M.R.O. 1—77,003—8-6-37.

(1) Number of pages_____

(2) Date of repair_____

(3) Initials of the Reference_____

MADRAS RECORD OFFICE.

Government of Madras.

DEPARTMENT.

G.O. No. 2246 47 Press Mis.

Dated 18 7 .

Not to be folded or roughly handled

No. 37. Read the following letter from the Deputy Consulting Engineer for Railways, to the Secretary to Government, Public Works Department, dated Madras, 9th August 1871, No. 346:—

I HAVE the honour, in reply to the Government Order No. 318, dated 2nd February 1871, to forward the correspondence noted marginally on the subject of the train service on the Great Southern of India Railway.

Letters from Agent and Manager.
No. 3,944 and enclosure.
,, 3,996 ,,
,, 4,038 ,,
,, 4,126 ,,

2. The Government will observe that the remarks in paragraph 5 of the letter No. 2,008 R., dated 13th December 1870, were based on the assumptions, (1) that the line east of Trichinopoly is practically level, whereas the ruling gradient really is 1 in 240 on a curve for a length of 1½ mile, and (2) that the traffic statements for the first half of 1869, which the Agent and Manager considers exceptionally low and which was actually 24 per cent. less than those for the corresponding half of 1870, were taken on the basis of the calculations shown in paragraphs 6 and 7.

3. It will be observed that the maximum loads fixed for the several classes of engine are as follow:—

		East of Caroor.	West
6 Wheel coupled	15″ cyl.	30 vehicles	20
4 ,, ,, ...	,, ,,	20	16
4 ,, ,, ...	14″ ,,	16	12

and that these have been practically determined by the ruling gradients on the respective sections.

4. The Agent and Manager is of opinion that no economy would result from having additional engine-power available at the inclines, that assuming that the trains must run in connection with those of the Madras Railway, any saving effected by reducing the speed would be counterbalanced by the increased cost due to runing the train after dark.

5. With reference to the arrangements in force on the Port Canning State Railway, he shows that the present system on the Great Southern of India Railway compares favourably, as regards the cost per mile, with that recently introduced on the Port Canning line, and strongly deprecates any diminution of the train service on the ground that, in his opinion, the trains more than pay their cost, while every effort should be made to develope the traffic by giving the greatest possible amount of accommodation to the public.

6. It does not thus appear to me that a modification of the present traffic arrangements would prove of advantage. The fast trains, Nos. 3 and 5, between Negapatam and Tanjore, have not been run regularly, but only occasionally; they do not represent a part of the ordinary train service, and I have asked the Agent to take them out of the time-table.

From the Agent of the Great Southern of India Railway, to the Acting Consulting Engineer for Railways, dated Negapatam, 17th March 1871, No. 3,944.

I HAVE the honour to state, in reply to your letter No. 42, of the 6th ultimo, that I consider our net receipts would be decreased in the event of one train daily in each direction ceasing to run, and the remaining train being timed to perform its journey at a lower rate of speed.

2. The Deputy Secretary to the Government of India in the Public Works Department, (Railway,) appears to have based his remarks upon the traffic statements for the first-half of the year 1869. The goods' traffic at that time was exceptional. During the first-half of 1870 an increase of 24½ per cent. was obtained.

3. The Locomotive Superintendent's report (copy attached) shows that it would be impossible to work over certain sections of the line, in one train daily, the extent of traffic which presented itself during the latter period.

4. No saving of station staff would be caused by the taking off of a train. No larger number of poinstmen, porters, and signalmen are needed for two than would be needed for one train daily in each direction. Regarding semaphore signals, if these have been dispensed with saving could have been effected. You will no doubt have read in the Joint Report of Colonel Strachey, Colonel Dickens, and Mr. Rendel upon the State Railways the following paragraph :—"Semaphore signals "may also be dispensed with, except perhaps at important junctions. They are not used on the "Norwegian Railways nor on many of the Continental lines where traffic is light."

5. The Resident Engineer informs me that if but one train daily ran the services of all gatemen not employed at public road crossings could be dispensed with, if Government sanctioned the care of the smaller gates being entrusted to the platelayers.

6. In conclusion, I wish to state that it would be possible to dispense with a second train between Trichinopoly and Erode for a few weeks during the year, but I would deprecate making such a change, as I feel sure that the loss of revenue which would result in curtailing the accommodation now offered to the district would certainly exceed the saving in working expenses caused by the alteration.

From the Locomotive Superintendent, to the Agent of the Great Southern of India Railway, dated Negapatam, 24th February 1871, No. 106.

YOUR No. $\frac{3}{3}\frac{1}{9}\frac{5}{7}$ with Proceeding of Madras Government, No. 318, 2nd February 1871, returned.

I am of opinion that it would be a practical impossibility to work our traffic between Trichinopoly and Negapatam during eight months of the year with one train a day. I find that for the first half of 1870 the average daily number of vehicles on our trains between Negapatam and Trichinopoly was 69 vehicles and between Trichinopoly and Erode 35 vehicles. A statement got out for the Madras Government a few weeks since, showed that the average daily train load from July 1869 to June 1870 was 17·1 vehicles per train. There is a very material error in the paper under consideration. In paragraph 5 it states "while the country east of Trichinopoly is described as level." There are three inclines, rise and fall, between Negapatam and Trichinopoly, namely—

At Tanjore.—East-rise 1 in 240 for 1½ miles. West-fall 1 in 300 1¾ miles.

At Cottaraputty.—East-rise 1 in 300 for 1¼ miles. West-fall 1 in 300 1⅞ miles.

At Terooverembore.—West-rise 1 in 240 for 1¼ miles.

The loads hauled by our engines are—

	East of Caroor.		West of Caroor.
6 wheels coupled	15″ cylr.	30 vehicles	20 vehicles.
4 do.	do.	20 ,,	16 ,,
do.	14″ ,,	16 ,,	12 ,,

Now, as to the hauling capability of our engines, for the question of reducing our trains practically resolves itself into this form. The theoretical tractive power of an engine is calculated from a well known formula based upon certain conditions ; when those conditions are variable, the value of a theoretical deduction of tractive power becomes a secondary consideration, the practical and economical effectiveness of the engine being paramount, which latter condition is governed by the greatest load an engine can haul up the steepest incline on her journey. This principle has been most carefully watched upon our line, and the result has been that our engines have been loaded to the number of vehicles with which they can perform their duty most economically and effectually. Tanjore incline, in the middle of the run from Negapatam to Trichinopoly, is a most difficult and trying piece of road, an incline of 1 in 240 for 1½ miles *on a curve*. Granted our engines at a reduced speed could haul more vehicles over the greater part of the line east of Trichinopoly, but what would be the result of such a load upon an engine up this incline. Very simple reasoning will show that if such a load distressed an engine, to the extent of springing her tube plate, or drawing her tubes, etc., (which is of frequent occurrence to an overloaded engine, and has occurred several times on our line,) more damage is done to the engine, and more expense entailed in the repair than a hundred times the revenue derived from the overload. If, therefore, our engines are now running with their maximum economical loads, and such I consider to be the case, we cannot work the traffic with one train. West of Caroor it might be done with specials now and then, but not with any decreased expenditure, for, in view of being called upon to work ballast and material trains for the new south line, I should be training a staff to meet those requirements, and could not, therefore, dispense with any of my men. I am now working very short-handed ; at times I have three and four men down with fever at Trichinopoly, who must be replaced by others who are the only spare men I have. In points of economy of fuel, I do not think it would be to any appreciable extent, the extra loads would consume the fuel saved by the engines taken off the trains, or nearly so. Nor would there be any saving in wear and tear by the reduced speed from the cause I have already pointed out, of strain on the engines on the inclines. For eight months in the year our trains are fully loaded, and have almost daily to refuse trucks at stations. I do not think it possible to work our traffic with one train, nor, in the event of only one train being run, do I think the saving would be in any proportion to the risk run from over-loads.

From the Agent of the Great Southern of India Railway, to the Acting Consulting Engineer for Railways, dated Negapatam, 25th April 1871, No. 3,996.

I HAVE the honour to inform you, in reply to your letter No. 96, of the 31st ultimo, that the trains are at present run at so low a rate of speed over this line that I do not think any appreciable saving would be effected by adopting a still lower rate. The through train cannot leave Erode earlier than it does, as it runs in connection with the train from Madras and carries the mail ; if the speed was reduced this train would be travelling over the eastern end of the line after sunset, and we should have to incur extra expenditure in staff and stores in consequence.

2. With regard to your inquiries respecting the maximum loads fixed for the several classes of engines, I understand from the Locomotive Superintendent that our engines *could* draw a larger number of vehicles over the level portions of the line at a lower rate of speed ; but that no saving would be effected by increasing the maximum, as spare engines would then have to be kept in readiness to assist the trains over the steep gradients.

3. The traffic to which I referred, when I spoke with you in Madras, is the "short" or local passenger traffic. I am of opinion that if the morning train from Trichinopoly to Erode, and the afternoon train from Erode to Trichinopoly, be taken off, we shall lose nine-tenths of the station to station passenger traffic. For instance, the people who start in the morning for the Magistrates' and Law Courts at Moosery return in the evening to their homes, the one train a day running as it would do at an inconvenient hour (inconvenient for local purposes, though best suited for through traffic) would not suit such traffic, and it would be lost to the railway.

From the Agent of the Great Southern of India Railway, to the Acting Consulting Engineer for Railways, dated Negapatam, 22nd May 1871, No. 4,038.

In reply to the enquiry contained in your letter No. 135, of the 4th instant, I have to state that I do not think a totally different kind of traffic arrangement to that we now have in force would be more suitable to the wants of this line.

2. Attention has been called to the traffic arrangement of the Calcutta and South Eastern (State) Railway, but I find that although the receipts on that line are some 15 per cent. less than the income of the Great Southern, the staff expenditure of the first named is much heavier than that of the second.

3. For instance, the former's cost of purely traffic staff is, in round numbers, Rupees 1,500 per mensem, against the Great Southern charge of Rupees 3,600, or Rupees 53½ per mile against Rupees 21½ per mile, and this too when all loading and unloading of goods on the State Railway must be performed by the public.

4. Again, the monthly cost of the Locomotive and Carriage and Wagon Departments, exclusive of supervision, is returned on the State line as Rupees 567, or Rupees 20¼ per mile; similar service on the Great Southern does not cost quite Rupees 15 per mile.

5. And the State line's maintenance staff, less supervision, costs Rupees 47 per mile, against the Great Southern's Rupees 25½ per mile.

6. With regard to the second paragraph of your letter under reply. Return tickets are issued only on occasion of feasts being held at some station or in its vicinity. Last month the earnings from passenger traffic alone of Nos. 1 and 8 trains, which are used principally for working goods traffic, amounted to 14 annas 4 pie per mile. The cost of fuel and stores consumed in haulage would not amount to half that sum per mile. I have before explained no saving of staff would result from the taking off of these trains, as Drivers, Guards, etc., would still have to be kept on to run the specials which would be required to clear the line.

7. I am not sure that I correctly read your third paragraph to mean that Nos. 4 and 6 trains might be discontinued, by substituting special trains to run when required. To make such a change would be most impolitic. As before stated (see my letter No. 3,944), the second train on the western section *could* be dispensed with for a few weeks during the year; but no such alteration could be made at the eastern end of the line. I do not advocate, however, the taking off of the Nos. 1 and 8 trains; they earn money and are undoubtedly a convenience to the district.

8. My desire always has been, and will continue to be, to show an increased income in the Company's revenue statements, and it is satisfactory to learn that the Governor-General in Council recognises the ready spirit evinced by the Railway authorities to meet the common object of all economical management. As stated in letter No 2,008 R, the working establishments are low of their kind, but the traffic is small. I do not think it would be wise still further to reduce the staff, our efforts should rather be applied to increase the traffic, and unless facilities are offered to the public we cannot hope to succeed in effecting the latter.

From the Agent of the Great Southern of India Railway, to the Acting Consulting Engineer for Railways, dated Negapatam, 27th July 1871, No. 4,126.

I have the honour to state, in reply to your letter No. 217, of the 12th instant, that the expenditure in the Traffic and Engineering Departments I took from the published statements for

the half-year ending 31st December last. My quotation was in round numbers, the actual figures are as under :—

			RS.
Calcutta and Canning Traffic Staff			2,408
Deduct—	RS.		
Cash Office	101		
Account	110		
Audit	25		
Stores	36		
Medical	50		
Contingencies	300		
Stores	250		
			872
For 28 miles ...			1,536
For 1 mile ...			54 13 8

Great Southern of India Railway Traffic expenses for half-year ending 31st December 1870—

	RS.	A.	P.
Salaries, wages, etc.	21,502	2	10
Or per mensem	3,583	11	0
Rupees 3,583-11-0 ÷ 168 = Rupees 21½ per mile.			

	RS.
Calcutta and Canning Engineering staff	1,321
Or per mile... ...	47½

	RS.	A.	P.
Great Southern of India Railway—Inspectors' salaries ...	4,428	14	0
Do. allowances ...	270	0	0
Wages of Platelayers ...	21,073	8	8
	25,782	6	8
	4,297	1	1 or Rs 25½

The Locomotive expenses I quoted from a letter sent to me by the Locomotive Superintendent. You will learn, on reading the following extract from one of his subsequent communications, a correction requires to be made in that quotation:—"Regarding our conversation upon the subject "of the Consulting Engineer's query in the matter of the figures in my No. 220, 15th May, "comparing the Calcutta and Canning expenses with our own, I have gone over the figures again "and find I am in error, having omitted some charges which should be taken into account. I send "you a fresh result which shows our expenditure Rupees 32-2-0 per mile. Deducting the "superintendence to approximate it to the returns of the Calcutta and Canning State line gives "Rupees 24-3-0 per mile.

"*Revenue.*	RS.	A.	P.
"Drivers and Firemen...	2,383	10	0
"Office Establishment	419	9	0
"Cleaners and watermen	418	7	0
"Fitters	483	4	0
	3,704	14	0
"Carriage and wagon Muster Roll ...	368	5	0
	4,073	3	0

"for 168 miles of line as comparative with Calcutta and Canning line, Rupees 24-3-0.

"Locomotive Superintendent.

"Charge to Revenue.

	Rs.	A.	P.
" Running account and repair	407	4	0
" Foremen do. do.	921	7	0
	5,401	14	0
" for the same length —	32	2	0

No. 38. ORDER THEREON, 4th September 1871, No. 2,246.

RAILWAY, No. 5.

ORDERED that these papers be forwarded to the Government of India.

(Here enter No. 2,247, dated 4th September 1871.)

(True Extract.)

Captain, R.E.,
Under Secretary to Government.

PUBLIC WORKS DEPARTMENT,
FORT ST. GEORGE, *4th September* 1871.

No. 39.

No. 2,247.

To

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

RAILWAY, No. 6.

SIR,—In reply to your letter No. 2,008 R., dated 13th December 1870, communicating observations on the working arrangements of the Great Southern of India Railway and drawing particular attention to the rate of speed maintained as affecting the cost of maintenance and working, I am directed to forward the accompanying copies of correspondence, from which it will be observed that the several points referred for consideration have been carefully and exhaustively treated of in communication with the Company's officers.

2. The Deputy Consulting Engineer, after a review of the circumstances of the line, has arrived at the conclusion that no sensible economy would result from alteration of the present traffic arrangements, and that any saving which might be effected by a reduction in speed would be counterbalanced by the increased expenditure involved in working the trains after dark, which, in this case, would be unavoidable as the trains run in connection with those of the Madras Railway.

3. The only modification in existing arrangements which it has been thought desirable to make is the discontinuance of two trains, which the time-tables provide for, between Negapatam and Tanjore, on the eastern section of the line.

I have the honour to be,
Sir,
Your most obedient servant,
(Signed) A. deC. SCOTT, Captain, R.E.,
Under Secretary to Government.

Exd. S. T. Augustin.

No. 3944

GREAT SOUTHERN OF INDIA RAILWAY.

AGENT'S OFFICE,

NEGAPATAM, March 1st 1871.

From

THE AGENT,

Great Southern of India Railway,

To The Acting Consulting Engineer
for Railways
Madras

SIR,

I have the honor to state in reply to your letter No 42 of the 6th ultimo, that I consider one net receipts would be decreased in the event of one train daily in each direction ceasing to run, and the remaining train being timed to perform its journey at a lower rate of speed.

The Deputy Secretary to the Government of India in the Public Works Department (Railway) appears to have based his remarks upon the traffic statements for the first half of the year 1869. The goods traffic at that time was exceptional. during the first half of 1870 an increase of 24½ per cent was obtained.

The
the Continental
lines

The Locomotive Superintendent's report, (copy attached) shows that it would be impossible to work over certain sections of the line, in one train daily, the extent of traffic which presented itself during the latter period.

No saving of station staff would be caused by the taking off of a train. No larger number of pointsmen, porters and signalmen are needed for two, than would be needed for one train daily in each direction. Regarding semaphore signals, if these had been dispensed with saving could have been effected. You will no doubt have read in the joint report of Col. Stracey, Col Dickens and Mr Reisel upon the State Railways the following paragraph. "Semaphore signals "may also be dispensed with, except "perhaps at important junctions. "They are not used on the Norwegian "Railways nor on many of the Continental "lines

"lines where traffic is light."

The Resident Engineer informs me that if but one train daily and the services of all Gatemen not employed at public road crossings could be dispensed with, if Government sanctioned the care of the smaller gates being entrusted to the platelayers.

In conclusion I wish to state that it would be possible to dispense with a second train between Tuckinopoly and Erode for a few weeks during the year, but I would deprecate making such a change, as I feel sure that the loss of Revenue which would result in curtailing the accommodation now offered to the district would certainly exceed the saving in working expenses caused by the alteration.

I have the honor to be
Sir
Your most Obd. Servant

Archibald Bell

Agent

Great Southern of India Railway.
Loco: & Barr: Supt^dts Office.
Negapatam Feby 24th 1871.

No 106.

My dear Sir.

Your No. 995/398 with proceedings of Madras Government No. 318. 2d Feby 1871 rec^d

I am of opinion that it would be a practical impossibility to work our traffic between Trichinopoly and Negapatam during 8 months of the year with one train a day— I find that for the first half of 1870 the average daily number of vehicles on our trains between Negapatam and Trichinopoly was 69 vehicles and between Trichinopoly and Erode 35 vehicles. A statement got out for the Madras Government a few weeks since, shewed that the average daily ~~train~~ ~~from~~ July/69 to June'70 was 17.1 vehicles per train. There is a very material error in the paper under consideration. In para 5 it states (while the country east of Trichinopoly "is described as level" There are 3 inclines rise and fall between Negapatam and Trichinopoly viz:

at Tanjore.

East-rise 1 in 240 for 1½ miles. West fall 1 in 300 1¾ miles

at Vottarapatty

East-rise 1 in 300 for 1¼ miles. West fall 1 in 200 1⅞ miles

at Tirooverumboor.

West-rise 1 in 240 for 1¼ miles

The loads hauled by our Engines are.

	East of Caroor.	West of Caroor
6 wheels couplrs 15" Cyls	30 vehicles	20 vehicles
4 — do	do	20 — "	16 — "
— do	14"	16 — "	12 — "

Now.

Rec^d 1st March 1871.
Acted on 20th Ditto

P.P. 3798/71

Offrs Marked 6
the uniformity of
working one train
daily

Now, as to the hauling capability of our engines for the question of reducing our trains practically resolves itself into this form. The theoretical tractive power of an engine is calculated from a well known formula based upon certain conditions - when those conditions are variable, the value of a theoretical deduction of tractive power becomes a secondary consideration the practical and economical effectiveness of the engine being paramount, which latter condition is governed by the greatest load an Engine can haul up the steepest incline on her journey. - This principle has been most carefully watched upon our line and the result has been that our engines have been loaded to the number of vehicles with which they can perform their duty most economically and effectually. - Our worst incline, in the middle of the run from Negapatam to Erichinopoly is a most difficult and trying piece of road an incline of 1 in 240 for 1½ miles on a curve. - Granted our Engines at a reduced speed could haul more vehicles over the greater part of the line east of Erichinopoly but what would be the result of such a load upon an engine up this incline. - Very simple reasoning will show, that if such a load distressed an engine to the extent of springing her tube plate or drawing her tubes &c.a (which is of frequent occurrence to an overloaded Engine and has occurred several times on our line) more damage is done to the Engine, and more expense entailed in the repair than a hundred times the pecuniar derived from the overload. - If therefore our Engines are now running with their maximum economical loads, and such I consider to be the case, we cannot work the traffic with our trains West of Caroor it might be done with Specials now and then, but not with any decreased expenditure

for.

for in view of being called upon to work ballast and material trains for the new South line, I should be training a staff to meet those requirements, and could not therefore dispense with any of my men. I am now working very short-handed- at times I have 3 and 4 men down with fever at Trichinopoly, who must be replaced by others who are the only spare men I have.- In points of economy of fuel I do not think it would be to any appreciable extent- the extra loads would consume the fuel saved by the engines taken off the trains or nearly so- Nor would there be any saving in wear and tear by the reduced speed from the cause I have already pointed out of strain on the engines on the inclines.- For 9 months in the year our trains are fully loaded and have almost daily to repair trucks at stations. I do not think it possible to work our traffic with our train- nor, in the event of only our train being run do. I think, the saving would be in any proportion to the risk run from over-loads.

Yours faithfully.
(Signed) Edward G Cheward.
Loco: Supt[t]

True Copy
[illegible]
Agent

No. 3996

GREAT SOUTHERN OF INDIA RAILWAY.

AGENT'S OFFICE,

NEGAPATAM, April 25th 1871.

From

THE AGENT,

Great Southern of India Railway,

To The acting Consulting Engineer
for Railways.
Madras

SIR,

I have the honor to inform
you in reply to your letter No.
96 of the 31st ultimo, that the
trains are at present run at
as low a rate of speed over
this line that I do not think
any appreciable saving would
be effected by adopting a still
lower rate. The through train
cannot leave Erode earlier than
it does, as it runs in connection
with the train from Madras
and carries the mail - if the
speed was reduced this train
would be travelling over the eastern
end of the line after sunset, and
we should have to incur extra
expenditure in Staff and stores
in consequence

with

With regard to your enquiries respecting the maximum loads fixed for the several classes of Engines, I understand from the Locomotive Superintendent that our Engines could draw a larger number of vehicles over the level portions of the line at a lower rate of speed. but that no saving would be effected by increasing the maximum, as Spare Engines would then have to be kept in readiness to assist the trains over the steep gradients

The traffic to which I referred when I spoke with you in Madras, is the "Short" or local passenger traffic I am of opinion that if the morning train from Trichinopoly to Erode and the afternoon train from Erode to Trichinopoly, be taken off, we shall lose nine-tenths of the Station to Station passenger traffic, for instance the people who start in the morning for the Magistrate and Law Courts at Moosery return in the evening to their homes, the

one

one train a day running as it would do at an inconvenient hour (inconvenient for local purposes, the best suited for through traffic) would not suit such traffic, and it would be lost to the railway

I have the honor to be
Sir
Your most obt servant
William L Bell
Agent

of purely traffic staff is in round numbers Rs 1,500 per mensem against the Great Southern charge of Rs 3,600; or Rs 53½ per mile against Rs 21½ per mile — and this too when all loading and unloading of goods on the State railway must be performed by the public

Again, the monthly cost of the Locomotive and Carriage & Waggon Departments, exclusive of supervision, is returned on the State line as Rs 567 or Rs 20¼ per mile; similar service on the Great Southern does not cost quite Rs 15. per mile.

And the State line's maintenance staff, less supervision, costs Rs 44 per mile against the Great Southern's Rs 25½ per mile.

With regard to the second paragraph of your letter under reply Return tickets are issued only on occasion of feasts being held at some station or its vicinity. Last month the earnings from passenger traffic alone

Dte 8th Feb

To The Agent
G.S.& W.Ry Co.

The Q.S.Locomotive Engr
for Railway

Dated 25th } Q.Feb 1911
Read 28th }

P.W. 3798/1.

Requesting the refund
of Rs 100 paid in Q.S.O.B.

No. 2655 GREAT SOUTHERN OF INDIA RAILWAY.

AGENT'S OFFICE,

NEGAPATAM, May 22nd 1871

From

THE AGENT,

Great Southern of India Railway,

To *The Acting Consulting Engineer for Railways Madras*

SIR,

In reply to the enquiry contained in your letter No 135 of the 4th inst I have to state that I do not think a totally different kind of traffic arrangement to that we now have in force would be more suitable to the wants of this line.

Attention has been called to the traffic arrangement of the Calcutta and South eastern (State) Railway, but I find that altho' the receipts on that line are some 15 per cent less than the income of the Great Southern, the Staff Expenditure of the first named is much heavier than that of the second.

For instance, the former's cost of

eastern

alone y Nos 1 and 8 trains, which are used principally for working goods traffic, amounted to 114 annas 4 pie per mile. The cost of fuel and Stores Consumed in haulage would not amount to half that sum per mile. I have before explained no saving of staff would result from the taking off of these trains, as Drivers, Guards, & would still have to be kept to run the specials which would be required to clear the line

I am not sure that I correctly read your third paragraph to mean that Nos 4 and 6 trains might be discontinued, by substituting special trains to run when required. To make such a change would be most impolitic. As before stated (see my letter No. 3944) the second train on the eastern section could be dispensed with for a few weeks during the year; but no such alteration could be made at the eastern

eastern end of the line. I do not advocate however the taking off of the Nos 1 and 8 trains; they earn money and are undoubtedly a convenience to the District.

My desire always has been, and will continue to be, to show an increased income in the Company's Revenue statements, and it is satisfactory to learn that the Governor General in Council recognises the ready spirit evinced by the Railway Authorities to meet the common object of all - economical management.

2008. R The working establishments are low for their kind, but the traffic is small. I do not think it would be wise still further to reduce the staff, our efforts should rather be applied to increase the traffic, and unless facilities are offered to the Public we cannot hope to succeed in effecting the latter

I have the honor to be
Your most obt Servant
Laidlaw
Genl

No. 4126 GREAT SOUTHERN OF INDIA RAILWAY.

AGENT'S OFFICE.

NEGAPATAM, July 27 1871

From

THE AGENT,

Great Southern of India Railway,

To The acting Consulting Engineer
for Railways
Madras

SIR,

I have the honor to State,
in reply to your letter No.
214 of the 12th instant, that
the expenditure in the Traffic
and Engineering Departments
I took from the published
Statements for the half year
ending 31st December last.
My quotation was in round
numbers, the actual figures
are as under.

Calcutta and Cauvery Graft
Staff

No. 4188

From
The Agent.
G.S.I.R.

To
The Officiating Consulting Engr.
for Railways
Madras

Dated 25th July 1871
Rec'd 25th " "
P.R. 3795/71.

Regarding traffic
arrangements with E.G.P.
Railway Line.

Staff —— —— Rs 2408.

Deduct

Cash Office	Rs 101.	
Account	" 110.	
Audit	" 25.	
Stores	" 36.	
Medical	" 50.	
Contingencies	" 300.	
Stores	" 250.	872

For 28 miles ~~Rs~~ 1536.

For 1 mile ~~Rs~~ 54. 13. 8

Great Southern of India Railway

Traffic expenses for half year ending 31st December 1870.

Salaries, Wages &c. —— Rs 21,502. 2.10

or per mensem —— 3583-11.0

~~Rs~~ 3583. 11.0 ÷ 168 = ~~Rs~~ 21½ per mile

Calcutta & Canning Engineering

Staff —— Rs 1321.

or per mile —— 47 8.

G I S Railway

Inspectors salaries Rs 4438. 14.0

do. allowances 270. 0.0

Wages of Platelayers 21073. 8. 8

25782.6.8

4294.1.1. = Rs 25½

The Locomotive expenses I quoted from a letter sent to me by the Locomotive Superintendent. You will learn on reading the following extract from one of his subsequent communications a correction required to be made in that quotation.

"Regarding our conversation upon "the subject of the Consulting Engineers query in the matter of "the figures in my No. 220 - 15 May. "Comparing the Calcutta and "Canning expenses with our own "I have gone over the figures "again and find I am in "error having omitted some charge "which should be taken into "account. I send you a fresh "result which shows an expenditure "Rs 32.2.0 per mile - Reducing "the superintendence to approximate "it to the returns of the C & C State line gives Rs 24.3.0 per mile

"Revenue

"Drivers and Firemen	——	Rs 2383. 10. 0
"Office Establishment	——	" 419. 9. 0
"Cleaners & Watermen	——	" 418. 7. 0
"Fitters	——	" 483. 4. 0
		3704. 14. 0
"Carriage and Waggon Masters	Rate	368. 5. 0
		" 4073. 3. 0

" for 168 miles gleine as Comparative
" with Calcutta & Canning line Rs 24.3.
" Locomotive Superintendent
" Charge to Revenue.

" Running account & repair 407. 4. 0.
" Foremen do — — do — 921. 7. 0.
5401. 14. 0.
" for the same length — ~~Rs~~ 32. 2. 0.

I have the honor to be
Sir
Your most Obedt Servant

Lieutenant R. Bell

R Reed

CONSULTING ENGINEER'S OFFICE.

Railway Department.

No. 346.

From Captain C. I. Smith R.E.
Consulting Engineer for Railways,

To Colonel I. Carpendale R.E.
Secretary to Government,
Public Works Department,
Fort Saint George.

Sir,

I have the honour in reply to the Government order No. 318 dated 2nd February 1871, to forward the correspondence noted marginally, on the subject of the train service on the Great Southern of India Railway -

Letters from Agent & Manager
No 3944 & enclosure
" 3996 — " —
" 4038 — " —
" 4126 — " —

2. The Government will observe that the remarks in paragraph

No. 4126

From
The Agent
S.I.R. Co.

To
The Hon'ble C. Carmichael Esq.
for Secretary
Public Works Department
Fort St. George

Dated 27th July 1871.
Rec'd 29th July 1871.

P. No. 3798/71

Re the correspondence
in the traffic and
Engineering departments.

paragraph 5 of the letter No. 2008 R dated 13th December 1870, were based on the assumptions (1) that the line east of Trichinopoly is practically level - whereas the ruling gradient really is 1 in 240 - on a curve for a length of 1½ mile, and (2) that the traffic statements, for the first half of 1869, which the Agent and Manager considers exceptionally low and which was actually 24 per cent less than those for the corresponding half of 1870 - were taken on the bases of the calculations shown in Paragraphs b and j.

It

3. It will be observed that the maximum loads fixed for the several classes of Engine are as follows:-

	(East) Engl.		(West) of Carvor
6-wheel coupled	15"	30 Tons	Vehicles 20
4 "	"	20	" 16
4 "	"	14"	16 " 12

and that these have been practically determined by the ruling gradients on the respective sections -

4. The Agent and Manager is of opinion that no economy would result from having additional engine power available at the inclines - that assuming that the trains must run in connection with those of the Madras Railway, any saving effected by reducing the speed would

would be counterbalanced by the increased cost due to running the train after dark –

5 With reference to the arrangements in force on the Port Canning State Railway, he shews that the present system on the Great Southern of India Railway compares favourably, as regards the cost per mile, with that recently introduced on the Port Canning line and strongly deprecates any diminution of the train Service, on the ground that in his opinion the trains more than pay their cost while every effort should be made to develope the traffic by giving the greatest possible amount of accommodation to the public –

6. It does not thus appear to me that a modification of the present traffic arrangements would prove of advantage – The fast trains № 3 and 5 between Negapatam and Tanjore, have not been run regularly but only occasionally: they do not represent a part of the ordinary train Service, and I have asked the Agent to take them out of the Time Table

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

Madras
9 Augt 1871

C Smith Capt RE
Dy Cons Engr for Railways

No. 6. P.W. 8.

Proceedings of the Madras Government

Railways.

Read the following:-

From

The Dy: Consulting Engineer for Railways

(M. E. No. 346 dated 9th August 1871)

Undertaken that there
shall be forwarded to
the Govt of Madras
No 2247.

To

The Consulting Engineer
for Railways.

Sir,

I am directed by the Govt of Madras to forward to you herewith a letter from the Secretary to the Board of Revenue dated 13th December 1870, Commencing on the subject of the Steam service on the G. I. P. & M. Rys

Dated 2nd Feby/71 Pp 43-44

P.W. 1871 Dept
Proceedings for Septr
RAILWAY DEPARTMENT.

No. 3798.

From

The Consulting Engineer
for Railways,

To

The Secretary to Government,
P. W. Department,
Fort St. George.

Dated 9th August 1871.
Received 11th
Encl: 5.N No. 346.

Submitting
Copies of correspondence on the subject of the steam service on the G. I. P. & M. Rys

No 2246-2247 - 4 Sept/71

No 37
6 Pkts 16 Cards 1/10 Sept 28

speed maintained as affecting the cost of maintenance and working, I am directed to forward the accompanying copies of correspondence, from which it will be observed that the several points referred for consideration have been carefully and exhaustively treated in communication with the Company's Officers.

The Deputy Consulting Engineer after a full review of the circumstances of the line has arrived at the conclusion that no sensible economy would result ~~from disturbing~~ the present traffic arrangements and that any saving which might be effected by a reduction in speed would be counterbalanced by the increased expenditure involved in working the trains after dark, which, in this case, would be unavoidable as the trains run in connection with those of the Madras Railway.

The only modification in existing arrangements which it has been thought desirable to make is the discontinuance of two trains, which the Time Tables provide for, between Negapatam and Tanjore on the Eastern Section of the Line.

Dep. 5/9/71 Write 25 pages
Copies of Nos. 2246-47

17 Aug

Cp-3798

Govt of [1871] Madras.

PUBLIC WORKS.

To The Secy Committee on
for Railways
and
To The Secretary to the
Govt of India

Date

Rec'd 5

G. O. 4 Sept 2246-2247

Order

Nos. 37-38 29

G. S. of S. Railways. Papers
Orders on the correspondence,
submitted by the Committee
for Railways, on the
subject of the reduction
of train service on the
E. & S. Ry.

Letter from Secy. with remarks,
Correspondence on the subject
of the reduction of train
service on the E. & S. Ry.