condition to pay off the debenture holders of other shareholders gradually by redeeming bond to the extent of, say, Rs5000 or Rs10000 a year to be selected by lot. All that I now wish the Board to do is to pass a resolution ordering a survey for a Steam tramway or light railway line from Samalkota Via Peddapur and Jaggampeta to Eleswaram, with a rough estimate of the cost of construction, if made to carry a 10 ton locomotive with a maximum gradient of 1 in 100 and also a rough estimate of the working expenses with Coal fuel at Rs10 per ton; at the same time

same time, I request an allotment of Rs1,000 from the General provision under surveys and plans to meet the cost of making such a survey. Whether the District Board construct the line or not, the advantages of such a survey and estimate are obvious as, if the District Board are not willing to undertake the work, it is very possible some private firm might, though personally I should like the District Board to follow the lead of the Tanjore District Board and construct it itself as the most likely body to work such a scheme for the public benefit.

Godavari Dist Board Office, 21. 6. 1895.

/sd/ T. A. Brodie
President
Dist Board

/True Copy/

/sd/ V. Veeraraghavaiah
Vice President Dt Board

P/43

THIS No. TO E. & C. No. 3639 OF 1896
LETTER No. 6552 D. 19 6 96
FROM EeR

39

9/Mar/96
D W 3.14
5085/96

Daniel Lucas

8/Mar/96
D 3.89
5085/96

Statement showing the extent of traffics carried on along the proposed line from Samalcota to Polavaram via Peddapuram & Jaggampeta

Principal articles of export	Place to which exported	Exports 1892-93	1893-94	1894-95
	From Peddapuram			
Factory Jaggery	Coconada	123000 Bales of 164 lbs each	124,000	126000
Peddapuri Sugar and or Jaggery in Store	Yelavu Guntur Jaggayyapeta	26000	25,500	24,000
Gingelly	Coconada	10500	9,500	8,000
Pulses such as red gram &c	Coconada	8000	8,500	6,500
Tamarind	Bikkavolu Rajahmundry Ellore	7000	9,000	7,300
Ragi or Chodi	Juni Anakapalli Vizagapatam	2950	3,050	2,850
		177,450	179,550	174,650
				179,550
				177,457
				531,160
				177,053
				354,107

Principal articles of import	Place from which imported	Imports 1892-93	1893-94	94-95
	To Peddapuram			
Oilseed stuff	From Coconada & Kothapatnam Guntur	10500	10,000	9,800
Oilseed	Guntur Bezvada Jaggayyapeta Kammam Nellacli	21000	19,500	21,000
Grain	Rajahmundry Bhimadole Ellore Ganapavaram Adivi Kothacli	26000	25,500	22,500
Salt	Coconada	4,950	5,150	4,750
Cloths	Coconada	660	650	600
Cotton thread	Coconada	550	500	500
Pepper &c	Coconada	500	450	400
Metals such as brass, iron &c	Coconada	650	600	600
		64,810	62,350	60,150
				62,350
				64,810
				187,310
				62,000

12400 md Samalcota 4½ miles

42

40

67,600

35400
12400
47800

Statement showing the extent of traffics carried on along the proposed line from Samalcota to Yeleswaram Via Peddapuram & Jaggampeta

Principal articles of export	Place to which exported	Exports 1892-93	1893-94	1894-95	Principal articles of import	Place from which imported	Imports 1892-93	1893-94	94-95
	From Yeleswaram					To Yeleswaram			
Tamarind	To Samalcotah	10050	10000	10000	Rice	From Samalcotah	6000	6000	6000
Myrabolams	Do	5050	6000	5000	Salt	Do	5000	5000	5000
Rela bark & Jangadi bark	Do	1000	1050	950	Castor oil	Do	600	600	600
Soap nut	Do	1000	1000	950	Gingelly oil	Do	500	500	500
Horns	Do	500	550	400	Metals Such as brass vessels iron &c	Do	300	250	300
Wax	Do	300	400	300	Cloths	Do	200	200	200
Gunica-nut	Do	500	450	400			12600	12550	12600
Oilseeds	Do	6000	6050	5050				12600	
Horsegram	Do	1000	1500	2000					
Whili millet	Do	2000	2000	2000					
Gingelly	Do	2500	2000	1500					
Soap-nut	Do	550	500	500					
Kamalaphalams	Do	2000	2000	2000					
Brinjals	Do	2000	2000	2000					
Mango fruits	Do	1000	1000	1000					
Bamboos	Do	400	400	400	Bamboos				
Jaggery	Do	20000	15000	15000					
		55,800	45,900	48,450					
				45500					
				55000					
				150,150					
				50,000					

42

41

50,000
12,500
62,500
125,000 M³ 24 hrs

Statement showing the extent of traffic carried on along the proposed line from Samalcota to Pyleswaram Via Peddapuram & Jaggampeta

Principal articles of export	Place to which exported	Exports 1892-93	1893-94	1894-95	Principal articles of import	Place from which imported	Imports 1892-93	1893-94	94-95

From Jaggampetah

Jaggery	To Peddapur and Samalcotah	10000	10000	10000					

To Jaggampetah

20,000 Mds 14 miles

Articles and passengers that passed Stations at Jaggampeta and Katrupudi prepared by the then Establishment

through the traffic in 1889-90 as per accounts

			1889-90	
Passengers	Thro. Jaggampeta & Katrupudi	—	66550	
Domestic animals	Do	—	~~2576~~ 2576	
Rice	Do	—	137861	Mds
Pulses &c	Do	—	16779	Do
Jaggery	Do	—	24693	Do
Other articles	Do	—	30638	

Peddapur 7-8-95

(Sd) P. Rama Rao Tahsildar

True copy

for President Dist Bd

B/4.3

Chamber of Commerce
Coconada 8th August 95

315

The President
District Board
Godavari

Sir

I have the honor to inform you that the Chamber have taken into consideration the very interesting memorandum prepared by you on the possibility and advisability of constructing a steam tramway or light Railway between Samalcotta and Peddapuri with an extension to Ellaswaram through Jaggampet.

The Chamber warmly support your project. The benefits which a steam tramway would confer on the District are immense. The country would be opened up and a great impetus given to trade with the Hill tracts and undoubtedly a large and increasingly paying traffic would reward the enterprise.

The Chamber also agree with you

you that the line should be constructed and maintained by the District Board. Having ample funds at their disposal or at any rate having ample credit to raise money at a low rate of interest, the Board are in the best position to work the line economically and in the interests of the public, much more so than any private Company could possibly be.

The Chamber would like to encourage the District Board to undertake the work at once, i.e. as soon as the survey is complete and the necessary financial arrangements have been made and not to wait until it is proved that Coal can be procured from the upper Godavari at Rs 10/- per ton. Coal at Rs 10/- per ton is not necessary, the Chamber think, for the success of the undertaking, when there are large supplies and ample reserves of fuel at Ellaswaram the terminus of the line. The cost of this fuel will be found, the Chamber think, to compare very favourably with Coal at Rs 15/- It can be had for the cost of collecting it plus a small Government charge. This charge Government might be asked to forego and might very well agree to do so in view of the public nature of the work and as an encouragement to the promoters. 325.P

The Chamber would like to recommend that the line be confined entirely to the Public Road. In Italy, to name only one country, this is done. It reduces the cost of construction enormously. The lines are simply laid down on the side of the roads and the people and animals soon become accustomed to the passage of the trains - No cuttings of any sort are required - It would be a pity to tie the Engineers to a gradient not exceeding 1 in 100. In Italy where these light steam tramways are much in vogue, very steep gradients are met with.

I have the honor to be
Sir
Your most obedient Servant
(Sd) J. Jones
Chairman
(Secretary)
(Chairman and
Vice President

Pg 43

Chamber of Commerce

Cocanada 24th September 1950

33

To

The President,
District Board,
Godavari.

Sir,

I have the honor to acknowledge receipt of your letter of the 10th instant regarding the construction of a steam Tramway to connect Samalkot and Pedeswaram by way of Peddapur and Jaggampeta. Your letter was considered at a meeting of the chamber held this morning and I have been requested to send you the following reply.

The chamber will be very pleased indeed, if the District Board's proposal be acted upon, and half of the capital of the Tramway company be issued to the public. It will undoubtedly be of great advantage to the District if the inhabitants can be brought to understand the value of Cooperation, for,

Rec 4.13
5085/50
2
734/50

there are many openings for other joint-stock concerns which might be successfully launched, were it not for the want of initiative of the people. At the same time the members of the Chamber cannot conceal from themselves that much tact will be required to render the subscription a success. The prospect of 6 p.c. will not tempt the larger capitalists who are accustomed to lend to zamindars at 9 p.c. and the smaller men who usually invest their savings in gold ornaments will be difficult to get at. However, the object of the District Board is worthy of all praise and if the President and members use their influence with some of the leading merchants, Lawyers, and Native Government servants, there is no reason why the new departure should not prove a great success.

The idea of allowing the shareholders to nominate half the Directors is an excellent one, several influential

influential people will [illegible] in it a great incentive to interest themselves in the undertaking.

The Chamber are pleased to learn that there is no necessity of a higher gradient than 1 in 100.

I have the honor to be
Sir
Your most obedient servant

(Sd) J. Innes.
Chairman

(True Copy)
/Illegible/
For President District Board
Godavari.

P/3

Gw 5.12
5085/96
3
734/96.

Gw 5.8
5085/96
1
734/96

Application of the District Board, Godavari, for a loan from Government under section 5 of the Local Authorities Loans Act No. II of 1879

The work or works for the construction or repair of which the loan is required and an estimate of the cost thereof.	The amount which it is proposed to borrow.	The fund or funds on the security of which it is proposed to borrow.	The law or laws under which the said fund or funds is or are levied, received or held.	The period for which the loan is required, the number and amount of the instalments, if any, in which it is proposed to receive such instalment and the instalments, if any in which it is proposed to repay the loan.	Details of account of the revenue and expenditure of the local authority for the three last preceding years.	Existing prior charges upon the funds of the Local Authority.
Construction of a light railway from Samalkot to Pithapuram via Peddapuram and Jaggampeta estimated to cost about 7 Lakhs of rupees.	Rs 3,00,000	Godavari District Funds.	The Madras Local Boards' Act V of 1884	The loan is required for a period of 30 years. It is proposed to be taken in two instalments — one of Rs 2,00,000 in the official year 1896-97 and the other of Rs 100,000 in the year 1897-98. — and repaid with interest at 4½ p.c Interest is to be payable every year and the principal in 30 equal annual instalments.	Attached hereto.	X None.

(5)

Ps 4:3

30 S.D.

"The Special meeting of the Committee of Godavari District Board held on the 6th day of [illegible] 1896 at 6.30 P.M.

From Government
1879
Re the existing prior charges upon the funds of Local City.

38

38 S.D

Copy of Proceedings of the Special meeting of the Native Chamber of Commerce of Cocanada held on Saturday the 2nd February 1896 at 6.30 P.M.

Present.

1. Mr. Batham Venkataratnam garu, Chairman
2. " Ganjam Venkataratnam garu
3 " Chekka Venkataswamy garu
4 " Batchu Venkatarayudu garu
5 " Nalam Padmanabham garu
6. " Vadakatta Kamaraju garu
7 " do Annapuraju garu
8 " Bangaru China Subbhanadri garu
9 " Boda Raju garu
10 " Palivela Chittiah garu
11. " Pyda Venkatachelapati garu
12. " Dt Bazavandas Bagla Rai Bahadur garu
13 " Narayandas Bunsilal Sahukar garu
14 " Korlepara Chelamayya garu
15 " Vaka Subbarayudu garu
16 " K. Doorayya garu

1

1. Read letter dated 18th January 1896 from the President, Godavari District Board asking the opinion of this Chamber on the Board's proposal of Constructing a light Railway from Samarlakota to Yeleswaram via Peddapuram and Jaggampetta.

Resolved that this Chamber accords its cordial support to the proposed project which will not only prove a financial Success in the opinion of this Chamber but will also Confer a great boon upon the people of this District especially upon the people of the Agency tracts.

/sd/ Batham Venkataratnam

Chairman

/ True Copy /

/ Illegible /

Vice President Distt Board

Dwt. 11/5085/96

5/7/96

/ A 5:3

No 1

Cocanada, 3rd February 1896.

35 P

From

M.R.Ry Badam Venkataratnam Garu

Chairman, Native Chamber of Commerce

Cocanada

To

V. A. Brodie Esquire

President, District Board, Godavari

Sir.

With reference to your letter No 1435/DB/95 dated 18.1.1896, I have the honour to enclose herein copy of a resolution passed by the Chamber at a meeting held on the 2nd Instant, from which it will be seen that the Chamber Cordially supports the Samarlakota Yeleswaram light railway project proposed by you. The Chamber fully appreciates your desire to associate the natives of this District in the management of this Concern and it is hoped that this will be the fore-runner of many similar undertakings. The people of this Country are accustomed to look to Government for

for lead even in such matters and, if the proposed project should prove successful, the people will realize the benefits of Joint Stock Companies. Of all the branch lines that can be thought of, in this District, there is perhaps no line which gives such a sure promise of success as the proposed one and the Chamber trusts that Government will see its way to sanction the same and grant the loan applied for.

I have the honour to be,
Sir,
Your Most Obedient Servant

sd/ B. Venkataratnam
Chairman

/ True Copy /

/ Venkataratnam /
Vice President Dist. Board

4/7544/6

pp
5-3

1896

Local Fund Department

From

The President

CHIEF SECRETARY'S
6 MAR 1896
GOVERNMENT OF MADRAS

District Board, Godavari

Report No. 1435/DB/95

Dated 3rd
Despatched 6th March 1896
Received

Subject,

Enclosures to this office.
Report No. 1435/DB/95
dt. 3rd March 1896.

Our C.O. 5085/96

1 P

GODAVARI DISTRICT.

Report No. 1435/DB/95

BOARD OFFICE 3-3-1896.

Dept 5

From V. A Brodie Esquire.
President

District Board Godavari,

To

The Chief Secretary to Government,
Local and Municipal Department,
Madras.

SIR,

As promised in para 20 of the Covering letter of the District Board's Budget for 1896-97, I have the honor to submit the following report on the proposed light railway from Samalkot to Yellavaram via Peddapur and Jaggampeta.

2. When the East Coast Railway was constructed, a serious error appears to have been made in aligning it, so as to pass through Samalkot instead of Peddapur, but the mistake having been committed, a change of alignment is not now possible on paying conditions, nor is it likely that a branch to Peddapur on the broad gauge

would pay any better. But I entertain no doubt whatever about the remunerative character of a light railway (which I now think preferable to a steam tramway) between Samalkot and Yeleswaram – the chief centre of trade in agency produce of the District, though itself situated in one of the richest, most highly cultivated and populous tracts of the District outside the Delta.

3. In the first place, the cost of construction will be low. Material can be cheaply conveyed to Samalkot (the starting point) from Cocanada by either rail or canal and the country to be traversed presents no natural difficulties. There are no hills to be avoided or tunnelled, no swamps to be crossed entailing high embankments and none but small streams to be bridges with the single exception of the Yelru river and to cross this it is proposed to utilize the existing yerravaram bridge on the Grand Trunk Road which the District

District Engineer certifies to be quite strong enough for the purpose. The cost of acquiring the land required for the line will also be small, for, though the District Engineer has found it advisable to depart from the original idea of utilizing the existing road, yet keeping as he proposes to the west of it, the line will pass almost entirely through dry lands ~~and~~ which, in this part of the Peddapur Taluk, do not command a high market value. Possibly, it may be remarked that via Jaggampeta is a round about way of going from Samalkot and Peddapur to Yeleswaram, but Jaggampeta is a populous and important village where 4 roads meet and it is necessary and advisable to pass by it in order to tap the agency traffic from Rottapalli which comes next to Yeleswaram as an agency trade centre, north of the Godavari. This course is also desirable in the interests of cheap construction, for, to proceed direct from Peddapur would

be to pass through the richly cultivated valley of the Yelesu, which the line as now proposed skirts and this would entail considerable expenditure on land acquisition and besides subject the line to the danger of inundation and damage from floods.

4. In the next place, traffic prospects are excellent. As stated in my original memorandum on the subject (of which I enclose a copy, though in some respects it is not altogether accurate as, when I drafted it originally I had been less than 2 months in the District) I was greatly struck during my last jamabandi tour in the Peddapur Taluk by the enormous number of carts passing along the road from Yelesuraram to Peddapur. At the weekly market held at Yelesuraram, it is estimated by competent judges that produce worth more than Rs 10,000 on an average is brought for sale from the interior agency tracts, including certain tracts lying in

lying in the Vizagapatam District. This consists principally of tamarind myrabolams, soapnuts, Nux vomica, honey, wax, and oranges, which are exported to Cocanada and other places in the District. In exchange for this produce the hillmen purchase oilseeds, grain, salt, cloth, gingelly oil, castor oil and other articles brought from the coast. There is also a large export of jaggery and other produce from the surrounding country and a considerable trade in timber, which would, I have no doubt, develop enormously, could it only be easily and cheaply (in comparison with its bulk and value) carried to the railway or canal at Tanukkol. Proceeding from Yelesuraram, at Yerraram the line connects with the Grand Trunk Road and would get considerable traffic by it from Prattipadu and the country to the west of it, whilst Jaggampeta where it again leaves the Grand Trunk Road

Road, as already stated, is a big village where considerable traffic comes in from the Kothapalli and Murari direc-tions. Again, Peddapur is not only a place with a large population of 13,658 but an important commercial centre from which an enormous quantity of jaggery and other produce of the very fertile yelam valley is exported to different parts of the District, chiefly to Cocanada for export to foreign ports. A statement showing approxi-mately the quantity of goods carried along the route of the proposed line for the three years 1892-93, 1893-94 and 1894-95 prepared by the Tahsildar of Peddapur, in consultation with the leading local merchants who are fully acquainted with the trade and traffic of the tract the line will serve, is herewith submitted. In 1889-90 two gumastahs were employed to register the cart traffic at Jaggampeta and Rattipudi for one year and an abstract prepared

prepared from the said registers is also appended to the above statement. That all this traffic will be diverted to the proposed railway which will afford cheaper and safer facilities of trans-port is beyond doubt and it should also attract a good deal which now goes to Pithapur. The cartowners now charge a hire of Rs0-0-2 per bag per mile, while the railway will probably charge little more than half. The opening of such a line is also certain to originate a large trade in firewood and building-stone between Yelamaram and Cocanada where both are in great demand.

5. There is also a large passenger traffic to be taken into account. It cannot be inconsiderable as the proposed line passes through important and populous villages (as per the list enclosed) and, besides, will of course serve a large population residing with-in a few miles of it throughout its

× will be submitted on receipt of the same from the District Board Engineer.

course on both sides. Possibly, it may be said that traffic on the East Coast Railway in this District has so far disappointed expectations, but this is simply because the railway runs alongside navigable canals almost throughout, whereas the proposed line is free from such competition.

6. There is, perhaps, I may also mention, no possible project of the kind in the District in regard to which there exists such complete unanimity of opinion as to its paying character among officials & non-officials alike. In his letter of the 8th august last (a copy of which is enclosed) the Chairman of the Chamber of Commerce Cocanada writes "The Chamber warmly support your project. The benefits which a steam tramway would confer on the District are immense. The country would be opened up and a great impetus given to trade with the hill tracts and undoubtedly a large and increasingly

increasingly paying traffic should reward the enterprise". The Chairman of the Vizianagram Chamber of Commerce - a gentleman possessing a thorough knowledge of the conditions of trade throughout the District - after consulting his Chamber not only endorses these views, but gives tangible proof of the genuineness of his belief by offering himself to take shares to the value of Rs 25,000. The Cashier of the local branch of the Madras Bank who is also a man of considerable knowledge and experience in such matters has also furnished me with a memorandum on the subject in which he states that about 150,000 bags of cane-jaggery and as many bags of gingelly, myrabolams and the various kinds of grain &c are being annually brought down to Samalkot and Cocanada by bandy from the tracts the railway is intended to serve, at a cost of 2 to 3 annas per bag according to distance and that the receipts calculated on the

existing traffic alone would amount to Rs 40,000 to Rs 50,00 per annum without mentioning the passenger traffic or apparently the traffic in the reverse direction.

7. I am glad to note also that the project has evoked great enthusiasm in the places which the proposed line is intended to serve and Copies of the proceedings of public meetings held in those places urging the necessity of taking the project in hand at an early date have been received by me. This is the more gratifying as it was wholly unexpected. Some of the principal landholders too through whose estates the line will pass are also, I understand, prepared to take payment for their lands, which it may be necessary to acquire, in shares.

8. The contrast in point of facilities of Communication and in the general condition of the people between the Deltaic and the Rampa agency tracts of the District is, I need hardly say very great. The Deltaic and Coast tracts possess numerous roads and Canals which have not only proved in the highest degree beneficial to the people, but very profitable to the State. Roads, Railways and Canals are, however, alike practically unknown to the people of the agency tracts and the chief markets are as yet directly inaccessible to them. Valuable produce is, in Consequence, in many localities suffered to go to waste for want of a market. By opening the proposed line a step will be taken towards removing the obstacles which at present impede, to a certain extent, commercial intercourse between the hill tracts and the plains and which diminish the value of the produce raised and so discourage agriculture in the former. Not only will such a line probably develop the trade of these regions in the Course of a few years to an extent which cannot now be gauged from want of data to go upon but the people of the

agency tracts who are as yet very backward will be brought into closer contact with a higher civilization. Becoming less rude, it is to be hoped they will become concurrently less inclined to break out in rebellion against the State with small excuse.

9. Another advantage and one more directly affecting the Government itself is that the proposed line will lead to the development of the Forests in the neighbourhood of Cyclesvaram (which are extensive) and so lead to an increase in the Forest Revenue. Light railways have been stated by the Government of the North-western Provinces and Oudh to be the most important adjunct to a well considered forest policy of development. It has therefore expressed its conviction that the policy of improving communications in the interests of the Forest Revenue is sound and that it would even pay to open out the forests by means of light railways of the smallest gauge and worked only in the dry season (vide page

page 554 of the Indian agriculturist dated 2-12-95): Moreover, in the event of any disturbance in the hill tracts the value of such a line as that contemplated cannot be overestimated. Its construction will therefore place Government in a more secure and advantageous position to promptly suppress any disturbances.

10. On a careful consideration of all these circumstances, the District Board unanimously came to the conclusion at a meeting held on the 10th August last that the construction of the proposed line would be advantageous from every point of view, sanctioned an expenditure of Rs 1,000 towards the cost of a preliminary survey and plan with estimate and called upon the District Engineer to prepare the same. This work has been in the main completed, but as the work was stopped by the resignation of Assistant Engineer Mr. F. H. Longhurst to whom the

work was entrusted, the plans are not quite ready. The detailed estimates and plans will of course on completion be submitted to Government through the proper channel and this I trust will be very shortly. It is however roughly estimated that the total cost will be Rs 6,76,000 or in round figures seven Lakhs. Which cannot, of course, be met from the ordinary revenues of the District Board, nor is it easy to raise the entire outlay by local private subscription. The people are "either too little advanced in intelligence to appreciate the end or not sufficiently practised in conjoint action to be capable of the means". There is no developed system of Cooperation amongst the natives of the District; but, were Government to give a helping hand, the people will, I hope, not be slow to move in the matter. I am the more hopeful of this, because, my original idea, as set forth in my memorandum, was to raise the

the necessary capital or part of it with the sanction of Government by means of debentures, being altogether hopeless of inducing the public to take any share in the risks judging by my experience elsewhere, but, I have since had reason to change this view, for first one and then another leading man came forward with the suggestion that shares would be preferred to debentures, a view which the District Board fully endorsed. The District Board has accordingly resolved, as already stated in the Budget report, to undertake the project (1) by raising a loan of 3 lakhs at 4½ per cent interest from Government (2) by raising 3 lakhs by means of public subscription - the shareholders having the right of nominating an equal number of directors with the District Board and the District Board President to be Chairman of the Board and (3) by contributing the remainder that may be required from

the District Funds.

11. The land cess of the District amounts to Rs 5,28,000 per annum so that 4.64 pie in the rupee of it would meet the interest on 3 lakhs at 4½ per cent but as the project promises to be fairly remunerative from the start, it is believed that the earnings, once the line is opened, will more than cover the above interest and that no charge at all will ever fall upon the District Funds. On the contrary, it is confidently expected by the Board that the project will more than pay its way and so prove ultimately a source of additional revenue.

The same reasons which justify the policy of state guarantees in the case of the construction of the main lines of railway - a policy which has been productive of signal service to the Country - apply with greater force in the case of encouraging local enterprises of the kind now proposed. The object in both

both cases is the same - the development of the material resources of the country - and I trust, therefore, that Government will be pleased to accord its assistance, especially as the Board does not apply for a grant in aid or even ask that Government, though likely to be largely benefited indirectly, should take a share in the risks, but limits its prayer to a loan of a portion of the capital required on terms by no means unremunerative, from a purely commercial point of view, to the State, having regard to the present price of Government paper. The Board, once the line is open and indeed for that matter before, can easily afford to pay off a portion of the loan every year in addition to the interest. These annual instalments, of course, Government must fix but I would suggest Rs 10,000 per annum, the Board being at liberty to pay off more, if able to do so. Neither Government nor the Board will lose anything by

this transaction. On the contrary, both, it may be confidently anticipated will be gainers in every way if the undertaking is properly conducted, not only financially but also indirectly by promoting the welfare and convenience of the inhabitants of an important and extensive tract of country.

12. The Board is confident that there will be no difficulty in raising 3 lakhs from the general public of which the more progressive and intelligent section certainly entertain no doubt about the success of the undertaking. Should it however fail to receive local support to this extent, the result must be attributed to ignorance on the part of local capitalists of the benefits of Co-operative action and distrust of the Western modes of investment, but I trust that, if only 2 lakhs are locally subscribed, Government will see its way to making its loan 4 lakhs instead of 3 on the security of the

the District Board revenues. 10 P

13. There is another aspect of this scheme to which also I attach the greatest importance viz: the moral effect which the undertaking is calculated to have, if (as all anticipate) successful, in stimulating a spirit of industrial enterprise in the people. A successful work planned and executed by local agency, carried out and maintained at the cost of funds locally raised, and managed and supervised by representatives of the people of the District, cannot fail to prove a valuable lesson to the people and suggest to them the advantage of emulation. If it should lead to the people of the District taking an interest in joint-stock undertakings of the kind intended for the development and benefit of the District, it will have served a most useful end, for, though this appears to me the scheme best calculated to attain success from the first, there are

many others of the same kind which would, I believe, also pay handsomely, such as a similar line from Cocanada to Kotipalli through Drakshavarama in the Ramachandrapur Taluk. The Chairman of the Chamber of Commerce has written as follows on this view of the question in his letter dated 26-9-95 (of which a copy is enclosed):-

"The Chamber will be very pleased indeed if the District Board's proposal be acted upon and half of the Capital of the Tramway Company be issued to the public. It will, undoubtedly, be a great advantage to the District if the inhabitants can be brought to understand the value of Co-operation, for, there are many openings for other joint-stock concerns which might be successfully launched were it not for the want of initiative of the people". This is only too true.

14. Tanjore has already taken the lead in the matter of constructing the Mayavaram-Mutthupet railway with the aid of a contribution from Provincial Funds and I cannot conceive why a similar but much less ambitious project should not prove an equal success in this District. That line is a feeder to the South Indian railway whilst the one now proposed will be a valuable feeder to the East Coast Railway which too is a State undertaking, but I doubt if Government is so directly interested and likely to benefit by the Mayavaram-Mutthupet line as by the one proposed here which will be not only of strategical value to it in controlling the agency tracks but also benefit it directly to a very large extent in reference to its Forest revenues.

15. I have, therefore, the honor to request that Government will be pleased to accord its sanction to the project in question and to the loan applied for by the Board. An application in

11 P

in respect of the 2 lakhs taken credit for, from Government for the year 1896-97 is herewith submitted in the form prescribed by the Rules framed under section 5 of the Local authorities Loans act no 11 of 1879. A rough sketch of the proposed line of railway is also enclosed for the information of Government.

I have the honor to be
Sir
Your most obedient servant
(Sd) V. a Brodie
President

V Venkatachalam
Vice President Dist Bd
Godavari

P.S.
1.3.

* List of Enclosures.

1 Copy of a letter dated 8th August 95 from the Chairman of the Chamber of Commerce Cocanada

* Sent Separately by Book Post

2. Do letter dated 24th September 95 from Do Do.

3 Do letter no 1 dated 3rd February 96 from the Chairman of the Native Chamber of Commerce, Cocanada.

4. Do District Board President's memo dated 21-6-95.

5 Application for a loan of Rs 3,00,000.

6 Copy of a statement showing the statistics of Traffic.

7. A rough sketch of the proposed Tramways.

V Venkatachalam
Vice President Dist Bd
Godavari

Godavari Distt Board's Office, dated 5.3.96

1896

Local Fund. Department

From CURRENT No. 11042

The President

District Board. Lodwar

Dis No. 726 /96

Dated 9
Despatched 11 } April 1896
Received

Subject. 15 APR. 96

Submitting in reference to Govern-ment Memorandum No. 378 dated 23.3.96. Certain records in Connection with the proposed Light Railway.

H.R. 24/8

Dis. 2 1085/96

ENC. 1 TO R.F.O. No. 3639 OF 1896.
LETTER NO. 6552 19.8.96
FROM EEK

23/4.

137

Extract from the Proceedings of the District Board Godavari passed at its meeting held at ~~Rajahmundry.~~ Cocanada on 10th August 1895.

* * *

Present.

U. A. Brodie Esquire, President Distt Board.

Members.

1. C. W. Elphinstone Esquire, Actg: Dist Collector, Rajahmundry
2. L. C. Moore Esquire, Actg: Head Asstt Collector, Ellore.
3. MRB C. L. Venkatachelam Pantulu Garu, General Duty Dy Collector, Narsapur.
4. Rao Bahadur K. Rustum Diwji Garu, Head Opo Dy Collector
5. K. Narasimham Pantulu Garu, Tahsildar of Ramachendrapur
6. U. Venkatrow Garu, Actg: Tahsildar of Narsapur
7. P. Venkatappadu Pantulu Garu, Actg: Tahsildar of Narsapur
8. D. Narasimham Naidu Garu, Actg: Tahsildar of Rajahmundry
9. Syed Yazzuddin Saheb, Actg: Tahsildar of Amalapur
10. MRB G. Venkataratnam Garu,
11. W. J. Nighton Esquire
12. MRB Sri Rajah Vatchavaya Roya Jagapatiraju Bahadur Garu
13. " Sri Rajah K. Ramachendrarayu Garu
14. " N. Reddi Naidu Garu
15. " V. Ramayya Garu
16. " N. Padmanabham Garu
17. " D. Kesavaramaswamy Garu
18. " P. Venkatachelapati Garu
19. " Ch Venkatratnam Garu

URR. P. Venkayya Jaru

B. Venkatabathuru Jaru

Moulavi Mahomed Vahiduddin Sahib

Mahomed Abdur Rahimani Sahib

Munshi D. Mahomed Yacoob Sahib

Read this office No. 1435 DB / 29.6.95. circulating for the members of the Board President's Memo regarding the establishment of a tramway or a light railway between Samarlakota and Yeleswaram via Peddapur and Jaggampeta.

The Board sanctions a preliminary Survey and estimate and allots Rs 1000 for the same from the reserve.

As far as possible the existing roadway should be utilized. Where however important villages which it is desirable to serve lie off the existing road it should be aligned to as to serve them better.

The report with plan and estimate should be submitted by the 12th November next.

No. 3 / 5885/96 / 11.12.96

/Sd/ V. A. Brodie
President

/True Extract/ Illegible
Asst. Secy.

16

Items Particulars	Actuals of 1892-93			Actuals of 1893-94			Actuals of 1894-95		
	District	Taluk	Total	District	Taluk	Total	District	Taluk	Total
Balance	199607	276891	476498	167958	334974	472932	177341	277788	455129 ✓
1 Rates and Taxes									
(a) Fees on land	251220	251219	502439 ✓	250263	250263	500526 ✓	264188	264189	528377 ✓
(b) Tolls under Act V of 84									
Contributions from municipalities	2772		2772 ✓	2		2 ✓			
(c) House tax		14441	14441 ✓		18475	18475 ✓		25287	25287 ✓
2 Education									
(a) School fees		17990	17990 ✓		23267	23267 ✓		27941	27941 ✓
(b) Contributions									
(1) from municipalities									
Fines on Accounts of education and Inspection									
(2) from Other District funds									
(3) Private individuals									
(c) Sale proceeds of books	42		42 ✓	28		28 ✓	265		265 ✓
(d) Income from endowments									
(e) Miscellaneous	11	53	64 ✓	56	67	123 ✓		103	103 ✓
3 Medical	3	80	83 ✓				109	111	220 ✓
(a) Hospitals receipts									
(b) Sale of medicines									
(c) Contributions									
(1) from municipalities									
(2) Other District funds									
(3) Private individuals									
(d) Income from endowments									
(e) Miscellaneous	3	80	83 ✓	2	502	504 ✓			
4 Interest									
(a) On Government securities		80	80 ✓		40	40 ✓		90	90 ✓
(b) On Arrears of revenue	5	4	9 ✓	6	6	12 ✓	7	6	13 ✓
5 Miscellaneous									
(a) Contributions for purposes other than education, medical or works									
(1) from municipalities									
(2) " Other District funds									
(3) " Private individuals		11605	11605 ✓		1036	1036 ✓		3024	3024 ✓
(b) Choultry rents		15612	15612 ✓		15146	15146 ✓		18746	18746 ✓
(c) Market rents		14431	14431 ✓		15817	15817 ✓		17299	17299 ✓
(d) Bungalow fees		193	193 ✓		113	113 ✓		126	126 ✓
Taxes on Petta Land		1075	1075 ✓						
(e) Fees and fines		1663	1663 ✓		2873	2873 ✓	15	3450	3465 ✓
(f) Ferry rents	33571		33571 ✓	33450		33450 ✓	32855		32855 ✓

(g) Grass rents											
(h) Fishing rents		498	498 ✓		343	343 ✓		93	93 ✓		
(i) Rents and produce of lands		6925	6925 ✓		893	893 ✓	250	909	1159 ✓		
(j) Avenues	2988	3406	6393 ✓	862	10570	11432 ✓	991	5953	6944 ✓		
(k) Sale of stores											
(l) Sundry receipts	37	481	518 ✓	1	1940	1941 ✓	6	393	399 ✓		
Contributions for pensions and gratuities											
6 Public works											
(a) Sale of buildings											
(b) " tools and plant	107		107 ✓	356		396 ✓	13		13 ✓		
(c) " old materials	2		2 ✓	27		27 ✓	63		63 ✓		
(d) Contributions											
(1) From municipalities											
Cocanada							2000		2000 ✓		
(2) From other District funds											
(3) " private individuals		800	800 ✓		1912	1912 ✓		97	97 ✓		
(e) Refunds of expenditure	38		438 ✓	1321		1321 ✓	7296		7256 ✓		
6 Miscellaneous	820		820 ✓	565		565 ✓	1043		1043 ✓		
Local Public works in Charge of Public works officers	153		153 ✓	141		141 ✓					
7 Contributions from Provincial funds											
(a) Education	1371	9366	10737 ✓	4211	9000	13211 ✓		4871	4871 ✓		
Building grants											
Furniture & library grants											
(b) General purposes											
Medical								1134	1134 ✓		
Vaccination											
(c) Public works											
(d) Chaultries											
(e) Refunds	567		567 ✓								
8 Contributions from special funds											
(a) Pounds fund											
(b) Canals ferry funds											
9 Allotments from the District funds		60736 ✓						17000 ✓			
					43500 ✓						

e Miscellaneous debt Accounts	24697	4711	29308	27825	6874	34699	30199	4049	34248
Total Receipts.	518311	692259	1149834 487	114	707111	1115225	516641	672465	1172106
Grant I Public works									
(a) New works									
(1) Communications	64725	68256	132981	63600	67425	131025	54584	63153	117737
Ferry works	594		594	1055		1055			
Public works Department	2950	298	3248	1291	150	1441			
(2) Civil buildings	949	10523	11472	6780	8297	15077	4004	4098	5702
Ferry works				313		313			
(3) Miscellaneous Public improvements		14387	14387		15429	15429	2231	11800	14031
									1043
Public works department	1936	10	1946						
(b) Repairs									
(1) Communications	85877	40953	126830	95924	56658	150582	108511	55197	163708
Ferry works	2548		2548	786		786			
Roy public works department	4927		4927	2636		2636			
(2) Civil buildings	304	3509	3813	35	6509	6544		4650	4650
Ferry works									
(3) Miscellaneous Public improvements	4519	22005	26524	3007	25006	28013	2736	16774	19510
Ferry works.									
(c) Establishment									
(1) Public works department supervision	1870	~~268~~	1878	362		562	4445		4452
Other establishment Charges by the Public works department	1936	336	2272	1574	34	1608	777		777
(2) Local Funds									
Engineering establishment.									

101

Salaries	17986	12795	30781 ✓	16474	15874	01548 } 26481	16268	44781 ✓	
Batta	4180	3382	7562 ✓	3432	281	6668 }			
						818		818 ✓	
(3) Tolls and ferries									
Establishment for the Rajahmundry and Narsapur steam ferries	6327		6327 ✓	3092		3092 ✓			
Establishments for the ferry between Atchutapuram and Kovvur									
(b) Tools and plant	3644	2403	6047 ✓	1818	1625	3443 ✓	10086	898	10984 ✓
Pay Public works department	10552	4867	15419 ✓	3672	2	3674 ✓			
(c) Contingencies	3629	2743	6372 ✓						
A.P. Engineering establishment				2214	2322	4536 ✓	3494	2210	5704 ✓
Establishment of the Rajahmundry and Narsapur steam ferries									
(f) Contributions.									
(1) Provincial funds	8750		8750 ✓	3820		3820 ✓			
(2) Other District Boards									
(3) Municipalities ex-Rajahmundry		2000	2000 ✓		968	968 ✓			
(4) Private individuals									
(9) Miscellaneous									
Profit and loss				795		795 ✓	1256	50	1306 ✓
Refunds of receipts				1242		1242 ✓			
Total Grant I	228001	188675	416676 ✓	213622	200730	414352 ✓	212424	174098	886522 ✓
Grant II Education									
(a) Inspection									
Salaries	4867		4867 ✓	3825		3825 ✓	6207		6207 ✓
Batta				889		889 ✓			
Contingencies				570		570 ✓			
(b) Training & Normal Schools.									
(1) Salaries of masters	405		405 ✓	859		859 ✓	429		429 ✓

(2) Stipends of students	356		356 ✓	1163		1163 ✓	1035		1035 ✓	
(3) Clerks and servants				2		2 ✓				
(4) Miscellaneous	387		387 ✓	132		132 ✓	106		106 ✓	
(C) Secondary Schools										
(I) Salary system.										
(1) Salaries of masters		16804	16804 ✓		17666	17666 ✓		19419	19419 ✓	
(2) Clerks and servants		728	728 ✓		877	877 ✓		974	974 ✓	
(3) Miscellaneous		1729	1729 ✓		2413	2413 ✓		2588	2588 ✓	
(II) Salary result system										
Salaries of masters } Fixed										
clerks and servants } results										
Miscellaneous										
(D) Primary Schools.										
(I) Salary System.										
(1) Salaries of masters										
(2) Servants										
(3) Miscellaneous.										
(II) Salary result system										
Salaries of } Fixed school		45816	45815 ✓		53842	53842 ✓		63814	63814 ✓	
masters } fees results		8755	8755 ✓		9791	9791 ✓		9844	9844 ✓	
Servants		2190	2190 ✓		2491	2491 ✓		2936	2936 ✓	
Miscellaneous		6462	6462 ✓		10401	10401 ✓		10033	10033 ✓	
(E) Grants-in-aid										
(1) Salary grants		19	19 ✓					77	77 ✓	
(2) Results grants		4688	4688 ✓		10182	10182 ✓		7895	7895 ✓	
(3) Buildings grants								100	100 ✓	
(4) Furniture										
(5) Miscellaneous										
(F) Contributions to										
(1) Provincial service										
(2) Other District Boards										
(3) Municipalities										
(4) Private individuals										
(G) Miscellaneous										
(1) Purchase of books			500			500 ✓	14	-	14 ✓	
(2) Commissions on sale of books										
(3) Miscellaneous/eg.										
Stipends to Agricultural students								5	5 ✓	

Circle gymnastic instructors									
Primary School readers									
Refunds.					3	3			
Total Grant II	6015	87190	93205	7940	107666	115606	7791	117685	125476
Grant III Medical Services Vaccination Sanitation and Public and charitable Institutions									
Hospitals & dispensaries									
(1) Superintendents									
(2) Medical subordinates		10359	10359		11621	11621		13984	13984
(3) Clerks and servants		3656	3656		4083	4083	112	4659	4771
(4) Diet of patients		338	338		532	532		642	642
Clothing and bedding		147	147						
(5) Medicines and Surgical instruments	410	4241	4651		3393	8393	695	9820	10575
(6) Supplies		575	575		728	728		910	910
(7) Midwives and results to midwives		359	359		467	467	175	648	623
(8) Midwifery pupils	113		113	148		148			
(9) Medical pupils	131		131	315		315	329		329
(10) Medical practitioners				59		59	921		921
(11) District Surgeon's Establishment Salaries Batta.	747		747	943		943	1105		1105
Contingencies									
(12) Pay of Compounders to be drawn at Head Quarters.	80		80						
(13) Cholera Charges		107	107		68	68		94	94
(14) Contingencies		1763	1763						
(15) Miscellaneous					2041	2041	371	2682	3053
Vaccination (including Annual Vaccination)									
(1) Fixed Charges.	7567		7567	7786		7786	8262		8262

(2) Contingencies	4626		4626 ✓	4681		4681 ✓	4725		4725 ✓	
(c) Sanitation										
(1) Improvement of water supply		9781	9781 ✓		9378	9378 ✓		8786	8786 ✓	
(2) Do of village site		6873	6873 ✓		11988	11988 ✓		884	884 ✓	
(3) Scavenging establishment		15041	15041 ✓		17733	17733 ✓		21567	21567 ✓	
(4) Arrangements at fairs and festivals		1049	1049 ✓		1145	1145 ✓		749	749 ✓	
(5) Other sanitary outlay		1116	1116 ✓		4166	4166 ✓		4277	4277 ✓	
(d) Markets		196	196 ✓		297	297 ✓		〃	〃 ✓	
(e) Choultries										
(1) Establishment		3495	3495 ✓		3465	3465 ✓		3973	3973 ✓	
(2) Feeding Charges		11564	11564 ✓		8394	8394 ✓		8227	8227 ✓	
(3) Contingencies		1932	1932 ✓		2461	2461 ✓		2509	2509 ✓	
(f) Public bungalows		558	558 ✓		589	589 ✓		557	557 ✓	
(g) Contributions to										
(1) Provincial services										
(i) Medical College	1188		1188 ✓	1168		1168 ✓	3412		3412 ✓	
(ii) Sanitary inspection	2138		2138 ✓	2195		2195 ✓	2195		2162 ✓	
(iii) Medical reserve Staff	481		481 ✓	406		406 ✓	352		352 ✓	

II Cuttack establishment	52		52 ✓	32		32 ✓				
Public works department on account of the moiety of the cost of the Dowlaishwaram dispensary		661	661 ✓							
Dispensary -										
(2) Other District funds										
Private institutions		350	350 ✓							
(3) Municipalities										
Cocanada		1600	1600 ✓		1600	1600 ✓				
Ellore		2139	2139 ✓		2667	2667 ✓		6535	6535 ✓	
Rajahmundry		3680	3680 ✓		3160	3160 ✓				
(4) Private individuals										
Prince of Wales Choultry					600	600 ✓				
(5) Miscellaneous										
(1) Miscellaneous endowed institutions								600	600 ✓	
(a) Taylorpeta fund		1050	1050 ✓							

(4) Dwadasi Fund									
(2) Rewards for Killing dogs									
(3) Miscellaneous Lighting Charges		3145	3145 ✓		6020	6020 ✓		2	2 ✓
Miscellaneous other Miscellaneous		6273	6273 ✓		4713	4713 ✓		12469	12469 ✓
Refunds		42	42 ✓		58	58 ✓		11	11 ✓
Total Grant III	17331	91888	109219 ✓	175-31	101345	118876 ✓	22621	104362	126983 ✓
Grant IV miscellaneous.									
(a) Controlling establishment at the Presidency	5377		5377 ✓	4037		4037 ✓	3440		3440 ✓
Printing work done by Government Press	679		679 ✓	319	345	664 ✓	332	170	502 ✓
(b) Establishment in the Collectors Office									
(1) Local Fund Account Branch.	1258		1258 ✓	1342		1342 ✓			
(2) Audit Branch	1449		1449 ✓	1626		1625 ✓	3049		3049 ✓
(c) Local Boards office establishment	2132	5775	7907 ✓	2355	6902	9257 ✓	2246	8566	10812 ✓
Establishment of Local Fund Inspectors									
Do do Clerk in taluq Offices under Offices establishment									
Temporary Survey establishment									
(d) Contingencies									
(1) Stationery	101	739	840 ✓	637	595	1232 ✓	638	880	1518 ✓
(2) Postal Charges	506	903	1409 ✓	663	1085	1718 ✓	679	1414	2093 ✓
(3) Printing Charges	468	1948	2416 ✓	702	1682	2384 ✓	619	1203	1822 ✓
(4) Travelling Allowances to non-Official members	1703	1873	3576 ✓	1628	1671	3299 ✓	1604	310	2914 ✓
(5) Do do Offices establishment	165	870	1025 ✓	159	574	733 ✓	293	941	1234 ✓
Miscellaneous	264	1430	1694 ✓	236	1876	2112 ✓	489	1922	2411 ✓
Law Charges	276	1126	1398 ✓	27	963	990 ✓			
Purchase of reference books, periodicals &c.									

12

(e) Pension Contributions towards Service Local Fund	234		234	303		303	466		466
Do do Local Fund employees	429		429	206	141	347			
(f) Refunds									
(1) Land cess	54	54	108	191	191	382			
(2) House tax		36	36		124	124	582	860	1442
(3) Other Collections		23	23						
(g) Loans									
(1) Principal									
(2) Interest									
(h) Miscellaneous							8	1057	1067
Total Grant II	15083	14775	29858	14430	16119	30549	14445	18325	32770
Total to all Grants	266430	382528	648958	253523	425860	679383	257281	414470	671751
Reserve									
Allotments from District Taluq funds	6073			43000			17000		
Miscellaneous debt Account	23187	4757	27944	13250	3463	16713	27408	3207	30615
Grand total expenditure	350353	387285	676902	309773	429323	696096	301689	417677	702366
Balance	167958	304974	472932	177341	277188	455129	214952	264788	469740
Deduct.									
(1) Balance under union funds		10111	10111		15363	15363		20971	20971
(2) Balance under endowment funds		73596	73596		61501	61501		78777	78777
(3) Balance under Canal and ferry fund	16382		16382	96256		96256	53810		83810.
Net balance available for general purposes.	61576	22267	282843	81045	200924	282009	131142	155040	286182.

Godavari Distt Board's office 8/9-4 76 9 p.m.

Executive Engineer

For President Distt Board

Com 7814.

the Proceedings of the District Board Godavari passed

at ~~Cocanada~~ Rajahmundry. on 10th December 1895;

37 S. R.

* * *

Present

D. Brodie Esquire, President, Distt Board.

Members

C. D. Meyer Esquire, Sub Collector, Rajahmundry

G. C. Moore Esquire, Ag: Asst Collector, Ellore

Surgeon Major J. C. C. Marsden, Distt Medical and Sanitary officer

Rao Bahadur K. Rustum Jiwaji Garu, Head Quarters Dy Collector, Cocanada

K. Narasimham Pantulu Garu, Tahsildar of Ramachendrapuram

V. Venkatrow Garu, Ag: Tahsildar of Narsapur

D. Narasimham Naidu Garu, Tahsildar of Rajahmundry

P. Krishnama Chariar Avergal, Asst Engineer Central Division

G. Venkataratnam Garu

M. V. L. Narasimhacharlu Garu

D. Seshagirirow Pantulu Garu

K. Varaha Narasimharow Naidu Garu

N. Reddi Naidu Garu

N. Kamaraju Garu

Ch. Seetaramayya Garu

The Hon'ble N. Subbarow Pantulu Garu

B. Venkatow Garu

N. Ramayya Garu

K. Seshamrajyu Garu

Extract from the Proceedings of the District Board Godavari passed
at its meeting held at ~~Cocanada~~ Rajahmundry on 10th December 1895.

37 s.

Present

U. A. Brodie Esquire, President, Distt Board.

Members

1. W. D. Meyer Esquire, Sub Collector. Rajahmundry
2. L. G. Moore Esquire, Ag: Hd Asstt Collector. Ellore
3. Surgeon Major J. C. Marsden, Distt Medical and Sanitary officer.
4. M.R.R. Row Bahadur K. Rustum Iyengar Garu, Head Quarters Dy Collector, Cocanada
5. " K. Narasimham Pantulu Garu. Tahsildar of Ramachendrapuram
6. " U. Venkatrow Garu. Ag: Tahsildar of Narsapur
7. " D. Narasimham Naidu Garu. Tahsildar of Rajahmundry
8. " P. Krishnama Chariar Avergal. Asstt Engineer Central Division
9. " G. Venkataratnam Garu
10. " M. V. L. Narasimhacharlu Garu
11. " D. Seshagiriow Pantulu Garu
12. " K. Varahal Narasimharow Naidu Garu
13. " A. Reddi Naidu Garu
14. " A. Kamaraju Garu
15. " Ch. Seetaramayya Garu
16. " The Hon'ble A. Subbarow Pantulu Garu
17. " B. Venkatow Garu
18. " A. Ramayya Garu
19. " K. Seshamrajuy Garu

20 " HRH D. Rama Jagannadharaju Sahu

21 " Sri Rajah Vatchavaya Rosa Jagapatiraju Bahadur Garu

22 " P. Venkayya Garu

23 " D. Venkataratnam Garu

24 " B. Venkataratnam Garu

25 Mahomed Abdur Rahimbux Sahib.

1. Read draft revised Estimate for 1895-96 and the Budget Estimate for 1896-97 of the District Board, Godavari, as revised with reference to the recommendations of the Sub Committee appointed for the purpose.

Passed.

2. Read draft Consolidated Revised Estimate for 1895-96 and the Budget Estimate for 1896-97 as revised with reference to the recommendations of the said Sub Committee

---

Passed as amended by the Sub Committee

The following are the new proposals provided for in the District Board's Budget for 1896-97 as per recommendations of the Sub Committee:-

* * * * *

6. To make a provision for the proposed light railway from Cocanada to Chelluvaram via Peddapur

---

Sanctioned.

2/11 Nov 96

P.S.E.C

5085/96

Sd/- U. A Brodie
President

True Extract

Vice President Distt Board

1896

Local Fund Department

From

The President

District Board. Godavari

Dis No. 726/DB/96.

Dated 9
Despatched 13
Received April 1896

Subject,

Submitting
Enclosure to this office
Dis: No. 726/DB dated 9.4.96.

In Che 11042/96.

P W S.6
5085/96

GODAVARI DISTRICT.

Dis: No. 726/DB/96

BOARD OFFICE 9th April 1896.

Local & Municipal Dept.
CURRENT No. 1104 2

FROM

U. A. Brodie Esquire
President

District Board, Godavari

To

The Chief Secretary to Government,
Local and Municipal Department,
Madras.

SIR

With reference to your memorandum No. 378 dated 23.3.96, I have the honour to submit herewith

(1) Copies of the District Board's Resolution dated 10.8.95 as also the subsequent ones regarding the proposed Light Railway,

Sent Separately (2) A detailed account of the Revenue and expenditure of the District Board for the last three years,

and (3) A list of the villages on or near the line surveyed for the Light Railway.

I

I have the honour to be,

Sir,

Your Mot obedient Servant

/Sd/ V. A. Brodie

President

Uncatarahaw

Vice Preaident Dratt. Board

List of Villages through which the Light Railway passes.

1. Timmapuram	25. Tallur
2. Annaram Jaddangky	26. Rasampeta
3. Ramaniah peta	27. Bherrampalem
4. Velaiswaram	28. Mallapilly
5. Luigamparty	29. Katravulapally
6. Perarau	30. Jayakampally
7. Siripuram	31. Surampalem
8. Prattipaud	32. Jaggama Timmapuram
9. Tirumali	33. Kattamuru
10. Velanka	34. Gudivada
11. Kistampudy	35. Peddapur
12. Geddanapally	36. Rasampeta
13. Yerrarau	37. Vadlamuru
14. Somaram	38. Gorrita
15. Krishnavaram	39. Damarlakota
16. Burugapudy	40. Bhimavaram
17. Tandrada	
18. Gonada	
19. Ramavaram	
20. Marripaka	
21. Gorripalem	
22. Jaggampeta	
23. Mallisala	
24. Machapudy	

/Sd/ P. H. Brown M.I.C.E

Dratt Board Engineer

/ True Copy /

Uncatarahaw

Vice President Dratt Board

Local & Municipal Dept.
CURRENT No. 1896/ 1117 2

Local Fund Department

From

The President

District Board. Salaam

Dis ... 728 / 96 Sgle.

Dated 13th
Despatched 13th } April 1896.
Received

Encls. 2. 17 APR. 96

Subject,

Submitting a list of villages with population on or near the line surveyed for the Light Railway & requesting that it may be substituted for the third enclosure to this office Dy No. 728 dd 9-3-96.

P. W. CURRENT No. 5085

SERIAL No. 1

TO BE RETURNED WITH REPLY

Recd 15th April 1896

Recd: 4.6.96.

Cur. Nos. 734, 1104 & 1117 2

44P

No. 606

Referred to the Public Works Department (Railway Branch) for favour of remarks.

2. A copy of a note by the Honble Mr. Bliss accompanies

Dy 23/5/96.

W. D. Phillips
Ag. asst. Secretary

Fort Saint George,
29th May 1896.

D A/A

To

The Public Works Department
Railway Branch
with copy of a note by the
Honorable Mr. Bliss C.I.E.

1
11 Jun 96

Encls
5085/96

(Enclosure to Govt Board)

List of villages with population on or near the line surveyed for the Light Railway

15

Name of Village	Number of population	Name of village	Number of population
1. Timmapuram	637	24. Machapudy	1311
2. Ammaram Jaddangy	508	25. Jallur	1445
3. Ramanatpeta	283	26. Rajampeta	908
4. Velaiswaram	4945	27. Bobbrampalem	426.
5. Lingampatty	2888	28. Mallapilly	1597
6. Perbaram	703	29. Katavulapally	2994
7. Siripuram	1421	30. Nayakampally	484
8. Prattipaud	2093	31. Surampalem	451
9. Tirumali	862	32. Jaggamma Timmapuram	1003
10. Velanka	1315	33. Katta puru	4238
11. Kirlampudy	3934	34. Gudivada	889
12. Geddanapally	1582	35. Peddapuri	13658
13. Yerraram	1363	36. Rajampeta	1777
14. Somaram	840	37. Vadlamuru	1517
15. Krishnavaram	867	38. Gonuta	1449
16. Burugapudy	2628	39. Samarlakota	6887
17. Jamdrada	2870	40. Bhimavaram	5051
18. Gonada	1581		
19. Ramavaram	649		
20. Marripatra	377		
21. Gorripalem	375		
22. Jaggampeta	3,802		
28. Mallisala	1,249		

Vencatacharam

GVD
13/4.

Vice President Distt Board.

13/4

For President, Distt Bd

Dis. No. 728/DB/96

GODAVARI DISTRICT
CURRENT
BOARD OFFICE 13. 4. 1896.

Dept 13

14P

FROM

U. A. Brodie Esquire
President

District Board. Godavari

To

The Chief Secretary to Government,
Local and Municipal Department,
Madras.

SIR,

I have the honour to submit herewith a List of Villages with population on or near the line surveyed for the Light Railway and request that it may be substituted for the third enclosure to this office Dis. No. 726/DB, dated 9.3.96 as the population has not been noted against the villages in the list already submitted.

I have the honour to be,
Sir,
Your most obedient Servant
[illegible]
For President, District Board

13/4

95/5805
1.5.96

1177 7/96

NOTE BY THE

HONOURABLE Mr. BLISS, C.I.E.

The scheme is at present in far too "sketchy" a state for any orders to be passed on it. They don't even give us the gauge of the proposed Railway. Still, we may as well hear what the Railway Branch of the Public Works Department thinks about it. An obvious defect is that the terminus at Samalkotta would involve a second break of bulk in a very short distance. I should say that, if the scheme is to succeed, a third rail should be laid down from Samalkotta to Cocanada and the light Railway trains run over it, or else that the light railway should be on the broad gauge, however light the rails and engines may be made for economy's sake.

We cannot of course give a loan in 1896-97 as we have not provided for it in our budget.

(Initialled) H. W. B.

18/5/96.

(True Extract)

Under Secretary, P.W.D.,
for Chief Secretary.

P. W. Current No. 5085

SERIAL
No. 2

№ 1737
6.6.96

Referred to the
Manager, East Coast Railway
for favour of remarks.

...cipal ...

...T 1896 1646

Local Fund Department

F

The President

District Board Godavari

Ref: on Con: No. 800/OB 1896

Dated 1st
Despatched 2nd June 1896.
Received 5/JUN/96

En. 42

Subject.

Forwarding plans, sections, bridge drawings etc for the proposed light railway from Samarlacota to Polavaram & requesting to forward them to the Secretary to Government Railway Department for sanction.

(with Endorsement)

OLS 263

P. W. CURRENT No. 5748

SERIAL No. 4

TO BE RETURNED WITH REPLY.

46P

CS

Encls: 9

No. 722 Dated: 25-6-96

Referred in continuation of Endorsement No. 606, dated 29th May 1896, to the Public Works (Railway) Department for favour of remarks.

18/6/96

W. W. Phillips
Ag. Assistant Secretary

Fort St. George
26th June 1896

Con 25/6

To The Public works (Railway) Deptt.
with 42 enclosures.

+ Plans not reproduced

GODAVARI DISTRICT.

Ref. on Cir. No. 800/B3/96

BOARD OFFICE / 2nd June 1896.

Dept. 2nd June 1896.

FROM

J. A. Brodie Esquire
President
District Board Godavari

TO

The Chief Secretary to Government,
Local and Municipal Department,
Madras.

SIR,

I have the honour to forward herewith* plans, sections, bridge drawings and designs for Station buildings together with the Engineer's report on the proposed light railway from Samarlakota to Yelaswaram via Peddapur and Jaggampeta and to request you will be good enough to forward them to the Secretary to Government Railway Department for Sanction.

* Sent Separately

The packet Contains

1. 5. Railway plans plotted in 5 miles length

2. 5 Sections plotted in 5 miles length.

3. 21 Bridge drawings

4. 2 Station building designs

6. 8 Abstact estimates prepared in accordance with Government Orders on railway Construction

6. 1 Engineer's report

I have the honour to be,

Sir,

Your Most Obedient Servant

(Sd) V. A. Brodie

President

(Sd) Duncan Graham

Vice President Distl Boards.

Pr. 1/6.

48 S P

NOTE ON PROPOSED BRANCH LINE FROM SAMALKOTE.

No information has been given as to the guage proposed. weight and description of rail. sleepers &c.. all items of importance that require to be settled before any proper Estimate of cost can be arrived at.

2. Presumably the proposal is to construct a light tram line. on a narrow guage to be worked by Locomotives quite independent of the existing Railway. If this is the case. no provision has been made for Engines. Rolling Stock. Workshops. Staff Quarters. Station Machinery &c.. &c.

3. The terminus of the proposed Branch has I see been located on the Canal Embankment so that it will not be. and is not intended to be a feeder to the East Coast Railway. A certain amount of traffic from this District now finds its way to the Railway by carts. but the greater part of it is delivered into boats and conveyed to Cocanada by the Canal. The loss of the present traffic to the East Coast Railway would be inconsiderable as it is carried only a short distance at an unremunerative rate.

4. Whether the greater part of the traffic from the surrounding District could be secured for conveyance over the branch line depends a good deal on the cost of carriage by rail as compared to transit by carts.

5. The rate at which the branch could afford to carry at again depends on the capital outlay and the quantity of goods to be carried.

6. Before offering an opinion on the probable financial success of the scheme it will be necessary to have a more complete estimate of the capital outlay required to construct the line. Also. if it is intended to work the Branch by independent Agency. a further estimate of the probable working expenses should be prepared.

7. I am inclined to think a short Branch of this nature is more likely to give a better return on the capital. if it is constructed on the Broad guage and handed over to the main line Agency to work on the favourable terms offered by Government.

8.

8. As a narrow guage it could hardly pay if worked by a separate Agency but if it is intended to raise a large capital for the purpose of extending the system to all parts of the District similar to the Railways in Guzerat. then I think it will be worthy of every support.

Manager E.C.Railway.

18/8

50 S.P

Note by Traffic Superintendent.

Light Railway from Samalkot to Yelaswaram via Peddapur and Juggampeta.

Mr. Bliss' note sounds the key note of the whole scheme. If this tramway is to terminate at Samalkot on a different gauge to the East Coast Railway it becomes, according to the District Board's showing in their No. 1435 D.B. of 3.3.96 , a distinct competitor with the East Coast Railway , and besides this, by causing a break of bulk, it to my thinking , absolutely ruins its prospects. Taking this view that this light Railway is to commence at Yelaswaram and terminate at Samalkot a distance of 20 miles and have its terminus, as the plan shows , on the canal bank; its projectors are sure that it will be a financial success, simply on the profits obtained by the carriage of the traffic between Yelaswaram and intermediate stations and Samalkot, the same being there delivered either on to the East Coast Railway , or on to the canal for carriage to destination. The bulk of the traffic , or at any rate , so large a quantity of it, that the remainder may be neglected, moves between Yelaswaram and intermediate stations, and Cocanada, and the District Board in their letter state that they will make sufficient profits in the carriage of this traffic to pay a satisfactory dividend on a capital of seven lakhs and will be able year after year to pay off certain of their debenture or shareholders by lot, and these prospects are based entirely on the supposition (to quote their own words) that they will get all this traffic at a little more than half the cart rate, that is, taking their figures, that the cart carries traffic for two pies a bag a mile, which is equal to one pie a maund a mile, they expect to get the traffic over this tramway at a little more than ½ pie a maund a mile . A casual look into any Railway's goods tariff , or an inquiry from any Traffic Manager will tend to show, that Railways and tramways consider themselves very fortunate if they can obtain traffic, of the classes which use this route , at rates varying from $\frac{1}{5}$th to $\frac{1}{8}$th of a pie per maund a mile , and

515P

from my experience of the traffic of this Railway, under exactly similar circumstances , to those under which the tramway will be placeed , makes me unhesitatingly say that it will be several years before it will obtain anything like the bulk of the traffic and even then I doubt if a $\frac{1}{10}$th of a pie per maund per mile, accompanied with large concessions of " no demurrage" and other heavy risks will fetch it. If you take it that the cart can carry from Yelaswaram to Cocanada Port in almost one night , and deliver the traffic at the merchants door, and will bring his rate down , in competition with the Railway, to certainly ½ of a pie a maund a mile, do you think that the traffic will cart itself to the tramway station at Yelaswaram , to undergo the trouble of booking and loading into the tramway there, break bulk or be transhipped into the Railway or the Canal boats at Samalkot , then go by rail or canal to Cocanada Port, and then again bear the expenses of carting from the Railway station to the godowns, or of handling from the boats to the godowns, and all this to cover a journey of thirty miles. My experience makes me think otherwise , and if even it is induced to take this round about route, the sacrifies of rate and revenue that will be necessary to induce it to do so will ruin the financial prospects of any undertaking.

I am certain that none of it will go by Railway from Samalkot , under these circumstances; except what little we now get at the time of the year when the canals are closed; and if it were to go by canal the whole scheme becomes a competitor of the East Coast Railway. The vested interests of the Gomastha who gets his commission on the engaging of the carts ,and canal boats is a factor that has been overlooked.It has beena most potent factor in keeping traffic off the East Coast Railway.

After full inquiry through my Traffic Canvassers and extended investigations on the spot I am convinced that the proposal in this form will not benefit the East Coast Railway a single particle and be a distinct financial failure in itself , and even if it succeeded to $\frac{1}{3}$rd the extent the District Board hopes, it would as mentioned , in its own letter do a great deal of harm to the East Coast Railway's traffic in

525-P

firewood from Kottapally and Pithapuram and building stone from Durgagda.

The essence of the financial success of such a scheme is, that it should work on exactly the same lines as its competitors and take up and deliver traffic as near as possible from the same points as they do, making up in speed and safety any impossibilities in this direction. The tramway in the form above referred to utterly fails in these essential qualities. In support of what I have said above, I can quote several instances, if desired, where the Railway has had exactly similar competition by carts without the additional factor of the very cheap carriage by canal and where the offer of an $\frac{1}{8}$th pie per maund per mile and brisk canvassing has failed for 3 years to obtain a single bag.

To proceed to the second view, viz. the one mentioned by Mr. Bliss, C.I.E., that the tramway should have a third line on the East Coast Railway and run its own traffic to Cocanada Port. Supposing this to be done, does this tramway intend to have the same delivery sheds as the East Coast Railway or does it intend to switch off somewhere near Cocanada Port and get more into the heart of the business centre of the town? I know of no one centre that will obviate very extensive carting to some at least of the principal godowns, and I think you will agree with me, judging from our efforts in this direction, such a scheme would considerably raise the capital cost of the undertaking. Whichever it does, it will, I am certain, not be able to get the traffic at a figure higher than a $\frac{1}{10}$th pie per maund per mile which on the whole length Yelaswaram to Cocanada Port would amount to three pies per maund or half an anna a bag. It will also have, as the East Coast Railway does, to erect sufficient sheds to store the traffic for days without charging demurrage. Out of this ½ anna a bag it will have to give the East Coast Railway, 80 per cent of the earnings for the 10 miles Samalkot to Cocanada Port, which will come to very nearly one pie per maund or two pies a bag. It will also have to bear its share of the expenses of the switching arrangements and the delivery agency at Cocanada and the joint station working at

53 S.P

Samalkot, which will certainly come to another pie a bag. Will it out of the remaining three pies a bag be able to pay the working expenses of the whole tramway and pay a satisfactory interest on a capital which has been estimated at seven lakhs , but which as your note shows, when they have made a proper estimate, is likely to be double that figure. I certainly think it will not. The only other scheme left and the only one that seems to me feasible at all is, that if the branch line to Yelaswaram is considered necessary for the general benefit of the country it passes through or for strategical purposes &c., as the Collector says , it should be constructed as cheaply as possible from old rails and materials on the standard gauge, the working agency and the stock of the East Coast Railway should be used. There should be no expensive arrangements of shareholders , boards , and meetings, in short, if the Railway is at all to be built , that it be a part and parcel of the East Coast Railway system. The District Board in their letter to Government lay stress on the fact that it will be a valuable feeder to the East Coast Railway ; it will be nothing of the sort. All the traffic of the district it is intended to serve which goes any distance on the East Coast Railway to Vizagapatam or Bezwada already comes to the Railway. The remainder, if it were, in spite of what I have said above ~~to be~~ brought to the Railway , would be at the best , singularly unremunerative traffic , as it would go such a short distance to Cocanada Port.

The District Board also laid great stress on the unanimity of the opinion of all the leading merchants and Chambers of Commerce and the enthusiasm with which the prospects of this line are generally hailed . The chorus no doubt in favor of the scheme is full and loud as the record shows, but the music distinctly dwindles down to " very soft" when the singers in the chorus are asked to take shares and though this is speciously argued away under the general heads of want of the knowledge of cooperation and ignorance of the western methods of investment of money , it is to my mind much too significant to be passed over so lightly , and judging from three years active canvassing for the East Coast Railway I am certain it would be found that

54 S.P

the greatest enthusiasts in favor of this scheme will be the hardest to get to put any of their traffic on the tramway, and I am certain it is this under current of feeling which prevents them from taking shares largely in the concern. To sum up the whole of the DistrictBoard's proposals. They have, without very deep investigation into the matter, and blinding their eyes wilfully or negligently to the lessons daily taught by the East Coast Railway, which every one who travels may read, and relying on a very insufficient estimate of cost, have created great enthusiasm about this tramway scheme, which enthusiasm stops short when the question of investing any appreciable amount of their capital comes in, and they ask the Government of Madras to make up for this lack of enthusiasm by lending them seven lakhs which will not be half enough to carry out a scheme that in the opinion of experts , in the crude form in which they put it forward, must end in disastrous failure. I can think of no scheme more calculated to put back for years the creation of private enterprise , which the District Board seems so anxious to foster, than this scheme if carried out. If the Government has the money for feeder lines , the East Coast Railway can point out several very remunerative ones on which the money can be well spent.

Which?

To conclude I will take the District Board's figures in the returns submitted by them of the traffic which they say will use this tramway. The total traffic they give that runs from Peddapuram to Cocanada Port and vice versa is 234800 bags

or 469600 maunds

Distance Peddapur to Cocanada Port= 13½ to 14 miles

at $\frac{1}{10}$th pie per maund ---------- Rs 3424. 0. 0.

Deduct 80 per cent of the earnings ,distance

from Samalkot to Cocanada Port , 1954. 0. 0.

Amount earned by Tramway--------- Rs 1470. 0. 0. A

Now take the local traffic from Yelaswaram to Cocanada Port and vice versa given in the return

Total traffic = 62050 bags = 124100 maunds

55 S.P

Distance from Yelaswaram to Cocanada Port

30 miles at $\frac{1}{10}$th pie per maund ---------- Rs 1939. 0. 0

Deduct 80 per cent from Samalkot to

Cocanada Port ---------- , 514. 0. 0.

Total earnings by tramway ------- Rs 1425. 0. 0. B

Total traffic from Juggampett to Cocanada Port and vice versa

10,000 bags or 20,000 maunds

Distance from Juggampett to Cocanada Port 25 miles at

$\frac{1}{10}$th pie per maund ---------- Rs 260. 0. 0

Deduct 80 per cent for 10 miles from

Samalkot to Cocanada Port , 82. 0. 0.

Total earnings by tramway ------- Rs 178. 0. 0. C

The total of A,B,& C, is Rs 3073. At a liberal estimate , suppose the passenger traffic is double of this amount. The total then will be Rs 6146 + 3073 = Rs 9219. deduct from this 50 per cent for the working expenses the profit will amount to Rs 4609, which on a capital of 14 lakhs makes 5As 3 ps per cent; therefore the District Board is going to pay satisfactory interest on its capital and also repay to Government Rs 10,000 a year of the capital lent- out of Rs ~~9219~~ 4609 or 5as 3 ps per cent I do not see where it is to come from.

Waltair station

Dated 14th August 1896.

TRAFFIC SUPERINTENDENT.

In your reply please quote the number and date of the letter.

Form No. Mgr. 19.

No. 6552 49P 18

SERIAL No. 5

From

THE MANAGER,
EAST COAST RAILWAY.

To

THE CONSULTING ENGINEER for RAILWAYS.
MADRAS.

Dated Waltair, the 19th August 1896.

Sir,

With reference to your No.1757 dated 6th June 1896, and its accompaniments herewith returned, regarding the construction of a light Railway from Samalkot to Yeluswaram via Peddapur and Jagampeta. I have the honor to forward herewith a note on this subject together with a copy of one by the Traffic Superintendent of this Line.

I have the honor to be,

Sir,

Your most obedient Servant,

Manager, E.C.Railway.

Accompaniments.

Report on the proposed light-Railway
from Samalcotta to Pallaiveram
via Reddapur and Jeggumpetta.

The District Board having proposed
to build a light-railway of 2'6"
guage running from Samalcotta to
Pallaiveram and the survey and
plans having been completed,
I have now to report as follows:-

As far as the construction of the
line goes, there are no Engineering
difficulties to be contended with.
For the first 9 miles the line runs
over hard, dry gravel soil - On this
portion of the line there is no bridge
over 2 of 40' span. From mile 9, the
formation of the ground is not so
favorable, being extremely low in
places and continually flooded
during the monsoon - In consequence
of this, it has been found necessary
to put in a number of culverts

between miles 9 and 15 - there are also some curves between miles 6 & 9 which have been put in for the same purpose - in order that the line may run as far as possible on the high ground thus saving a great deal of high banking and also a number of small bridges and culverts which otherwise would have been necessary to carry off the flood water. From mile 13, where the Jigguinpetta station is situated, the road runs by the northern side of the Great Northern Trunk Road up to the bridge over the Pelaru at Yerraram mile 19. Consequently, in only a few places was it been found necessary to put in bridges, as in most cases, the Great-Northern Trunk road culverts have simply been extended. From Yerraram to Pelaniweram mile 23., the line runs parallel to the Yerraram

Trunk road; in this case there are no bridges, simply extension of road culverts.

It will be seen from the above, that there would be no difficulty whatever in constructing the line. Exception may perhaps be taken to some of the gradients, these for the most part have been put in to avoid deep cutting and in some places to carry the line over to touch trees, the average height of bank being 5' and the highest 12 feet. It may be thought that it would have been better to run the line from Sammalettai straight up at right angles to the East Coast, instead of running as we do, for some distance parallel to it and then curving to the north and east. I would however point out that this alignment has been chosen in order to avoid richly cultivated gardens, a large tank and

and also a number of pucka and kutcha houses which would have to have been demolished during the construction of the line and for which heavy compensation would have had to be paid. As it is, the line for the first 4 miles runs over absolutely waste land for which very little compensation will be required. The line including rolling stock will cost £24600 per mile, the rolling stock proposed to be used is the same as that used on the Mopre State Railway which has given great satisfaction.

I have not reported as to the traffic likely to be available for the line, this having been dealt with exhaustively by the District Board President in his memorandum to the Chief Secretary to the Government, Local and Municipal department, on the proposed light Railway. Subjoined will be found a detailed description of the proposed line from Samul-cotta to Cheravaram-

C. No 7347 of 1896

Mile 0-1. The line starts from 300 ft. to the north of Samulcotta East Coast line, to which it runs parallel in a western direction for 575 ft. From this point it curves away to the north with a gradient of 1 in 140 rise. It crosses a steel rolled girder bridge of 30 ft. span over a nulla at mile 0-25. This bridge is approximately the same as the bridge over the same nulla on the East Coast Railway which is 2 spans of 12'; the soil here is 2 feet of red earth subsoil gravel. From this point the line curves to the north and then back towards the east on the level. Mile 0-71 crosses a bridge of 15 feet span and at mile 0-83 another bridge of 15 ft. span. These two nullas unite and pass under the first mentioned bridge of 30 ft. span.

Span - From this point, the line
curves gradually to the west with
a fall of 1 in 150 and then rises
1 in 180, where it crosses Samulcotta
Peddapur road at mile 1-2100 ft=
mile 2 crosses a bridge of 20 ft span,
soil as before - Opposite to this bridge,
there are two culverts of 6 ft each
waterway - These culverts are not
sufficient during the monsoon and
it has therefore been considered
necessary to give the Railway
bridge 8 feet extra waterway - The
line still curves gradually to the
west on a gradient of 1 in 200 rise -
There is a bridge of 15 feet span
at mile 3.7 this being necessary
in order to carry off the drainage
which comes down from near the
Inlay Cutcherry of Peddapur - top
and subsoil gravel - Curving
away to the north over a gradient
1 in 59 fall, it crosses Peddapur
station at mile 3-2400 ft on the
level still curving to the north
on a gradient 1 in 74 fall - The
line crosses a bridge of 10 feet span
at mile 3.71 this bridge is to allow
passage of water from a tank to
the west of the line - The area under
irrigation from this tank is 100 acres.
soil red earth and gravel - From
this point the line curves to the
west on a gradient 1 in 224 fall,
crossing a bridge 2 of 20 ft girders
at mile 4.13 - This bridge is proposed
to take the discharge from the tank
at Peddapur in case of an accident
to the tank bund - There are also 2
Culverts of 3 ft span over two irri-
gation channels from the tank - soil
soil, red earth and subsoil gravel -
Curving back towards the north on
a fall of 1 in 120 and then to the
west on the same fall (these curves
are put in in order to avoid old
Peddapur City) the line crosses 2
Spans of 40 ft girders at mile 4.93 /
Mis

This bridge is to allow the discharge from the tanks of old Peddapur - 2 culverts of 3ft- each are also provided over two irrigation channels, irrigated area 150 acres - The line from this point (mile 5) curves to the west- over 1 in 84 rise and then 1 in 140 - at mile 5.405 ft- the line crosses a bandy track from Kattamur village - at- mile 6.08, it crosses a bridge of 15ft- girder over the supply channel to a large tank east of the line - at- mile 6.1030 ft, there is provided a place for crossing and stopping trains by signal for the convenience to the inhabitants of Kattamur village - Curving to the west over 1 in 227 rise followed by 1 in 309 fall, it crosses a 15ft- span over the supply channel of the large tank to the east of the line, top soil 3ft- and earth, subsoil gravel - At- mile 7, the line crosses another 15ft- span provided for the discharge of the tank to the west - Curving to the west- on a grade 1 in 88 rise in order to avoid a large tank, it continues curving to the west on a grade of 1 in 62 rise and still to the west 1 in 218 rise, These three curves are put in to avoid heavy banking which would otherwise be necessary - The line crosses a culvert of 10 ft- waterway over the supply channel of Dinnapuram tank - Curving still to the west on a gradient of 1 in 431 fall it crosses Jaggampeta Peddapuram road at- mile 7.1920 ft- crosses over a 10ft- span at- mile 8.27 - This span is over an additional supply channel to Dinnapuram tank - From this point, the line bears away to the north and gradients of 1 in 61 rise, 1 in 150 rise level and then 1 in 71 fall, and crosses a bridge of 15ft- girder at- mile 8.47 over a drain - This drain cross the Local Fund road through a culvert of 8ft- span which is insuffici

Curvin

Curving to the west on a grade of 1 in 71 fall and 1 in 140 rise, these two curves are in order to avoid the irrigation tank of Katravulapalli village; it here crosses a bridge of 30ft-girder at mile 8.96 for the discharge of an irrigation tank - Irrigated area 84 acres, soil black cotton: at mile 9.07, there is another bridge of 20ft-span from Katravulapalli village - Corresponding curve on the road, there is a road-drain 60ft - Here is another crossing placed for trains at 9.600 ft - for the convenience of Katravulapalli people - Bearing away to the west the line passes Katravulapalli village road at mile 9.2000 ft - at mile 9.77, a bridge of 1 span of 40ft-girder is provided for the discharge of a drainage area of 3 square miles - The Local fund road here is frequently washed away by the floods - Beyond this bridge 2 curves are

are put in to avoid the low ground and heavy banking - mile 10.147

61 57

there is a bridge of 20 ft-span provided as the low ground as the L-F road suffers here badly; soil black cotton. The line bears from here to the west over a grade of 1 in 533, crossing a bridge of 30 ft-span over the supply channel of Ragamma tank - This tank has two waste weirs of 15 ft each.. Bearing away to north on a gradient of 1 in 270 rise and 1 in 93 fall, the line point towards Jeggampetta & crosses a bridge of 10 ft-span at mile 11.81. over an irigation channel and a culvert of 10 ft-span which allows water from the north of Local Fund road to flow into Jegula pandy drain. The irrigated area of this tank is 40 acres - at mile 11.85 the line passes over Jegulapandy drain by a bridge of 40 ft-span - The catchment basin is 3 square mile - One bridge of 15 ft, 1 culvert of 6ft - and 1 road-dra

road-dam of 80ft are provided on the Local Fund road - Not only the drainage from this river goes through, but a great portion of the drainage from the north & SW black cotton - Bearing away slightly to the north over a grade of 1 in 506 rise, it crosses a bridge of 1 of 30' span at-mile 12-91 and also 2 culverts - of 5 ft. span each - This is allowed for the irrigation of the land from Jayampetta tank, irrigated area 120 acres - at-mile 12-68 & 12-71 the line crosses over two bridges of 15' Span each - These are provided to permit the irrigation of land from a tank to the north of the Great-Northern Trunk road - Opposite these bridges in the Fort road is a road dam 66 ft long - as one half of the drainage passes parallel to the Local Fund road, it consequently does not affect the line - Curving away to the east over a gradient of

of 1 in 150 rise and then level the line crosses the G.N.T. road at mile 12.4800 ft - From this point the line passes to the north of G.N.T Road towards east running through Jayampetta station at mile 13.330 - From here to Yerraram bridge, the line is carried simply close to the G.N.T. road - No culverts on the road have all been extended in order to carry the railway except in the undermentioned places:- At-mile 12-96 a bridge of 1 span of 10ft - field has been put in, the corresponding openings on the road being 2 of 3ft - at mile 13.50, a 15ft span has been put in, opposite to which on the road are two of 6ft - each culverts - at mile 17.29, where the line crosses Dasalam drain which has a catchment area of 5 sq miles, a bridge of 4 Spans of 40ft girders has been provided - No G.N.T. road crosses this drain by

by a bridge of 2 spans of 30ft - attached
is a road dam of 100ft - Even this is
insufficient, the road being frequently
washed away - at mile 18.93 there
is one 15ft-span opposite to the 10'
span on the road. At mile 19.1950ft -
the line crosses through Yerraram
Station - On leaving this station,
it crosses Yerraram bridge of
15 spans of 26ft each - This bridge
being to standard dimensions is
capable of easily carrying any
load that can be got on a 2'6" line -
After passing the bridge, the line
bears to the north and continues
in that direction running
alongside the Yerraram Juddayy
road until it reaches the terminal
Station at Yelaisveram mile
23.35 - On the Yerraram Juddayy
road, there are 13 culverts of 3ft span
each, which have been extended
to allow the line being run over
them - Station buildings, Station
machinery

machinery buildings, permanent
way and Rolling stock have
not been taken into consideration
in this report, as the abstracts
and profiles clearly show the
design and give all necessary
information -

S. H. Berkeley
Asst. Engr in charge
preparation of report

M. Broun M.I.C.E.
District Board Engineer

Deposit receipt Railway from Stanmore to Clements

3	Staff quarters	10355	443		
4	Station Machinery	40451	1732		
VIII	Rolling stock			1,93129	8271
1	Locomotives	55420	2373		
2	Carriages & wagons	137709	5898		
IX	General charges			10500	449
1	Engineering Establishment	7000	299		
2	Audit and account	1500	64		
3	Locomotive	2086	86		
		574668		574668	24600

P.H. Brown M.E.
District Board Engr

Dc
14/4/98

Proposed Light Railway from Samalcotta to Yelaswaram

2ft 6in gauge
23.35 miles

Abstract of cost of Railway.

Heads of Account		Total Cost in Rupees			
		Sub Heads		Main head	
		Total cost	Rate per mile	Total cost	Rate per mile
I	Survey expenses	1000	42	1000	42
II	Land	5000	214	5000	214
III	Formation			37120	1590
1	Earthworks	37120	1590		
IV	Bridge work			59308	2540
1	Bridges	49656	2127		
2	Culverts	9652	413		
V	Electric Telegraph	9700	415	9700	415
VI	Ballast & Permanent way			189216	8146
1	Ballast	8580	363		
2	Permanent way	180636	7783		
VII	Station & Buildings			68680	2938
1	Stations & offices	9147	392		
2	Workshops & Storebuildings	9756			

614

03	1 Arch	- 3 ft	2000	-	700	600	400	86	-	-	48	1000		
4.93	2 Girders	- 40 ft	6000	-	800	2400	700	-	9.96	28	75	3000	3600	
5.04	1 Arch	- 3 ft	2000	-	700	600	400	86	-	-	48	1000	-	
6.08	1 Girder	- 15 ft	3000	-	800	1900	800	-	0.46	8	86	1500	500	
6.90	1 Girder	- 15 ft	3000	-	800	1200	500	-	0.46	8	77	1500	400	
7.00	1 Girder	- 15 ft	2000	-	700	1450	500	-	0.46	8	67	1000	350	
7.36	2 Arches	- 5 ft	400	-	1400	1700	900	151	-	-	108	200	400	
8.04	2 Arches	- 5 ft	400	-	1400	1700	900	151	-	-	108	200	400	
8.27	1 Girder	- 10 ft	1000	-	1200	1800	700	-	0.24	6	75	500	300	
8.47	1 Girder	- 15 ft	4000	-	1300	2100	700	-	0.46	8	75	2000	400	
8.91	1 ~~Girder~~ Arch	- 3 ft	2000	-	700	600	400	86	-	-	48	1000	-	
8.96	1 Girder	30 ft	3000	1000	800	1900	200	-	2.06	12	73	1500	1000	
8.98	1 Arch	3 ft	2000	-	700	600	400	86	-	-	48	1000	-	
9.07	1 Girder	30 ft	3000	1000	700	1550	500	-	2.06	12	67	1500	850	
9.77	1 Girder	40 ft	4000	8000	1200	1800	600	-	4.98	14	72	2000	1000	
10.41	1 Girder	20 ft	1000	800	3500	1600	600	-	0.65	9	83	500	550	
10.71	1 Girder	30 ft	3000	1000	1400	2150	900	-	2.06	12	96	1500	900	

Proposed Light Railway from Samarlakota to Nelaswaram.

Abstract of bridge quantities

2'-6" gauge
Miles 23.35

Mile	Name of Bridge		Excavation cft.	Sand cft	Concrete cft	Masonry cft	Pointing sft.	Arching cft	Iron work Tons	Timber cft.	Coping cft.	Dry filling cft	Pitching cft.	Total
0.25	1 Girder	- 30 ft	2000	-	500	1300	500	-	2.06	12	57	1000	700	
0.46	1 Arch	- 3 ft	2000	-	700	600	400	86	-	-	48	1000	-	
0.47	1 Arch	- 3 ft	2000	-	700	600	400	86	-	-	48	1000	-	
0.71	1 Girder	- 15 ft	3000	-	800	1200	500	-	0.46	8	77	1500	400	
0.83	1 Girder	- 15 ft	4000	-	1300	2100	700	-	0.46	8	75	2000	400	
2.09	1 Girder	- 20 ft	1000	-	3500	1600	600	-	0.65	9	83	500	550	
3.07	1 Girder	- 15 ft	3000	-	800	1200	500	-	0.46	8	77	1500	400	
3.71	1 Girder	- 10 ft	3000	-	900	2000	800	-	0.24	6	83	1500	400	
3.89	1 Arch	- 3 ft	2000	-	700	600	400	86	-	-	48	1000	-	
4.13	2 Girders	- 20 ft	3000	-	1100	3600	1300	-	1.30	18	98	1500	1500	
4.33	1 Arch	- 3 ft	2000	-	700	600	400	86	-	-	48	1000	-	

11.66	1 Arch	-	3 ft	2000	-	700	600	400	86	-	-	48	1000	-	
11.81	1 Girder	-	10 ft	2000	-	1000	1400	500	-	0.24	6	65	1000	300	
11.85	1 Girder	-	40 ft	11000	8000	1800	4500	1000	-	4.98	14	92	5500	2000	
12.11	1 Girder	-	30 ft	1500	900	1250	1900	500	~~151~~	2.06	12	62	750	600	
12.42	2 Arches	-	5 ft	400	-	1400	1700	900	151	-	-	108	200	400	
12.54	2 Arches	-	5 ft	400	-	1400	1700	900	151	-	-	108	200	400	
12.68	1 Girder	-	15 ft	3000	500	800	1200	500	-	0.46	8	77	1500	400	
12.77	1 Girder	-	15 ft	3000	500	800	1200	500	-	0.46	8	77	1500	400	
12.96	1 Girder	-	10 ft	2000	500	1000	1400	500	-	0.24	6	65	1000	300	
13.15	1 Girder	-	15 ft	3000	500	800	1200	500	-	0.46	8	77	1500	400	
13.16	1 open top	-	3 ft	500	-	300	125	200	-	-	9	28	250	-	
13.26	1 open top	-	3 ft	500	-	300	125	200	-	-	9	28	250	-	
13.36	1 open top	-	3 ft	500	-	300	125	200	-	-	9	28	250	-	
13.23	1 open top	-	6 ft	550	-	500	300	300	-	-	12	32	75	-	
13.56	1 open top	-	3 ft	500	-	300	125	200	-	-	9	28	250	-	
13.71	1 open top	-	3 ft	500	-	300	125	200	-	-	9	28	250	-	
13.80	1 open top	-	4 ft	500	-	400	300	300	-	-	10	32	250	-	
13.84	1 open top	-	4 ft	500	-	300	200	200	-	-	10	28	250	-	
13.94	1 open top	-	3 ft	500	-	300	125	200	-						
14.15	1 open top	-	3 ft	500	-	300	125	200	-	-	9	28	250	-	
14.25	1 open top	-	3 ft	500	-	300	125	200	-	-	9	28	250	-	
14.40	1 open top	-	3 ft	500	-	300	125	200	-	-	9	28	250	-	
14.65	1 open top	-	4 ft	500	-	300	200	200	-	-	10	28	250	-	
14.69	1 open top	-	3 ft	500	-	300	125	200	-	-	9	28	250	-	
14.90	1 open top	-	3 ft	500	-	300	125	200	-	-	9	28	250	-	
14.98	1 open top	-	6 ft	500	-	500	300	300	-	-	12	32	250	-	
15.20	1 open top	-	4 ft	500	-	300	200	200	-	-	10	28	250	-	
15.29	1 open top	-	4 ft	500	-	300	200	200	-	-	10	28	250	-	
15.46	1 open top	-	4 ft	500	-	300	200	200	-	-	10	28	250	-	
15.90	1 open top	-	4 ft	500	-	300	200	200	-	-	10	28	250	-	
16.00	1 open top	-	4 ft	500	-	300	200	200	-	-	10	28	250	-	
16.20	1 open top	-	4 ft	500	-	300	200	200	-	-	10	28	250	-	
16.32	1 open top	-	6 ft	500	-	500	300	300	-	-	12	32	250	-	
16.36	1 open top	-	4 ft	500	-	300	200	200	-	-	10	28	250	-	
16.87	1 open top	-	6 ft	500	-	500	300	300	-	-	12	32	250	-	
17.01	1 open top	-	3 ft	500	-	300	125	200	-	-	9	28	250	-	
17.29	4 Girders	-	40 ft	24000	3500	3300	4850	1400	-	19.92	56	77	1200	75	

Rates	2-14-6	3%	13%	16%	3%	75%	-	1-9-0	50%	3%	7%	
Amount Rs	418	816	6454	9652	966	966	32310	1123	2090	220	1468	56483
						Contingencies 5 per cent					=	2825
						Grand Total					=	59308

Passed in Old
District Board Engineer

17.46	1 open top	- 4 ft	500	-	300	200	200	=	-	10	28	250	-	
18.36	1 open top	- 4 ft	500	-	300	200	200	-	-	10	28	250	-	
18.93	1 Cinder	- 15 ft	3000	500	800	1200	500	-	0.46	8	77	1500	400	
18.95	1 Cinder	- 10 ft	3000	500	900	2000	800	-	0.24	6	83	1500	400	
19.12	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	
19.24	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	
19.28	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	
19.37	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	
19.74	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	
19.93	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	
19.06	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	
20.16	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	
20.67	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	
21.72	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	
22.02	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	
22.80	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	
23.14	1 open top	- 3 ft	500	-	300	125	200	-	-	9	28	250	-	

Propo = a right roadway from Tamalecotta to Velaswaram

2 ft 6 in gauge

23.35 miles

Bridge Abstract

Type of Bridge			Total Number of Spans	Waterway
Class	No	Spans		
Open tops	20	3 ft	20	60
	15	4 ft	15	60
	5	6 ft	5	30
Arched Culverts	8	3 ft	8	24
	4	5 ft 4 of 2 span	8	40
	1	10 ft	1	10
Girder bridge	4	10 ft	4	40
	11	15 ft	11	165
	3	20 { 2 of 1 span	2	40
		1 of 2 span	2	40
	5	30 ft	5	150
	4	40 ft { 2 of 1 span	2	80
		1 of 2 span	2	80
		1 of 4 span	4	160
Total for whole line			979	
Average per mile			41.92	

Personal Asst to
District Board Engineer

Proposed light Railway from Samalcotta to Yelaswaram

Gauge 2 ft 6"
Miles 23.35

Station Buildings Abstract.

Name of station	Class	Mileage	Distance apart	Station building	Goods shed	Passengers platform: Length ft.	Passengers platform: Height above rails ft	Station masters quarters: no	Station masters quarters: sq ft	Menials quarters: no	Menials quarters: sq ft	Well. Diam (c)
			miles	Sqre ft	S ft	ft.	ft	no	sq ft	no	sq ft	ft
Samarlakota	1	0	-	2124	689	200	1	1	940	7	1365	12
Peddapur	2	3 1/2	3 1/2	1633	689	150	1	1	940	5	975	-
Juggampeta	2	13 1/16	9 9/16	1633	689	200	1	1	940	5	975	12
Ettavaram	2	19 1/2	6 7/16	1633	-	150	1	1	940	5	975	-
Yelaswaram	1	23 1/4	3 3/4	2124	689	200	1	1	940	7	1365	12

District Board Engineer

270 = 0.35 per cent 1 0.62 Waiwaste
& upwards " " 1 0.96 Waiwaste to Waiwera
2 ft 6 in gauge
miles 23.35.

Course Abstract.

Angle of curvature or Radius		Number of each	Total length to miles
15° - 16'	(R = 375)	1	0.05
10° - 54'	(R = 525)	1	0.15
9° . 32'	(R = 600)	5	0.54
8° . 29'	(R = 675)	1	0.22
7° . 0"	(R = 825)	2	0.11
6° . 20'	(R = 900)	6	0.87
4° . 46'	(R = 1200)	2	0.43
3° . 50'	(R = 1500)	5	0.84
3° . 10'	(R = 1800)	4	0.66
2° . 43'	(R 2100)	1	0.11
2° . 23'	(R = 2400)	2	0.32
2° . 7'	(R = 2700)	1	0.08
1° . 54'	(R = 3000)	6	0.61
1° . 16'	(R = 4500)	3	0.40
Flatter than 1° = 0		16	2.35
	Total	56	7.74

#257 7 9

Prepared JMc
District Board Engineer

1 in 232 and 235 — per cent — 1 — 0.62 — 2-65

2 ft 6 in quad
23.35 Miles

Gradient Abstract

Inclination	Number of each	Total length Miles	Percentage of total length of line.
1 in 59 = 1.69 per cent	1	0.25	1.07
1 in 64 = 1.56 per cent	1	0.11	0.47
1 in 71 = 1.40 per cent	1	0.23	0.98
1 in 75 = 1.33 per cent	1	0.34	1.46
1 in 76 = 1.31 per cent	1	0-19	112 0-81
1 in 82 = 1.22 per cent	1	0-08	0-34
1 in 83 = 1.20 per cent	1	0.46	1.97
1 in 84 = 1.19 per cent	1	0.57	2-44
1 in 86 = 1-16 per cent	1	0-13	0-56
1 in 88 = 1.13 per cent	1	0-31	1.33
1 in 89 = 1.12 per cent	1	0-21	0.90
1 in 93 = 1.07 per cent	1	0-13	0-56
1 in 94 = 1.06 per cent	1	0-27	1.16
1 in 100 = 1.00 per cent	1	0-12	0.51
1 in 106 = 0-94 Per cent	1	0-31	1.33
1 in 129 = 0.78 Per cent	1	0-43	1.84
1 in 133 = 0.75 Per cent	2	0-53	2.27
1 in 140 = 0.71 Per cent	2	0.56	2.40
1 in 146 = 0.68 Per cent	1	0-09	0.39
1 in 150 = 0.66 Per cent	1	0-11	0.47
1 in 155 = 0.65 Per cent	4	1.08	4.62
1 in 158 = 0.63 Per cent	1	0.34	1.46
1 in 160 = 0.63 Per cent	1	0-15	0.64
1 in 162 = 0.62 Per cent	1	0-09	0-39
1 in 175 = 0.57 Per cent	1	0.55	2-35
1 in 180 = 0.55 Per cent	1	0.35	1.50
1 in 200 = 0.50 Per cent	1	0-15	0.64
1 in 218 = 0-46 per cent	1	0.47	2.01
1 in 220 = 0-45 per cent	1	0.88	3.77
1 in 227 = 0-44 per cent	1	0.39	1.67
1 in 250 = 0-40 per cent	1	0.19	0.81
1 in 210 = 0-37 per cent	1	0.31	1.33

Ou 5.6
57 a/56

1 in 270	= 0.35	per cent	1	0.62	2.65
1 in 294	= 0.34	per cent	1	0.96	4.11
1 in 337	= 0.30	per cent	1	1.04	4.45
1 in 338	= 0.30	per cent	1	0.20	0.86
1 in 342	= 0.29	per cent	1	0.65	2.78
1 in 350	= 0.29	per cent	1	0.27	1.16
1 in 369	= 0.27	per cent	1	0.36	1.54
1 in 431	= 0.23	per cent	1	0.41	1.76
1 in 500	= 0.20	per cent	1	0.23	0.99
1 in 533	= 0.19	per cent	1	0.83	3.55
1 in 566	= 0.18	per cent	1	0.55	2.36
1 in 800	= 0.13	per cent	1	0.31	1.33
1 in 900	= 0.11	per cent	1	0.68	2.92
Flatter than 1 in 1000				5.86	25.08
				23.35	99.99

District Board Engineer

Proposed Light railway from Samalcotta to Yelaswaram

2 ft 6 in gua
23.35 Miles

Station Machinery

Name of station	Station Ashpits	Water columns: Number	Water columns: Diameter	Water tanks/well: Capacity in cubic ft	Water tanks/well: Diameter	Hand pumps or water lifts	Switches & fixed Stocks Rails 12	Crossings 1 in 5	Home signals	Distant signals	Platform weighing Machines: Number	Platform weighing Machines: Capacity tons	Engine shed area	Coal ashpits	Engine turntables
Samalcotta	1	1	4"	75	12	1	10	10	1	2	2	1	2500	2	1
Peddapur	0	0	0	0	0	0	3	3	1	2	1	1	0	0	0
Jaggampeta	1	1	4"	75	12	1	4	4	1	2	1	1	0	0	0
Erraram	0	0	0	0	0	0	3	3	1	2	1	1	0	0	0
Yelaswaram	1	1	4"	75	12	1	10	10	1	2	2	1	1400	1	1
14	2	2	3	4	3	3	3	2	2	2	3	3	3	2	2

Yelas

P. V. Krishna M.I.C.E
District Board Engineer

Exhibit

Proposed Light Railway from Tamarcotta to Velaswaram

2 ft 6" gauge

23.35 miles.

Articles required from England.

Description	Quantity	English cost f.o.b.	English cost Total	Rate of exchange	English Cost in rupees	Indian Charges	Total.	per mile
Permanent way	30 miles	8820	8820	1s. 8 Rupees	158760	15876	174636	5821.2
Station Machinery	as per list	2043	2043		36774	3677	40451	
Plant & work shop Machinery	Lumpsum	389	389		7000	700	7700	
Locomotives	4 Nos	2799	2799		50382	5038	55420	
Coaching stock	18 Nos	3470	3470		62460	6246	68706	
Goods stock.	42 Nos	3485	3485		62730	6273	69003	
		21006	21006		3,78106	37810	415916	

W. Brown M.Inst.C.E.
District Board Engineer

75 P

SERIAL
No. 6

Note by the Consulting Engineer for Railways on the proposed railway from Samalkot on the East-Coast Railway to Yeleswaram.

Alignment.

The Junction station at Samulcottah is placed 300 feet from the East-Coast Railway; before the line is actually constructed the junction arrangements will have to be considered with the East-Coast Railway authorities. There should be an island platform for transferring passengers and a tranship siding for goods.

2. The deviation from mile 0 to 2 is said to be necessary in order to avoid some gardens, a tank, and a number of houses; but there is a road shown on the plan from 22 chains to opposite mile 2 which could apparently be made use of. This portion should be carefully considered before construction is commenced, it would be worth while to incur a slightly heavier initial cost if a more direct line can be secured.

3. From mile 8 to 13 it would seem that a shorter and more economical line could be got by following the road as much as possible. If the road authority raises no objection, the line could be placed on the road as is done in the Darjeeling and Muvi railways, and, I believe, Barsi Road. Tramway

4. From mile 13 to the terminus the line has been placed at one side of the road: hereto, considerable expenses would be saved by using the road itself. If the culverts are not strong enough they might either be replaced by girders or deviations could be made where they occur and the culverts could be lengthened.

Grading.

5. Grading.

There are five gradients steeper than 1 in 80: their total length is 1.12 miles, the steepest is 1 in 59 at mile 3¼ running into Peddapur station. This could be altered to 1 in 100 by going into 11 feet of cutting at the deepest part or 1 in 80 at most.

6. A grade of 1/84 between miles 5 and 6 could be altered to 1 in 100 without much extra expenses.

7. The short grades of 1 in 64 and 1 in 71 between miles 8 and 9 and that of 1 in 82 between miles 9 and 10 could also be flattened without much extra earth-work. A grade of 1 in 76 at the 17th mile could easily be flattened to 1 in 100.

8. The ruling gradient should not be steeper than 1 in 80 and probably 1 in 100 could be got by careful surveying and grading: it will prove more economical in the long run to pay a little more for earthwork (which is only 1/15th of the total) and to so reduce working expenses.

9. Bridgework.

Extensions of culverts 3, 4 and 6 feet. The road is carried on timber baulks, it would probably be just as cheap to use girders made of old rails and would give more headway.

10. Girder bridges.

The following are noted:-

No. of spans.	Span in ft:	Mileage.	Ht: from floor to under girder in ft:
1	30	0.25	* 4'
1	20	2.09	* 6'
2	40	4.93	* 5'-3"
1	15	7.00	5'-6"
1	30	8.96	* 5'-6"
1	30	9.07	* 5'-6"
1	40	9.77	* 6'-6"
1	30	10.71	10'-0"
1	40	11.85	11'-0"
1	30	12.11	* 5'-0"
4	40	17.29	8'-6"

The

76 P

The height from floor to girder is quite out of proportion to the span. The height of those marked with a * should be increased: the span could then probably be -- diminished. If the height is kept the same smaller spans should be used.

11. Nothing is said in the report about materials but - if good stone can be got cheaply it would be preferable to convert a good many of the girders into arched bridges

12. Station Buildings.

Booking office, waiting shed, goods shed, passengers-platform have been provided for. The roofs are of corrugated iron and are carried on old rails. The accommodation is sufficient for a railway of this kind.

13. Staff Quarters.

Station masters' and menials' quarters are provided - for.

14. Station Machinery.

Watering arrangements are provided at the terminal stations and at the midway station of Jaggampetta and -- Engine sheds at the terminal stations.

Home and distant signals are allowed for at all stations. I think the distants might be done away with.

No plans of stations are given but it appears that- a loop and a dead end has been allowed for at each station

Turn tables at the terminal stations are also provided.

15. Permanent-Way.

No description is given and no mention is made of - ballast.

16.

16. Rolling Stock.

4 locomotives, 18 passenger carriages and 42 goods wagons have been estimated for: to begin with 2 locomotives would be sufficient, 12 carriages and 20 wagons.

17. Fencing and Plant have not been allowed for: the former is not necessary.

18. Estimate.

The total is Rs 5,74,668 for the 23.35 miles: the rate per mile is Rs 24,600. I have little doubt that the line could be made for this. The Movi railway (original length 26 miles) on the same gauge was estimated to cost Rs 23,600/ per mile laid with 19 lbs rails on steel sleepers. The actual cost some years after opening when 29 lbs rails had been substituted for 50 miles (the line being now 94 miles long) was Rupees 23,400 per mile.

The Movi line was laid mostly at one side of the road - by the date in question December 1894 it had been much improved by curves being eliminated and grades flattened.

19. To return to the estimate in detail, Survey, Land, --- Formation, no alteration required.

20. Bridgework. This could be reduced if the line were laid on the district road assuming the culverts to be strong -- enough.

21. Electric Telegraph. omit; the line could be very well -- run on the staff system.

22. Ballast and Permanent Way.

If 19 lb rails are used which would be good enough to - start with the rate could be reduced to Rs. 7,700 per mile.

23. Stations and Buildings.

The stations and staff quarters need not be built at - once. The line would only be worked in day light at first and the staff could very well be housed in the villages and the stations

77P

stations could be mere huts. On the Morvi line after the line had been opened for some years the amount expended on this head was only Rs. 415 per mile. I should think -- Rs 1000 per mile would be ample.

24. Rolling Stock.

The Morvi estimate (or rather actual statement) gives Rs. 4,000/ per mile against the District Engineers Rupees 8,271/. If the stock noted in para 16 as sufficient to - start with is provided Rs. 4,000/ a mile would be sufficient.

25. Plant.

Rs. 200/ per mile should be entered.

The estimate could be reduced as under:-

	per mile. Rs	
Telegraph	415	
Ballast and Permanent Way ...	446	
Stations and Buildings ...	2938	
Rolling Stock	4000	
	6799	
Plant	200	6999

say 7000 per mile.

This would give a mileage rate for the whole line of 18,600 Rupees.

for Consulting Engineer for Rys:-

Ootacamund,
18th September/96.

78 P

SERIAL
No. 7

Light Railway from Samalkot to
Yeleswaram via Peddapur
and Jaggampeta.

H.E. the Governor
Hon. Mr. Elsis
Hon. Mr. Grose.

The Collector might be informed as suggested in para. 21.

A.G.H
23.9.96

RP
24/9/96

JG
27/9/96

Draft 1st 28/9

This branch line was brought -- forward by Mr. V.A.Brodie, President - of Godavari District Board in March 1896.

2. The proposal was for a light - Railway (gauge not specified) to run from Yeleswaram along or close to the district road to the East-Coast Railway station at Samalkot and to place the terminus between the railway station and the canal, so that goods could take either means of transit to Coconada or elsewhere.

3. It was proposed to construct -- and work the line by Local Agency, and to raise the necessary Capital (roughly estimated at 7 lakhs) by

1. A loan at 4¼% from Govt: of	3,00,000
2. Public subscription	3,00,000
3. Contribution from Dist: Fund	1,00,000
	7,00,000

4. It was urged that

1. Engineering difficulties would be small.
2. It would be a valuable feeder - to the East-Coast Railway.
3. It was well supported by both - the European and Native Chambers of Commerce of Coconada.

4.

HE – 22.9.96
Revd – 24.9.96 R 18/9

4. It would open up a rich district.

5. The traffic was large and would pay sufficient interest on the Capital

At a Meeting of the District Board Rs. 1,000 was voted for a - survey for a 2'-6" gauge railway which has now been made and plans and estimates have been submitted.

5. Meanwhile Mr:Brodie's letter with accompaniments was sent to the Manager East-Coast Railway for report.

6. The Manager reports that the loss to the East-Coast Railway by goods - which formerly came to Samalkot station in carts and will now go by -- canal is inconsiderable. He hesitates to express any opinion on the financial prospects of the railway and -- advocates a light railway on the -- broad gauge worked by the East-Coast Railway.

7. The East-Coast Railway Traffic Manager (Mr:Pope) considers that it will be a competitor and not a feeder to the East-Coast Railway, and that - owing to the short distance from Coconada goods will still go by cart if - the line is to be built to a differnt gauge, and the line will be a financial failure. Even if a third rail is laid to Coconada, he thinks it will still - fail to pay a reasonable interest on Capital. He does not discuss the proposal of a light railway on the Broad gauge.

798

8. The estimate and plans have now been submitted. A note by the Acting Consulting Engineer is attached. The District Engineer estimates the cost at Rs. 5,74,668 for a length of 23.35 miles or Rs. 24,600 per mile. If the line were made as cheaply as possible in the first instance, as recommended in the note attached, it is estimated that Rs. 18,600/ per mile would be - sufficient: this is assuming that -- there should be no staff quarters -- and that station buildings etc, should be reduced to their simplest expression. It would be safe to take Rupees 23,000/ per mile (a little less than the Morvi statement of actual expenditure). This would put the cost of the line at Rs. 5,37,000.

9. In order to earn 4% on this -- Capital, the nett earnings must be -- 17.7 rupees per mile per week, or allowing working expenses at 50%, gross - earnings must not be less than 35.4 rupees per mile per week.

10. The statement of traffic given by the Collector shows:-

	Maunds	Miles
Between Peddapuram and Samalkota	478000	4½
Yeleswaram and Samalkota	125000	24
Jaggampeta and Samalkota	20000	14

This is equal to 54,31,000 maund miles.

11.

11. The traffic Manager, East-Coast Railway takes 1/10 pie as the probable rate at which goods would have to be carried to over-come cart competition. He has such an obvious bias -- against the proposed scheme that I think this may be accepted with -- reserve, and 1/5 pie may be taken as a basis for calculation.

12. On this assumption the goods -- traffic would then earn (if it all came on the railway) Rs. 5,660 per annum. Taking the passenger traffic to be equal to the goods the gross receipts will be Rs. 11,320/ per annum, or about Rs,9/- per mile per week, whereas it ought to earn nearly four times this amount to pay 4% on the Capital.

13. Even this is a sanguine estimate for the Peddapuram traffic is the biggest item, and it is not at all -- likely that any of it will come on to the railway, if bulk is to be broken at Samalkota. Another alternative is to build a light line on the Broad gauge and work it with East-Coast Railway rolling stock.

14. If this were done probably this traffic would be secured, but in that case the cost of the line would be trebled and this idea may be dismissed from consideration.

15. There remains the proposal put forward by the Honourable Mr: Bliss to

80 P

to lay down a third rail to Coconada

16. The East-Coast Railway is laid for the most part with Vignolles -- rails and pea-pod steel sleepers; it would be impossible to put in a third rail, and the only plan would be to lay the 2'-6" track between the East-Coast Railway rails, which would be exceedingly inconvenient, as it would make both roads very difficult to -- pack.

17. The only feasible plan seems to be to replace the steel sleepers with wooden and lay a third (75 lb) rail. (This would be necessary to keep the rails the same height). It is difficult to estimate the cost of this operation. It may be put down roughly at Rs. 100,000 for the 10 miles to Coconada. Assuming that the delivery sheds of the East-Coast Railway can be used the total cost of the line from Yeeswaram to Coconada will be Rs. 6,37,000.

18. The goods receipts may be calculated as under:-

	Maunds	Miles
Between Yeleswaram and Coconada	125000	34
Between Jaggampeta and Coconada	20000	24
Between Peddapuram and Coconada	478000	14½

This amounts to 16,61,000 maund miles = Rs. 12,147 per annum at 1/5 -- pie

pie per maund per mile.

Add passenger traffic assumed equal in amount.

Annual gross receipts. Rs. 24,294

" Nett " " 12,147

(assuming working to be 50%)

To this must be added the toll that would be charged by the East-Coast Railway for allowing the branch traffic to use their line and goods accommodation. This would have to be settled by the Government of India. The Traffic Manager assumes that the branch would have to give 80% of its earnings but where he gets this figure I do not know.

19. Neglecting this item for the present Rs. 12,147/ will give a return of less than 2% on the assumed Capital of Rs. 6,37,000/.

20. It generally happens no doubt that when a line is opened traffic rapidly develops, and it is possible that more careful statistics may show a better result, but on those now submitted it would seem a very risky venture to construct the line on any gauge.

21. The Collector might be informed that the estimated traffic will not pay a reasonable interest on the Capital required for either a 2'-6" gauge a light Broad gauge or an extension of the 2'-6" to Coconada. He might be asked to collect further statistics if he is still sanguine that sufficient traffic is forthcoming.

81P

21/9

R.

Ootacamund,
September/96.

R. Form No. 14.

No. 1469 D

SERIAL No. 8

Government of Madras.

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

82P

To

THE President
District Board
Godavari

20 Septr 1896.

SIR.

With reference to your letters noted in the margin on the proposed light-railway from Samalkot to Yeleswaram via Peddapuram and Jaggampeta, I am directed to inform you that the Estimates to which will not pay a reasonable interest on the Capital required for either a 2'-6" gauge, a light broad gauge or an extended

Ref. on Cur. No. 1435 D.D. of 3.3.95
Do No. 726 D.D. of 9.4.96
Do No. 728 D.D. of 13.4.96
Ref. on Cur. No. 800 D.D. of 1.6.96

789 8/12/97

of the 2'-6" gauge to Cocanada, and I am to request that you will be so good as to cancel further statistics if you are quite sanguine that sufficient traffic is forthcoming.

Yours 2919

DO/20 2/10/96

Public Works

~~Local & Muni.~~ (1896) Department.

SERIAL No. 9

11180

CURRENT No.

SECRETARY TO GOVERNMENT 26 NOV 1896 LOCAL & MUNICIPAL DEPARTMENT

From The President Distt Board Godavari

No. 1471 dy 8-12-96

~~Order.~~

Transferred to the Public Works Department - in continuation of endorsement No. 722, dated 24th June 1896.

Secretary to Government

Reference No. 809 dy

Dated 19th November 1896.
Dep'd 21st Do

Received 9.12.96

Registered 9.12.96

Enclosures 2 3 (1 Plan)

Spare copies

7/12/96
Fort St. George
December 1896

To

The Public Works Department.

SUBJECT.

Submitting a plan and report for a deviation of the proposed Light Railway line at Peddapur and requesting to forward them to the Secretary, Railway Department, Government of India for sanctioning the deviation

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

Report on the proposed realignment through Peddapur of the Godavari District Board Light Railway.

As the principal merchants and land owners of Peddapur Taluq objected to the Station Site as being too far away from the business portion of the town, it was decided by the President of the District Board V. A. Brodie Esqr that a site near the Taluq Cutcherry should if possible be obtained. In consequence of which I made a Survey and have succeeded in bringing the line to within 500 feet of the Cutcherry, the gradients both in and out of the Station have been reduced, and the cost has been kept down as much as possible by utilizing the Village road from the Station to the point where the new line joins the old. The Extra Cost is caused by the heavy Cutting Comming into the Station. This was unavoidable in order to make a decent gradient, which being brought down to 1 in 125 the original Sections Showing 1 in 59. The Extra Cost incurred will with Compensation amount to Rs 14,000 about. Tracings of both plan and Sections for the deviation are attached.

M. I. C. E.
District Board Engr

GODAVARI DISTRICT.

Ref. our Cur. No. 800/D.B. 96

BOARD OFFICE 19th November 1896.
Dep^d 21st November 1896.

FROM

G. W. Elphinstone Esquire
President
District Board, Godavari

To

The Chief Secretary to Government,
Local and Municipal Department,
Madras.

SIR,

In Continuation of my letter Ref. our Cur. No. 800/D.B. dated 1.6.96. I have the honour to Submit herewith* a plan and report for a deviation of the proposed Light Railway line at Peddapore and request that the same may be forwarded with the original plans and estimates, to the Secretary Railway Department, Government of India for favour of Sanctioning the deviation.

I have the honour to be,
Sir
Your Most Obedient Servant
(Sd) G.W. Elphinstone
President
I/Executive
Vice President District Board

* Sent Separately

Ack 20.11

Current No. 11180 From President Dist Board Godavri submitting plan and report for proposed deviation of Samalkot-Yelesvaram Dr. at Peddapur for sanction of the Govt of India

SERIAL No. 10

(1) His Excellency the Governor
(2) The Honble Mr Bliss, C.S.I.
(3) The Honble Mr Croze, C.S.I.

The plans and report deal with the location of a Station at Peddapur. The President Dist Board Godavri was informed in this office letter No. 1469 D that Govt would not disposed to consider the scheme favourably unless further Statistics of traffic should show a better prospect of reasonable interest on capital being secured. This being so the necessity for further expenditure on detailed surveys seems unnecessary the money would be better spent in other making careful arrangements for collecting traffic. nor is it required that the deviation plans together with the original plans should be forwarded to Govt. of India) under. Shown to The President Dist Bd. may be informed accordingly

14/12

R. Form No. 14.

No. 236 C

SERIAL
No. 11

Government of Madras.

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

87 P

To

THE President
District Board
Godavari

15th January 1897

SIR,

With reference to your letter Dev. No. 800 / 996 of 19 instt, submitting for sanction a plan + report for a deviation of the proposed Tyre from Samalkot-Bezwada Railway, at Peddapuram and directs to invite your attention to Board No. 1669 D of 2nd ~~Septr~~ October 1896, in which you were informed that Government were not disposed to consider the scheme referred to therein

5/12/97

18/1

unless further statistics of Trappia Ihme shew a better prospect of reasonable interest on capital being secured. Misbeing so the necessity for further expenditure in detailed surveys seems unnecessary. The money could be better spent in making useful arrangements for Colombo Trappia. You request that the demolition plan together with the original plans should be forwarded to the Govt of Dutch is not understood. —

J.H. 9/1/97

Sealed 15/1/97

Public Works

Local & Muni. (1897) Department.

Ry CURRENT No. 207

89P

From

The President, District Board Kosgama.

No. 1292 dy 11-12-97
~~Order~~

Transferred to the Public Works Department.

Reference No. 153/883 of 97

H Tremenheere
Ag Secretary to Government

P.R. 16/12/97

Dated 16-11-97
Despd 17-11-97
Received 13.12.97
Registered
Enclosures 2 14.12.97
Spare copies

Copy No. 1157. Rd 17/12/97
Records.

Copy & E.R. with statistics in original

SUBJECT.

Submitting further statistics on the proposed Colombo &c. railway from Kamalkot to Kelaniwaram Line &c.

7 Rs
R.
19/12/97

To The Comptroller for Rys with E.R. & statistics in original

To

The Public Works Department

18/12/97

16/12/97

A 16/12/97
9/12/97.

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

SECRETARIAT TO GOVERNMENT
NOV 1917
JUDICIAL DEPARTMENT

1st April 1877	Fire wood	"	579¼ mds	"	"	Jaggampeta - Voddapm	8 miles 290
	Do		503			Evzaram Samarlakota	18 .
	Paddy		457¼			Samarlakota Jaggampeta	12 .
	Jungle wood		823			Jaggampeta Samarlakota	12 .
	Cholum		219½			Do Do	12 .
	Jaggery		686			Do Peddapm	8 .
	Do		488			Ysleswaram Do	18 .
	Bamboos		183			Do Samarlakota	22 .
2nd April	Fire wood		969½			Jaggampeta Samarlakota	12 . 370
	Paddy		503			Samarlakota Jaggampeta	12 .
	Do		381			Do Katrevulapalli	9
	Cholum		244			Jaggampeta Samarlakota	12 .
	Jaggery		853½			Do Peddapm	8 .
	Raggy		122			Do Do	8 .
	Bazula		335½			Ysleswaram Samarlakota	22
	Vegetables		219½			Do Peddapm	18
3rd April	Fire wood		1116			Jaggampeta Samarlakota	12
	Do		457¼			Do Peddapm	8
	Paddy		548¾			Samarlakota Jaggampeta	12
	Do		183			Do Katrevulapalli	9
	Jaggery		1021½			Jaggampeta Peddapm	8
	Do		335½			Evzaram Do	14
	Bamboo		457¼			Do Samarlakota	18
4th April	Fire wood		1152½			Jaggampeta Peddapm	8 428
	Cholum		396¼			Do Do	8

						Jaggampeta	9
7th	Jaggery	945		Jaggampeta	Peddapm	8	
	Rice	381		Samarlakota	Jaggampeta	12	
	Salt						

Appendix II

No 1. Form of Day Book

Description of Goods	Number in classified list	Weight (Railway maund 82⅔ lbs)	Details as to Carriage	When from: District or territory	When from: Town or village	Where to: District or territory	Where to: Town or village	Name and number of route	Long or short distance	Passengers	Remarks

1st April Fire wood " 579¼ mds " " Jaggampeta " 16

1877 Do

Paddy

Jungle

6t

2d

Do Devarapur 8.

Do Do 8.

Challem 22

3

4 Cops

Challem 396 1/4

	Jaggery	945	Do	Do	8	
	Soap Nut	195	Yelesvaram	Do	18	
	Tamarind	350½	Do	Do	18	
	Cotton	244	Covaram	Do	14	
	Gram	195	Do	Do	14	
	Redgram	268¼	Jaggampeta	Do	8	
	Rice	426¾	Samarlakota	Jaggampeta	12	
5th	Fire wood	1006	Jaggampeta	Samarlakota	12	412
	Paddy	426½	Samarlakota	Jaggampeta	12	
	Do	274	Do	Katrenilapalli	9	
	Jaggery	945	Jaggampeta	Peddapur	8	
	Rice	381	Samarlakota	Jaggampeta	12	
	Salt	195	Do	Do	12	
	Brass pot	170½	Peddapur	Jaggampeta	8	
	Iron rods	219½	Do	Do	8	
	Caster oil	121¾	Do	Do	8	
	Cocoanuts	97½	Do	Do	8	
	Tobacco	381	Samarlakota	Peddapur	12	
6th	Fire wood	805	Jaggampeta	Samarlakota	12	266
	Paddy	579¼	Samarlakota	Jaggampeta	12	
	Challem	195	Jaggampeta	Samarlakota	12	
		21656⅓			545	2034

1st April 1877 Fire wood " 579¼ mds " " "

		216561/3				545	2034
6th	Jaggery	853½	Jaggampeta	Samarlakota	12		
	do	549	Erraram	Peddapur	14		
	do	335½	do	do	8		
	Bagulu	488	Jaggampeta	Peddapur	8		
	Ginger	183	do	do	8		
	Tamarind	426½	Upleswaram	Peddapur	18		
7th	Fire wood	825	Jaggampeta	Samarlakota	12	244	
	Paddy	503	Samarlakota	Jaggampeta	12		
	Jungle wood	792½	Jaggampeta	Samarlakota	12		
	Chollem	618¼	do	do	12		
	Jaggery	579¼	do	Peddapur	8		
	do	701	Erraram	do	14		
		48¾	Jaggampeta	do	8		
8th	Fire wood	1207¼	do	Peddapur	8	284	
	Paddy	45¾	Samarlakota	Jaggampeta	12		
	do	365¾	do	Katreonlapelli	9		
	Jaggery	548¾	Erraram	Peddapur	14		
	do	838¼	Jaggampeta	do	8		
	Stones	219½	do	Samarlakota	12		
9th	Fire wood	946½	do	do	12	319	
	Paddy	304¾	Samarlakota	Erraram	18		
	Paddy	304¾	do	Jummapur	8		
	do	152½	do	Katreonlapelli	9		
	Jungle wood	1134	Jaggampeta	Peddapur	8		
	Ginger	195	do	do	8		
	Rice	341½	Samarlakota	Upleswaram	22		
	Leather	91½	Jaggampeta	Samarlakota	12		
10th	Fire wood	219½	do	do	12	221	
	Paddy	381	Samarlakota	Jaggampeta	12		
	do	183	do	Katreonlapelli	9		
	Chollem	73	Jaggampeta	Peddapur	8		
	Jaggery	677¼	do	do	8		
	Raggy	152½	do	do	8		
	Bagulu	183	do	do	8		
	Bamboo	335½	Upleswaram	do	18		
	Tobacco	268¼	Samarlakota	Jaggampeta	12		
11th	Fire wood	1152½	Jaggampeta	Peddapur	8	434	
	Paddy	762	Samarlakota	Jaggampeta	12		
	Jungle wood	951	Jaggampeta	Samarlakota	12		
	Chollem	381	do	Peddapur	8		
	Jaggery	602½	do	do	8		
		42262			994	3546	

		42262				994	3546
6 11"	Gram	76 1/4	Jaggampeta	Peddapuri		8	
	Red Gram	183	do	do		8	
	Tamarind	244	do	do		8	
	Tobacco	335 1/2	Errarum	do		14	
12"	Paddy	838 1/2	Samarlakota	Jaggampeta		12	340
	Jaggery	1006	Jaggampeta	Peddapuri		8	
	do	701	Yeleswaram	do		18	
	Rice	488	Samarlakota	Jaggampeta		12	
	Leather	152 1/2	Jaggampeta	Samarlakota		12	
	Tobacco	335 1/2	Samarlakota	Jaggampeta		12	
	Salt	228 1/2	do	do		12	
	Chilly	183	do	do		12	
13"	Fire wood	951	Jaggampeta	Samarlakota		12	314
	Paddy	945	Samarlakota	Jaggampeta		12	
	do	457 1/4	do	Katravulapalli		9	
	Jungle wood	1134	Jaggampeta	Samarlakota		12	
	Jaggery	762	do	Peddapuri		8	
	do	884	Yeleswaram	do		14	
	Bamboo	304 3/4	do	do		14	
	Iron rods	97 1/2	Peddapuri	Jaggampeta		8	
	Castor oil	45 3/4	do	do		8	
	Horns	91 1/2	Jaggampeta	Samarlakota		12	
14"	Firewood	945	do	do		12	203
	do	304 3/4	do	Peddapuri		8	
	Paddy	396 1/4	Samarlakota	Jaggampeta		9	
	Jungle wood	823	Jaggampeta	Peddapuri		8	
	Cholleru	548 3/4	do	Samarlakota		12	
	Gram	213 1/2	do	do		12	
	Tamarind	183	Yeleswaram	Peddapuri		18	
	Cotton	91 1/2	Errarum	Samarlakota		120	
15"	Fire wood	1134	Jaggampeta	do		12	179
	Paddy	503	Samarlakota	Jaggampeta		12	
	Jungle wood	548 3/4	Yeleswaram	Samarlakota		22	
	Ginger	341 1/2	Jaggampeta	Peddapuri		8	
	Bazaloo	579 1/4	Yeleswaram	do		18	
	Salt	266 1/4	Samarlakota	Yeleswaram		22	
	Rice	457 1/4	do	do		22	
		60044				1448	4582

		60044					
16th	Firewood	987 3/4	Jaggampeta	Peddapuri		1448	4582
	Paddy	167 2/3	Samarlakota	Katravulapalli		9	
	Jungle wood	914 1/2	Jaggampeta	Samarlakota		12	
	Jaggery	853 1/2	Do	Peddapuri		8	
	Do	625	Errarum	Do		14	
	Bamboo	503	Upalesvaram	Samarlakota		22	
	Tobacco	304 3/4	Samarlakota	Jaggampeta		12	
	Soap nuts	24	Jaggampeta	Peddapuri		8	
	Cotton seeds	48 3/4	Do	Peddapuri		8	
	Hemp	45 3/4	Do	Do		8	
	Caster oil	91 1/2	Peddapuri	Jaggampeta		8	
17th	Firewood	914 1/2	Jaggampeta	Samarlakota		12	175
	Jungle wood	567	Do	Do		12	
	Chollem	518 1/4	Do	Do		12	
	Jaggery	914 1/2	Upalesvaram	Peddapuri		8	
	Do	976	Jaggampeta	Do		8	
	Leather	244	Do	Samarlakota		12	
18th	Firewood	732	Do	Do		12	345
	Chollem	304 3/4	Do	Peddapuri		8	
	Jaggery	1006	Do	Do		8	
	Ginger	167 1/2	Jaggampeta	Peddapuri		8	
	Gram	91 1/2	Do	Do		8	
	Red gram	137	Do	Do		8	
	Bengal gram	61	Do	Do		8	
19th	Firewood	1097 1/2	Do	Samarlakota		12	260
	Paddy	503	Samarlakota	Jaggampeta		12	
	Jaggery	609 1/2	Jaggampeta	Peddapuri		8	
	Do	658 1/2	Errarum	Do		14	
	Tobacco	244	Samarlakota	Jaggampeta		12	
	Bagulos	381	Jaggampeta	Peddapuri		8	
20th	Firewood	732	Jaggampeta	Samarlakota		12	211
	Paddy	274	Samarlakota	Katravulapalli		9	
	Do	302 3/4	Do	Jaggampeta		12	
	Jaggery	579 1/4	Upalesvaram	Peddapuri		8	
	Do	350 1/2	Errarum	Do		14	
	Do	762	Jaggampeta	Peddapuri		8	
	Ginger	304 3/4	Do	Samarlakota		12	
21st	Firewood	804 3/4	Do	Peddapuri		8	237
	Paddy	701	Samarlakota	Jaggampeta		12	
	Do	426 1/2	Do	Katravulapalli			
		79974				1879	6051

			79974				1879	6051
16	21st	Chollem	152 1/2	Jaggampeta	Samarlakota	12		
		Jaggery	548 3/4	Do	Peddapuram	8		
		Bamboo	335 1/3	Erraram	Do	14		
			244	Jaggampeta	Do	8		
		Bazulo	695	Do	Samarlakota	12		
	22nd	Firewood	1244	Do	Do	12	206.	
		Paddy	381	Samarlakota	Upleswaram	22		
1		Jaggery	762	Erraram	Peddapuram	18		
		Do	677 1/4	Jaggampeta	Do	8		
		Rice	548 3/4	Samarlakota	Upleswaram	22		
		Salt	183	Do	Do	21		
17	23rd	Firewood	878	Jaggampeta	Samarlakota	12	241	
		Paddy	548 3/4	Samarlakota	Jaggampeta	12		
		Do	396 1/4	Do	Katrenilapalli	9		
		Jungle wood	786 1/2	Erraram	Samarlakota	18		
		Jaggery	854	Jaggampeta	Peddapuram	8		
		Do	609 1/2	Erraram	Do	14		
18		Bamboo	503	Do	Samarlakota	18		
		Tamarind	122	Jaggampeta	Peddapuram	8		
	24th	Firewood	732	Do	Samarlakota	12	230	
		Paddy	701	Samarlakota	Jaggampeta	12		
		Do	274	Do	Katrenilapalli	9		
		Jungle wood	658 1/2	Jaggampeta	Peddapuram	8		
		Chollem	396 1/4	Do	Samarlakota	12		
		Jaggery	579 1/4	Do	Peddapuram	8		
		Do	701	Erraram	Do	14		
		Stones	183	Jaggampeta	Samarlakota	12		
	25th	Firewood	1006	Do	Do	12	355	
		Paddy	228 1/2	Samarlakota	Jaggampeta	12		
		Chollem	503	Jaggampeta	Peddapuram	8		
		Jaggery	762	Do	Do	8		
		Do	960 1/4	Erraram	Peddapuram	14		
		Ginger	183	Jaggampeta	Do	8		
		Gram	335 1/2	Do	Do	8		
		Redgram	183	Do	Do	8		
	26th	Firewood	1006	Do	Samarlakota	12	308	
		Paddy	381	Samarlakota	Jaggampeta	12		
		Junglewood	804 3/4	Jaggampeta	Samarlakota	12		
		Do						
		Chollem	427	Do	Do	12		
		Jaggery	686	Do	Do	8		
		Do	548 3/4	Erraram	Peddapuram	14		
			102683			2371	7391	

		102683				2371	7391
26th	Onions	91½	Samarlakota	Jaggampeta	12		
	Dry Chilly	183	Do	Do	12		
	Castor oil tins	91½	Peddapur	Jaggampeta	8		
	Salt	36¾	Do	Do	8		
27th	Firewood	1097½	Jaggampeta	Peddapur	8	214	
	Paddy	609½	Samarlakota	Jaggampeta	12		
	Firewood	677¾	Erraram	Samarlakota	18		
	Jaggery	503	Katravulapalli	Do	9		
	Bamboo	381	Erraram	Do	18		
	Tobacco	91½	Samarlakota	Jaggampeta	12		
	Tamarind	183	Jaggampeta	Peddapur	8		
	Leather	122	Do	Samarlakota	12		
	Minor Produce	320	Do	Do	12		
28th	Firewood	407¼	Do	Peddapur	8	211	
	Paddy	503	Samarlakota	Jaggampeta	12		
	Firewood	830¾	Jaggampeta	Peddapur	8		
	Jaggery	808	Do	Do	8		
	Cotton	91½	Erraram	Do	14		
	Hemp	45¾	Do	Do	14		
	Horns	183	Jaggampeta	Samarlakota	12		
29th	Firewood	823½	Do	Do	12	203	
	Jaggery	442	Erraram	Peddapur	14		
	Do	670¾	Jaggampeta	Do	8		
	Rice	442	Samarlakota	Yelesvaram	22		
	Salt	109¾	Do	Do	22		
	Tobacco	183	Do	Do	22		
	Bazaloo	564	Jaggampeta	Peddapur	8		
	Negapatam wood	384	Do	Samarlakota	12		
30th	Fire wood	676¾	Do	Do	12	171	
	Paddy	572¾	Samarlakota	Jaggampeta	12		
	Do	244	Do	Katravulapalli	9		
	Cholam	183	Jaggampeta	Samarlakota	12		
	Jaggery	914½	Do	Peddapur	8		
	Do	457½	Erraram	Do	14		
	Red Gram	122	Jaggampeta	Peddapur	8		
	Nalla maddy	878	Do	Samarlakota	12		
		17,662 mds			2803	8190	
		4307					
	Average tons per day	143		Average mds per day	13	293	annual passing

1st April Fire wood " 579¼ mds

May

1st May 1807	Firewood	713½	Jaggampeta	Samarlakota	12	184
	Do	567	Do	Peddapuri	8	
	Paddy	321	Samarlakota	Jaggampeta	12	
	Do	127	Do	Katravulapalli	9	
	Jungle wood	289½	Jaggampeta	Samarlakota	12	
	Jaggery	524½	Yeleswaram	Peddapuri	18	
	Bamboos	198	Erraram	Peddapuri	14	
	Tamarind	166½	Yeleswaram	Do	18	
	Tobacco	121⅔	Samarlakota	Yeleswaram	22	
	Do	198	Do	Jaggampeta	12	
2nd	Firewood	786½	Jaggampeta	Peddapuri	8	309
	Paddy	335	Samarlakota	Jaggampeta	12	
	Jaggery	353⅔	Erraram	Peddapuri	14	
	Do	512	Jaggampeta	Do	8	
	Bamboo	564	Erraram	Samarlakota	18	
	Tamarind	280	Yeleswaram	Peddapuri	18	
	Do	219½	Jaggampeta	Do	8	
	Gingelly	316⅔	Do	Do	8	
	Grain	109⅔	Do	Do	8	
	Cattle	73	Do	Do	8	
					12	
	Jaggery wood	289½	Jaggampeta	Samarlakota	12	
	Cotton	137	Erraram	Peddapuri	14	
	Paddy	198	Jaggampeta	Do	18	
	Bamboo	207	Do	Samarlakota	12	
	Mixed Produce	350½	Do	Do	12	
3rd	Firewood	579	Do	Peddapuri	8	317
	Paddy	564	Samarlakota	Jaggampeta	12	
	Do	198	Do	Katravulapalli	9	
	Jungle wood	472½	Jaggampeta	Samarlakota	12	
	Jaggery	583	Do	Peddapuri	8	
	Do	475	Yeleswaram	Do	18	
	Bamboos	347½	Do	Do	18	
	Rice	365⅔	Samarlakota	Jaggampeta	12	
	Chilly	137	Do	Do	12	
	Leather	91	Jaggampeta	Samarlakota	12	
	Mangoes	121⅔	Erraram	Peddapuri	14	
4th	Firewood	640	Jaggampeta	Samarlakota	12	250
	Paddy	472½	Samarlakota	Jaggampeta	12	
	Do	335	Do	Katravulapalli	9	
	Do	289½	Do	Tummapuri	8	
	Jaggery	341	Erraram	Samarlakota	18	
	Do	487⅔	Jaggampeta	Peddapuri	8	
		14410⅔			507	1060

4:	Bamboos	1441 0 2/3				507	1060
	Tamarind	121 2/3		Yelesvaram	Samarlakota	22	
	Ginjeli	45		Jaggampeta	Peddapuram	8	
5:	Firewood	548		do	Samarlakota	12	
	do	573		Jaggampeta	Peddapuram	8	176
	do	378		do	Samarlakota	12	
	Paddy	91		do	do	12	
	do	304 2/3		Samarlakota	Katavarlapalli	9	
	Jaggery	560		do	Jaggampeta	12	
	Bamboos	152		Jaggampeta	Peddapuram	8	
	Tamarind	106 1/2		Errarum	Peddapuram	14	
	Tobbacco	182		Yelesvaram	Peddapuram	18	
	do	91		Samarlakota	Jaggampeta	12	
	Minor Produce	137		do	Yelesvaram	22	
6:	Firewood	506		Jaggampeta	Samarlakota	12	
	Paddy	304		do	Peddapuram	8	219
	Jaggery	48 1/2		Samarlakota	Jaggampeta	12	
	Muffle wood	316		Jaggampeta	Peddapuram	8	
	Bamboos	289 1/2		do	Samarlakota	12	
	Tamarind	274		Errarum	Peddapuram	14	
	Bazaloes	304		Yelesvaram	do	18	
				Jaggampeta	Samarlakota	12	

	Castor oil	137		Samarlakota	Jaggampeta	12	
	Gram	167 1/2		Jaggampeta	Peddapuram	8	
	Cotton	30 1/2		Errarum	do	14	
	Yegisy wood	24		Yelesvaram	Samarlakota	22	
	Soap nuts	243 2/3		Jaggampeta	Peddapuram	8	
	Ginger	60 2/3		do	do	8	
7:	Firewood	713 1/2		do	do	8	217
	Paddy	228 1/2		Samarlakota	Katavarlapalli	9	
	do	426 2/3		do	Jaggampeta	12	
	Jaggery	243		Yelesvaram	Peddapuram	18	
	do	500		Jaggampeta	do	8	
	Muffle wood	457		do	Samarlakota	12	
	Bamboo	365		Yelesvaram	Peddapuram	18	
	Tamarind	137		Errarum	Peddapuram	14	
	Horns	574		Jaggampeta	Samarlakota	12	77
8:	Firewood	237 2/3		do	do	12	205
	Ginger	76		do	do	12	
	Paddy	228 1/2		Samarlakota	Simmapuram	8	
	do	289 1/2		do	Katavarlapally	9	
	Tamarind	45 2/3		Jaggampeta	Peddapuram	8	
	Jaggery	402 1/3		Jaggampeta	Peddapuram	8	
	do	476		Errarum	do	14	
	do	353		Yelesvaram	do	18	
	Bamboos	137		do	Samarlakota	22	
		2616 5/6				1066	1877

		2616 1/6				1066	1877
	Firewood	567		Jaggampeta	Samarlakota	12	314
	Paddy	472 1/2		Samarlakota	Jaggampeta	12	
	do	137		do	Katravulapalli	9	
	Jaggery	670 2/3		Jaggampeta	Peddapuru	8	
	do	396		Erraram	do	14	
	do	365 2/3		Yeleswaram	do	18	
	do	289 1/2		Katravulapalli	do	6	
	Bamboo	201		Erraram	do	14	
	Bazula	442		Jaggampeta	Samarlakota	12	
	Negesy	198		do	Peddapuru	8	
10th	Firewood	597		do	do	8	295
	Paddy	350 1/2		Samarlakota	Yeleswaram	22	
	Jaggery	475		Yeleswaram	Peddapuru	18	
	do	170		Erraram	Samarlakota	18	
	do	304		Jaggampeta	Peddapuru	8	
	Impl wood	198		Yeleswaram	do	18	
	Bamboos	164		Erraram	Samarlakota	18	
	Tamarind	91		Yeleswaram	Peddapuru	18	
	Ginger	76		Jaggampeta	do	8	
	Soak nuts	12		do	do	8	
	Ginger oil	137		Samarlakota	Erraram	18	
	Mangoes	504		Jaggampeta	Samalakota	12	
	Hank	36 1/2		Erraram	Peddapuru	14	
	Gunnies Pradies	76		Jaggampeta	Samarlakota	12	
11th	Firewood	731		do	Peddapuru	8	232
	do	530		do	Samarlakota	12	
	Paddy	528 2/3		Samarlakota	Jaggampeta	12	
	Jaggery	597 1/2		Jaggampeta	Peddapuru	8	
	do	219 1/2		Erraram	do	14	
	do	280		Yeleswaram	do	18	
	Leather	76		Jaggampeta	Samarlakota	12	
	Horns	137		do	do	12	
12th	Firewood	677		do	do	12	304
	do	567		do	Peddapuru	8	
	Paddy	182		Samarlakota	Katravulapalli	9	
	Jaggery	316 2/3		Jaggampeta	Peddapuru	8	
	do	676 1/2		Erraram	do	14	
	Tamarind	137		Yeleswaram	do	18	
	Bazaloo	640		Erraram	Peddapuru	14	
13th	Firewood	713 1/2		Jaggampeta	Samarlakota	12	275
	Paddy	167 1/2		Samarlakota	Jaggampeta	12	
	do	350 1/2		do	Katravulapalli	9	
	Jaggery	321		Jaggampeta	Samarlakota	12	
	do	503		do	Peddapuru	8	
		40960 1/6				1599	3297

					1599	3297
	40960 1/6					
Jungle wood	548 2/3	Jaggampeta	Peddapuu		8	
Bamboos	321		Do		18	
Rice	573		Yeleswaram			
Mangoes	289 1/2	Samarlakota	Yeleswaram		22	
Leather	121	Jaggampeta	Peddapuu		8	
Gram	83		Samarlakota		12	
Ginjelly	109	Do	Peddapuu		8	
14th Fire wood	481 1/2	Do	Do		8	
Paddy	243	Do	Do		8	194
Jaggery	268	Samarlakota	Jaggampeta		12	
Do	304	Jaggampeta	Peddapuu		8	
Jungle wood	506	Do	Do		14	
Tamarind	121	Jaggampeta	Do		8	
Salt	281 1/2	Do	Do		8	
Castor oil	97 1/2	Samarlakota	Yelesvaram		22	
Iron rods	73	Peddapuu	Do		18	
Bengal gram	36 1/2	Do	Jaggampeta		8	
Yellow	85	Jaggampeta	Peddapuu		8	
15th Fire wood	896	Yelesvaram	Do		18	
Paddy	321	Jaggampeta	Do		8	238
Do	289 1/2	Samarlakota	Katamalapalli		9	
Jaggery	524 1/2	Do	Tummapuu		7	
		Yelesvaram	Peddapuu		18	
		Jaggampeta	Samarlakota		12	
Do	365 2/3	Jaggampeta	Do		8	
Jungle wood	597 1/2	Do	Samarlakota		12	
Tamarind	121 2/3	Erraram	Peddapuu		14	
Bamboos	475 1/2	Do	Do		14	
16th Jaggery	321	Jaggampeta	Peddapuu		8	365
Red gram	137	Do	Do		8	
Fire wood	713 1/2	Do	Do		8	
Do	786 1/2	Do	Samarlakota		12	
Bamboos	350 1/2	Erraram	Do		18	
Paddy	321	Samarlakota	Jaggampeta		12	
Bengal gram	60	Jaggampeta	Peddapuu		8	
Gram	91	Do	Do		8	
Ginjelly	167	Do	Do		8	
17th Rice	594 1/2	Samarlakota	Jaggampeta		12	375
Salt	219 1/2	Do	Do		12	
Cocoanut	182 2/3	Do	Do		12	
Tobacco	381	Do	Do		12	
Jaggery	321	Jaggampeta	Peddapuu		8	
Do	518 1/4	Erraram	Peddapuu		14	
Fire wood	987 3/4	Jaggampeta	Do		8	
Paddy	426	Samarlakota	Jaggampeta		12	
Brass pots	137	Peddapuu	Do		8	
Rice	335	Do	Yelesvaram		18	
	56096				2111	4469

		56096				2111	4469
18th	Gingili	213	Jaggampeta	Peddapur		8	220
	Hampe	106 1/2	Do	Do		8	
	Jaggery	353 1/2	Do	Do		8	
	Paddy	396	Samarlakota	Jaggampeta		12	
	Do	350 1/2	Do	Kotavalapalli		9	
	Jungle wood	768 1/4	Upeletwaram	Peddapuer		18	
	Jam arind	158	Erraram	Do		14	
	Bamboos	286 1/2	Do	Samarlakota		18	
	Tobacco	60	Samarlakota	Jaggampeta		12	
	Do	36	Do	Kotavalapalli		9	
19th	Jaggery	378	Jaggampeta	Peddapur		8	238
	Do	365 2/3	Erraram	Do		14	
	Firewood	640	Jaggampeta	Samarlakota		12	
	Do	786	Do	Peddapur		8	
	Paddy	198	Samarlakota	Timmapur		7	
	Bamboos	321	Erraram	Samarlakota		18	
20th	Salt	60	Samarlakota	Upeletwaram		22	
	Rice	365	Do	Do		22	
	Salt fishes	167	Do	Do		22	
	Dry Chillies	69	Do	Do		22	
	Tobacco	1062	Do	Jaggampeta		12	
	Firewood	677	Jaggampeta	Samarlakota		12	
		85	Jaggampeta	Peddapur		8	
	Jungle wood	878	Do	Samarlakota		12	
	Bamboos	321	Upesaraam	Peddapur		18	
	Paddy	350 1/2	Samarlakota	Jaggampeta		12	
	Jaggery	648	Erraram	Peddapur		14	
	Do	146	Jaggampeta	Do		8	
	Mangoes	45	Erraram	Do		14	
21st	Fire wood	677	Jaggampeta	Samarlakota		12	291
	Yegary wood	321	Do	Peddapur		8	
	Walla maddy	121	Do	Samarlakota		12	
	Leather	109	Do	Do		12	
	Storns	73	Do	Do		12	
	Paddy	442	Samarlakota	Jaggampeta		12	
	Jaggery	670	Jaggampeta	Peddapur		8	
	Do	292	Erraram	Do		14	
	Jamarind	91	Jaggampeta	Do		8	
	Grain	137	Do	Do		8	
	Soap nuts	45	Erraram	Do		14	
22nd	Jaggery	451	Jaggampeta	Do		8	167
	Do	378	Upesaraam	Do		14	
	Do	280	Kotavalapalli	Do		6	
	Jungle wood	578	Erraram	Samarlakota		18	
		71059				2658	5664

		71059			2658	5664
22nd	Fire wood	420	Jaggampeta	Samarlakota	12	
	Paddy	701	Samarlakota	Jaggampeta	12	
	Tobacco	137	Do	Katavarapalli	9	
23rd	Jaggery	317	Jaggampeta	Peddapuram	8	369
	Do	463	Upleswaram	Do	18	
	Fire wood	713	Jaggampeta	Do	8	
	Raggy	158	Do	Do	8	
	Red gram	109	Do	Do	8	
	Tamarind	158	Do	Do	8	
	Soap nuts	24	Do	Do	8	
	Bamboos	472½	Erraram	Samarlakota	18	
	Sugar Cane	137	Katavarapalli	Peddapuram	6	
	Paddy	350½	Samarlakota	Jaggampeta	12	
	Jungle wood	475½	Erraram	Peddapuram	14	
24th	Rice	548	Samarlakota	Jaggampeta	12	290
	Salt	158½	Do	Do	12	
	Tobacco	350½	Do	Do	12	
	Dry Chilly	137	Do	Do	12	
	Bazulas	842	Jaggampeta	Peddapuram	8	
	Fire wood	951	Do	Samarlakota	12	
	Paddy	503	Samarlakota	Erraram	18	
	Ginjelly	213	Jaggampeta	Peddapuram	8	
25th	Jaggery	402	Erraram	Peddapuram	14	269
	Do	268	Jaggampeta	Do	8	
	Vegetable wood	316	Do	Samarlakota	12	
	Fire wood	951	Do	Do	12	
	Paddy	321	Samarlakota	Jaggampeta	12	
	Soap nuts	73	Jaggampeta	Samarlakota	12	
	Leathes	137½	Do	Do	12	
26th	Gram	280	Do	Peddapuram	8	241
	Jaggery	287½	Do	Do	8	
	Do	670	Upleswaram	Do	18	
	Do	167½	Erraram	Do	14	
	Fire wood	933	Jaggampeta	Samarlakota	12	
	Tobacco	335	Samarlakota	Jaggampeta	12	
	Paddy	548	Do	Katavarlapalli	9	
	Do	670	Do	Jaggampeta	12	
27th	Rice	640	Samarlakota	Upleswaram	22	275
	Salt	402	Peddapuram	Do	18	
	Fire wood	1024	Jaggampeta	Samarlakota	12	
		88525			3128	7140

88525

29f	Jungle wood	731	Jaggampeta	Samarlakota	12	
	Jaggery	609	Do	Poddapur	8	
	Paddy	365	Samarlakota	Yelesvaram	22	
	Dry Chilly	335	Do	Do	22	
	Castor oil	46	Peddapur	Do	18	
	Brass pots	73	Do	Do	18	
	Iron Shields	36½	Do	Jaggampeta	8	
28-	Jaggery	547	Yelesvaram	Peddapur	18	311
	Do	487	Errarum	Do	14	
	Do	609	Jaggampeta	Do	8	
	Fire wood	804	Do	Samarlakota	12	
	Jungle wood	528	Do	Peddapur	8	
	Big Bamboos	335	Errarum	Do	14	
2	Leather	182	Jaggampeta	Samarlakota	12	11
	Horns	91	Do	Do	12	
29f	Jungle wood	677	Do	Do	12	291
	Bamboos	914	Errarum	Peddapur	14	
	Paddy	365⅔	Samarlakota	Jaggampeta	12	
	Jaggery	528	Jaggampeta	Peddapur	8	
	Do.	792½	Yelesvaram	Do	18	
	Fire wood	658½	Jaggampeta	Peddapur	8	

2-	D.		Do	Do	8	
	Ginjelly	341½	Do	Do	8	
	Bengal gram	73	Jaggampeta	Do		261
30f	Ginjelly	350½	Do	Do	8	
	Tamarind	274	Do	Do	8	
	Grain	73	Do	Do	8	
	Red gram	73	Do	Do	8	
	Jaggery	731	Do	Do	18	
	Do	365	Yelesvaram	Samarlakota	8	
	Fire wood	804	Jaggampeta	Peddapur	14	
	Bazulas	402	Errarum	Jaggampeta	12	393
31st	Paddy	701	Samarlakota	Kakarlapalli	9	
	Do	396	Do	Jaggampeta	12	
	Salt	146	Do	Do	12	
	Tobacco	243⅓	Jaggampeta	Samarlakota	12	
	Bazulas	677	Do	Peddapur	8	
	Fire wood	987	Errarum	Do	14	
	Bamboos	599½	Do	Do	14	
	Jaggery	686	Peddapur	Jaggampeta	8	
	Castor oil	182				
		10653			3603	8396
		or			or	or
		3899				270. average
	Average tons per day	125¾		Average miles per day	12	

1st	Cholleru	350	Jaggampeta	Samarlakota	12	251		
	Jaggery	823	Do	Peddapuru	8			
	Do	533 1/2	Erraram	Do	14			
	Firewood	1024	Jaggampeta	Samarlakota	12			
	Paddy	518	Samarlakota	Jaggampeta	12			
	Tamarind	45 1/2	Jaggampeta	Peddapuru	8			
	Leather	91	Do	Samarlakota	12			
	Mangos	91	Do	Peddapuru	8			
	Barley	136 1/2	Do	Do	8			
	Iron rods	30	Peddapuru	Jaggampeta	8			
	Gingeli	213	Jaggampeta	Peddapuru	8		12-4	
2nd	Firewood	1170 1/2	Do	Samarlakota	12	331		
	Firewood	518	Do	Peddapuru	8			
	Betel Nuts	182	Do	Do	8			
	Gingeli	294	Do	Do	8			
	Red Gram	91	Do	Do	8			
	Ragi	182	Do	Do	8			
	Soap Nuts	91	Do	Do	8			
	Barley	213	Do	Do	8			
	Paddy	518	Samarlakota	Jaggampeta	12			

3rd	Rice	518	Samarlakota	Yelesvaram	2			
	Salt	36 1/2	Do	Do	22			
	Tobacco	91	Do	Do	22			
	Firewood	1097	Jaggampeta	Samarlakota	12			
	Jaggery	731	Do	Peddapuru	8			
	Do	503	Erraram	Do	14			
	Dry Chillies	91	Peddapuru	Eleswaram	18			
	Dry fishes	73	Samarlakota	Do	22			
	Brass pots	36 1/2	Peddapuru	Do	18			
4th	Jaggery	852	Jaggampeta	Peddapuru	8	226		
	Do	564	Erraram	Do	14			
	Firewood	969	Jaggampeta	Do	8			
	Bazaloo	426	Do	Samarlakota	12			
	Paddy	503	Samarlakota	Jaggampeta	12			
	Cotton Seeds	45 1/2	Jaggampeta	Peddapuru	8			
	Tamarind	91	Do	Do	8			
	Cholleru	335	Do	Samarlakota	12			
	Dry fishes	45 1/2	Samarlakota	Katavulapalli	9			
	Barley	91	Peddapuru	Do	6			
	Bamboos	304	Erraram	Peddapuru	14			
		14500			459	1038		

7:	Schilling	48	Gebäude	Jahresbericht	8	1918					
	Lohn	383	Bauarbeiter	do	12						
	do	91	do	Jahresbericht	12						
	Zement	637	Fenster	Schadenfälle	9						
	Mauerwerk	528	Türen	Lohn	8						
	Baustelle	394	Dach	do	8						
	Arbeiter	45½	do	Bauarbeiter	12						
	Baustelle Nord	91	Gebäude	Gebäude	8						
	Bagger	121	Zement	Zement	12						
	Gemeinde Blumberg	48	Mauerwerk	do	12						
	Mann Regen	618	do	Jahresbericht	12						
8:	Mörtel Sand	731	Jahresbericht	do	12						
	Fundament	475½	do	Lohn	8						
	Beton	893	Bauarbeiter	Türen	14						
	Lohn	457	Türen	Schadenfälle	12						
	Arbeiter	812	Schadenfälle	Jahresbericht	8						
	Gebäude	330	Jahresbericht	Dach	8						
	Dach	242	Schadenfälle	Bauarbeiter	12						
9:	Regen	890	Jahresbericht	Schadenfälle	9						
	Arbeiter	487	Schadenfälle	Lohn	8						
	Fundament	166	Jahresbericht	Gebäude	8						
	Mörtel Sand	341½	Gebäude	Schadenfälle	12						
	Gebäude	48	Schadenfälle	Jahresbericht	12						
	Lohn	383	Jahresbericht	Schadenfälle	12	2021					
	Arbeiter	91	Schadenfälle	Gebäude	8						
	Zement	637	Gebäude	Jahresbericht	12						
	Mauerwerk	528	Jahresbericht	Schadenfälle	12						
	Beton	394	Schadenfälle	Jahresbericht	8						
	Baustelle	45½	Jahresbericht	Gebäude	12						
	Bagger	91	Gebäude	Jahresbericht	8						
	Gemeinde Blumberg	48	Jahresbericht	Zement

		31446				884	2314
9th	Fire wood	933	Jaggampeta	Samarlakota		12	
	Leather	144	do	do		12	
	Onions	45 1/2	Samarlakota	Jaggampeta		12	
	Castor oil	68	Poddapur	do		8	
	Paddy	182	Samarlakota	Immapur		7	
	Soap Nuts	46 1/2	Erraram	Samarlakota		18	
10th	Rice	396	Samarlakota	Yelesvaram		22	218
	Paddy	609	do	Jaggampeta		12	
	do	182	do	Tillamapur		7	
	Big bamboos	695	Erraram	Poddapur		14	
	Jaggery	321 1/2	do	do		14	
	do	536 1/2	Jaggampeta	do		8	
2	Bajnloo	294	do	Samarlakota		12	
	Sam arind	34	do	Poddapur		8	
	Salt	36 1/2	Poddapur	Yelesvaram		18	
11th	Cyram	45 1/2	do	Katravulapalli		6	246
	Cholam	96	do	Samarlakota		12	
	do	396	Jaggampeta	Katravulapalli		9	
	Onions	48	Samarlakota	do		6	
	Salt	24	Poddapur	Samarlakota		12	
	Fire wood	792	Jaggampeta				
	Jaggery	579	do	Poddapur		8	
	do	396	Erraram	do		14	
	Bamboo	350	do	do		14	
	Gunjali	243	Jaggampeta	do		8	
12th	Paddy	98	Samarlakota	Immapur		7	287
	do	321	do	Katravulapalli		9	
	Fire wood	933	Jaggampeta	Samarlakota		12	
	Jaggery	457	do	Poddapur		8	
	Gunjali	243	do	do		8	
	Cholam	390	do	Samarlakota		12	
	Tobacco	146	Samarlakota	Jaggampeta		12	
	Minor produce	98	Jaggampeta	Samarlakota		12	
13th	Ragi	167	do	Poddapur		8	330
	Cholam	150	do	do		8	
	Bengal gram	36 1/2	do	do		8	
	Jungle wood	625	do	Samarlakota		12	
	Paddy	189	Samarlakota	Katravulapalli		9	
	Bamboos	457	Erraram	Poddapur		14	
	Bajnloo	219	do	Samarlakota		18	
	Nallamaddy	350	Yelesvaram	do		22	
		43969				1342	33205

1599

		43969			1345	0345
13th	Tamarind	134	Yelenwaram	Poddapun	18	
	Cotton Seeds	30	Do	Do	18	
	Onions	36½	Samanlakka	Jaffnampeta	12	
	Soy beans	12	Do	Do	12	
			Do	Do	12	289
14th	Paddy	426		Samanlakka	12	
	Leathers	73	Jaggampeta	Jaggampeta	8	
	Salt	48	Poddapun	Samanlakka	12	
	Firewood	1170½	Jaggampeta	Poddapun	8	
	Bagalee	300	Do			
	Onions	36½	Samanlakka	Jaggampeta	12	
	Iron rods	75	Poddapun	Do	8	
	Jaggery	182	Jaggampeta	Poddapun	8	
	Ginger	121	Do	Do	8	
2			Do	Samanlakka	12	188
15th	Ginger	358½	Do	Do	12	
	Firewood	731	Do	Do	12	
	Chalem	280½	Do	Poddapun	8	
	Barley	189	Samanlakka	Jaggampeta	12	
	Tobacco	158½	Jaggampeta	Poddapun	8	
	Red gram	109	Do	Do	8	
	Jaggery	292½	Erraram	Do	14	
	Do	281½	Do			
	Green gram	24	Erraram	Poddapun	14	
	Soap nuts	30	Do	Samanlakka	14	
16th	Firewood	747	Erraram	Poddapun	14	178
	Firewood	914½	Jaggampeta	Samanlakka	12	
	Barley	182	Do	Poddapun	8	
	Hemp	73	Do	Do	8	
	Horns	83	Do	Samanlakka	12	
	Paddy	294	Samanlakka	Kabaralapelle	9	
17th	Rice	487	Do	Yelenwaram	22	186
	Tobacco	73	Poddapun	Do	18	
	Jaggery	268	Erraram	Poddapun	14	
	Castor oil	73	Poddapun	Elenwaram	18	
	Firewood	603	Jaffnampeta	Poddapun	8	
	Green	48	Do	Samanlakka	12	
	Tamarind	82	Do	Poddapun	8	
	Chillies	378	Do	Samanlakka	12	
	Cotton	30	Do	Do	12	
18th	Jaggery	838	Jaggampeta	Poddapun	8	197
	Bamboos	579	Do	Do	8	
	Firewood	1170½	Do	Samanlakka	12	
	Paddy	402	Samanlakka	Jaffnampeta	12	
	Tamarind	78	Erraram	Poddapun	14	
		56486			1875	4333

15-9

		56486				1845	433	
19th	Paddy	259		Samarlakota	Katavarulapalli	9	203	
	Firewood	1152½		Jaggampeta	Samarlakota	12		
	Bamboos	274		Erraram	Peddapur	14		
	Cholem	578		Jaggampeta	Samarlakota	12		
	Jaggery	390		do	Peddapur	8		
	Mano Produce	213		do	Samarlakota	12		
	Bonupals	36½		Erraram	do	18		
	Hand to	48		Jaggampeta	do	12		
	Maupes	73		Erraram	Peddapur	14		
20th	Barley	198		Jaggampeta	do	8	360	
	Cholleru	182		do	do	8		
	Fruitwood	769½		do	Samarlakota	12		
	Yellow wood	274		do	Peddapur	8		
	Tobacco	158½		Samarlakota	Jaggampeta	12		
	Green gram	169		Jaggampeta	Peddapur	8		
	Gram	36½		do	do	8		
	Ragy	73		do	do	8		
	Pellu	36½		do	do	8		
21st	Jaggery	666		Jaggampeta	Peddapur	8	192	
	do	609		Erraram	do	14		
	Firewood	1134		Jaggampeta	Samarlakota	12		

	Paddy	387		Samarlakota	Srimanyi			
	do	548		do	Yelesvaram	22		
	Pony Bamboos	503		Yelesvaram	Peddapur	18		
	Cholem	228½		Jaggampeta	Samarlakota	12		
22nd	Rice	579		Samarlakota	Yelesvaram	22	250	
	Paddy	503		do	do	22		
	Tobacco	381		do	do	22		
	Brass Pots	121		Peddapur	do	18		
	Jaggery	533½		Yelesvaram	Pedapur	18		
	do	300		Jaggampeta	do	8		
	Firewood	822		do	do	8		
	Salt	60½		Samarlakota	Yelesvaram	22		
	Bamboos	457		Erraram	Samarlakota	18		
23rd	Jaggery	442		Jaggampeta	Peddapur	8	163	
	Firewood	658		do	do	8		
	Fruitwood	634		do	Samarlakota	12		
	Hams	73		do	do	12		
	Jaggery	300		Erraram	Peddapur	14		
	Bamboos	346½		do	Samarlakota	14		
	Cholleru	195		Jaggampeta	do	12		
	Hemp	48		Katavarulapalli	Peddapur	6		
		7080				2374	5501	

		56486					1845	4330
		72080					2374	5501
24th	Rice	321	Samarlakota		Yeleswaram		22	187
	Salt	73	Peddapur		do		18	
	Tobacco	121	Samarlakota		do		22	
	Brass pots	36½	Peddapur		do		18	
	Cholum	528	Jaggampeta		Samarlakota		12	
	Bagaloo	670½	do		do		12	
	Gingeli	238	do		Peddapur		8	
	Tamarinds	73	Yeleswaram		do		18	
	Paddy	335	Samarlakota		Jaggampeta		12	
25th	Cholum	167	Peddapur		Katravulapalli		6	200
	Ragi	91	do		do		6	
	Rice	121	do		do		6	
	Paddy	578	Samarlakota		Jaggampeta		12	
	Bagaloo	457	Jaggampeta		Samarlakota		12	
	Firewood	402	do		Peddapur		8	
	Bamboo	300	Errawaram		do		12	
	Gingeli	182	Timmapur		do		4	
	Iron rods	36½	Peddapur		Katravulapalli		6	
26th	Jaggery	396	Jaggampeta		Peddapur		8	207
	Firewood	786½	do		do		8	
	Cholum	528	do		Samarlakota		12	
	Minor Produce	170½	do		do		12	
	Leathers	97	do		do		12	
	Paddy	121	Samarlakota		Jaggampeta		12	
	Gingeli	242	Jaggampeta		Peddapur		8	
	Redgram	97	do		do		8	
	Tobacco	97	Samarlakota		Yeleswaram		22	
	Salt	36½	Peddapur		do		18	
27th	Cholum	268	Jaggampeta		Peddapur		8	344
	Gingeli	146	do		do		8	
	Ragi	242	do		do		8	
	Jungle wood	670½	Errawaram		Samarlakota		18	
	Firewood	983	Jaggampeta		do		12	
	Soap nuts	18	do		Peddapur		8	
	Gram	73	do		do		8	
	Paddy	381	Samarlakota		Katravulapalli		9	
28th	Jaggery wood	820	Jaggampeta		Samarlakota		12	194
	Jungle wood	579	do		do		12	
	Jaggery	274	do		Peddapur		8	
	Paddy	335	Samarlakota		Jaggampeta		12	
	Beads	45½	Peddapur		do		8	
		83647					2824	6633

		83647				28241	6633	
28th	Dry Chilly	48	Pedda pm	Jaggampeta	8			
	Gingili	365	Jaggampeta	Pedda pm	8			
	Yellow	24	do	do	8			
29th	Firewood	677	do	do	8	120		
	Tamarind	289½	do	do	8			
	Paddy	350½	Samarlakota	Jaggampeta	12			
	Jaggery	296	Jaggampeta	Pedda pm	8			
	Tobacco	73	Samarlakota	Jaggampeta	12			
	Bamboo	350½	Errarum	Pedda pm	14			
	Mixed Produce	85	do	Samarlakota	8			
30th	Gingili	300	Jaggampeta	Samarlakota	12	699		
	Barley	46	do	do	12			
	Paddy	387	Samarlakota	Katavullapalle	9		17-8	
	Gram	146	Jaggampeta	Pedda pm	8			
	Firewood	768	do	do	8			
	Mixed produce	48	do	Samarlakota	12			
	Carakka fruits	60	do	Peddapur	8			

88754
Or
3322

Average tons per day 110

30 457

Average lbs per cart 12 231

Or.

District Board Engineer

Ref.on Cur.No.153/D.B.of 97.

Godavari District,
Board Office, D/ 16-11-97.
Despd. 17

LOCAL & MUNICIPAL DEPT.
CURRENT No. 30902

From

V.A. Brodie Esquire,
President, District Board,
C O C O N A D A .

To

The Secretary to Government,
Local and Municipal Department,
M A D R A S .

Sir,

In reference to the Public Works Department Nos 1469 D. dated 15- 1- 97 and 2369 dated 2-9-96, I have the honor to submit herewith further statistics of traffic collected as directed in the letters above referred to. I am quite hopeful from the information therein contained that the proposed Railway would pay a reasonable rate of interest on the capital invested from the start and therefore trust that Government will be pleased to see its way to recommending its sanction.

I have the honor to be,
Sir,
Your most obedient servant,
(Sd.) V.A. Brodie.
President, Dist. Board.

Vice President, Dist. Board.

ent.

2t

6362/-