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MADRAS RECORD OFFICE

Government of Madras

Public Works

DEPARTMENT

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Dated	20-8	195	
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*Proceedings of the Madras Government, Public Works Department,
20th August 1875.*

No. 344. Read the following letter from Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, to Lieutenant-Colonel J. MULLINS, R.E., Officiating Secretary to Government, Public Works Department, dated Madras, 13th August 1875, No. 448 :—

I HAVE the honor to forward the Railway Administration Report of this Presidency for the official year 1874-75, and to request that the same may be printed in pamphlet form separately from this letter and the order of Government thereon.

2. A copy of the report has, as usual, been sent to the Chief Secretary to Government.

No. 345. ORDER THEREON, 20th August 1875, No. 2,396.

RAILWAY, No. 40.

ORDERED to be printed in the manner desired by the Consulting Engineer and communicated to the Government of India.

(True Extract.)

(Signed) G. W. WALKER, Major-General, R.E.,

Secretary to Government.

To the Consulting Engineer for Railways ✓

Exd. E. C. Shuster.
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1874-75
Report
on the
Administration of Railways
in the
Madras Presidency

for the year 1874-75

was Rs. 6,02,926, the Engineering portion being chiefly on the following works:-

Neilgherry Branch	Rs. 40,031	
Protective works to Palay, Poinny		
Guariatum and Nigerry bridges	65,625	
Thuggeri Bridge	1,48,896	
Renewals of sleepers	28,588/4	1/4 part charged to Revenue.
Bridges near Vaniembady & Mailputty	19,606/4	

In the Locomotive Department, two engines were purchased from the Calcutta and South Eastern Railway.

The value of stores in hand on 31st March 1875 was Rs. 36,28,041. The amount of capital sanctioned by the Government of India to be locked up in stores is 22 1/2 lacs but the Board of Directors question whether the store balances can ever be reduced.

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-ced to this limit.
3. Dividends. The net profits of the year were Rs. 19,46,873 giving a dividend at the rate of £1.15.6 per cent on the total capital expenditure.

4. Flood damages. The year 1874 will long be remembered on account of the numerous and very extensive damages caused by floods. A full description of these will be found in the Proceedings of Government dated 12th February 1875, No. 395, and a short summary only need be given here.

On the night of the 1st May 1874, a bridge of five 15 feet girder openings near the Vaniembady station, in the 124th mile South-West line, was carried away by the bursting of tanks higher up the valley. A new bridge of four 30 feet girder openings to replace it has lately been

been opened for traffic.

On the same date a bridge of four 15 feet arches near the Mailputty station, mileage 105 $\frac{1}{2}$ South-West line, was so seriously damaged as to need reconstruction. The Palaw river runs close to the line at this point, and the bridge spans an irrigation channel which is unprovided with a regulating head, the consequence being that in heavy floods a large quantity of water finds its way down it. The immediate cause of the injury was a large stack of straw which was lodged against the bridge and produced a deep scour. The bridge is being rebuilt with two 30 feet girder openings and is expected to be opened for traffic early in August 1875.

5. On the 17th September 1874

a 6 feet culvert in the 204th mile, near the Badgaody station on the Bangalore Branch, was washed away, and the bridge of five 30 feet arches over the Panar river in the same mile was for a time in danger. A temporary bridge of two 30 feet girder openings was constructed and traffic resumed within 12 days. The waterway here is now considered insufficient and it has been decided to add another bridge of two 30 feet openings to floor the large bridge and to rebuild the culvert.

6. On the 25th September 1874, considerable damage was caused to the South-West line between Jolarpett and Samulputty stations by the breaching of overlying tanks. The floors of several minor bridges were washed out but the works themselves

themselves should.

7. On the 24th, 25th, and 26th October 1874, the large bridges over the Cheyair, Paupugnee, Chittavutti, and Pennar rivers on the North-West line, and over the Gariattam river on the South-West line, sustained very extensive damages. The Cheyair and Paupugnee rivers which run on a high level overflowed their banks, breaching the line very heavily on both sides, and washing away a 6 feet culvert at the 17th mile. Several minor breaches occurred on the North-West line between the 71st and 108th miles but no masonry works were seriously injured, and this portion of the line was made good within three days and traffic resumed as far as Rajampett, 100 miles.

In

In the 131st and 132nd miles very heavy breaches were caused through the failure of the Munnoor Ketchema tank, the line between Rajampett and the Cheyair bridge being impassable for 19 days. The waste weir of this tank has since been extended from 46 to 200 feet, and in order to provide for the greater discharge, it is proposed to substitute a bridge of three 30 feet girder openings for the present 12 feet arch.

8. The injuries sustained by the large bridges were as follows:
Cheyair bridge - 136th mile. North West line. This bridge originally consisted of thirty eight 30 feet openings

openings spanned by wrought iron
girders on masonry piers, and is
divided into two unequal portions
by an island embankment about
200 yards in length. During the
floods of October 1870, seven piers
in the south portion of the bridge
were carried away, and were re-
placed by eight piers of screw-piles.
On the night of the 24th October
1874, the water rose to the bottoms
of the girders and the following
damage ensued: one masonry
pier in the south portion, four
in the north, and the two island
abutments destroyed, and two
sets of girders 140 feet long carried
away; one of these was found $\frac{3}{4}$
of

5 1 3
of a mile and the other $\frac{1}{2}$ mile
down stream. The bridge has
been temporarily restored by rebuilding
for a single way two of the ruined
piers, and substituting piers of
screw-piles for the remainder, and
was opened for traffic on the 26th
May 1875. The new bridge under
construction consists of forty-six
openings of 70 feet with the island
embankment removed. The abut-
ments and thirteen piers are of
masonry founded on rock and the
remaining piers of cast iron cylin-
ders 6 feet in diameter sunk down
to the rock and embedded in it,
the greatest distance before this is
reached being 93 feet. Some slight
damage occurred to the cylinders
which had been sunk.

Paupugnee

9. Paupugnee bridge. - 175th mile N.W. line.

Twenty 70 feet openings spanned by girders resting on screw pile piers. One pier and one set of girders of this bridge were seriously damaged in a train accident on the 16th June 1874, /referred to hereafter/ and the gap had been repaired with temporary piers of wooden sleepers carrying short iron girders. On the 24th and 25th October 1874, four screw pile piers with two sets of girders, and the temporary piers with their girders, were washed away. The bridge has since been restored with screw pile piers at the centres of the old openings and was reopened for traffic on the 26th May 1875.

10. Chittravutti bridge. 212th mile N.W. line.

Forty 70 feet girder openings, abutments
and

and ten piers at each end of masonry, and the remaining nineteen piers of screw piles. The flood of the 25th October 1874 destroyed nine of the masonry piers near the south abutment, and two sets of 140 feet girders. The gap has been restored with screw pile piers and the bridge was reopened for traffic on the 26th May 1875.

11. Pembar bridge. 234th mile N.W. line.

Twenty 70 openings spanned by girders on masonry piers. Two piers were destroyed without injury to the girders, and the bridge was made passable by temporary supports of wooden sleepers on the 17th November 1874. It was intended to rebuild at once the two ruined piers, but owing to difficulties experienced

experienced in getting in foundations while the traffic was being worked over the bridge, this has not yet been done. Meanwhile in order to provide against this year's monsoon, piers of screw-piles and iron cylinders have been constructed at the centres of the openings. These carry cross girders to support the main girders and under the joints of the latter short longitudinal girders have been inserted. The damages to four other piers, which were at the time considered slight, have proved to be so serious as to necessitate their being rebuilt and this work will be carried out next year. The girders over them are at present

present carried in the manner described above.

12. Goriatum bridge. 98th mile: S.W. line.
Twenty four 30 feet skew arches and five 30 feet arches on the square, with an island abutment between. On the 26th October 1894, the five arches forming the smaller portion were entirely destroyed. Communication over the bridge was temporarily restored on the 5th November 1894 by piers of wooden sleepers carrying short iron girders. A temporary road was subsequently constructed across the bed of the river and opened for traffic on the 8th January 1895. It has been decided to do away with the island, and the new work consists of eight 30 feet arches, and an irregular girder opening connecting the square and skew

skew portions of the bridge. Its completion is expected by the 1st September 1875.

13. On the 30th October 1874 four miles of line / 196th to 200th mile / immediately to the north of the Moodan-noor station were breached in many places by the failure of the Chindigaonta tanks. A bridge of three 30 feet girder openings was saved by cutting the embankment. The repairs were executed with great expedition and traffic resumed on the 17th November 1874.

14. It may here be stated that the Government have expressed their appreciation of the exertions made by the Engineering Staff in effecting communication along the line and in restoring the damaged bridges to their present condition.

The

The vigilance of the line watchmen in discovering the damages, and thus preventing any train accident has also been recognised.

15. In January 1875, the Chief Engineer proceeded to England to consult with Sir John Hawkshaw as to the means to be adopted in order to prevent a recurrence of these disorders, and the following is a summary of the recommendations made:-

Chepau bridge. Four openings to be added to the new bridge of forty six spans and 3 feet more roadway to be given by raising the girders to this extent.

Paupugnee bridge. Piers throughout to be reconstructed, and ten more openings to be added.

Chittanutt

Chittawutty bridge. Piers throughout to be reconstructed.

Pennair bridge. To be protected throughout with up and down stream curtain walls on wells carried down to the hard, and two additional openings added on the north side. The river bank projects at this point and it is probable that the deflection of the current thereby was the chief cause of the damage sustained. The nature of the piers of the new bridges for the Paupugnee and Chittawutty will be decided upon after borings have been taken to ascertain the nature of the strata passed through.

In addition, Sir John
Hawkeshaw

Hawkeshaw considers it desirable to alter the present superstructure and roadway over the large bridges. The bracing frames of the girders are to be considerably strengthened and longitudinal baulks, carried by iron cross girders rivetted to the main girders, are to be substituted for the present roadway of cross sleepers fastened by dog bolts to the upper flanges of the main girders. Flat bottomed steel rails spiked to the baulks will be used in place of the iron double headed rails.

16. Accidents. One serious accident has to be recorded. On the 16th June 1874, as the Deputy Chief Engineer's inspection train, consisting of a Pitson's tank engine, Engineer's inspection carriage, and a brake van, was crossing the Paupugnee bridge,

bridge, the engine left the rails and, with the inspection carriage, was precipitated into the bed of the river. Fortunately the heavy locomotive in rear was arrested by coming into contact with a ~~new~~^{screw} pile pier. A Permanent Way Inspector was killed in the spot, and a native fireman died shortly afterwards. The Deputy Chief Engineer and the Resident Engineer, together with the Driver and second fireman, were seriously injured. The accident is attributed to the excessive speed at which the train was driven over a bridge which, from its construction, is somewhat deficient in rigidity and therefore liable to considerable oscillation. The Government have subsequently directed that the speed of trains on the Railways of

13
of this Presidency shall in future not exceed 45 miles an hour on any portion of the line, and that over bridges with screw pile piers, it shall be limited to 10 miles per hour. 17. On the 30th December 1874 the wheel of a first class carriage is attached to the mail train, when between Romanore and Pothanore stations, broke loose from the axle. Fortunately no accident occurred, though the results might have been serious. The wheel was "Handy-side's patent iron disc", of which a trial was being made. The failure is attributed by the Locomotive Superintendent to the tendency of the wheels to skid in

in passing round a curve having put too severe a strain on the single leather fixed in the cast iron boss to prevent the disc revolving. These wheels are believed to answer well on some English lines and their entire failure here is not understood. The increased width of gauge may partly account for it; there are very few curves on the Madras Railway of a smaller radius than half a mile. Some of Mance's patent wooden disc wheels have lately been fitted to the Madras Railway carriage-stock and are found to run well.

18. The numbers of accidents to trains during the last three calendar years were as follow:

1.

	1872	1873	1874	6
1. Collision. —————	4	1	1	
2. Getting off proper line. ———	4	7	18	
3. Fire —————	4	5	19	
4. Running over cattle. ———	42	46	48	
5. Other causes. —————	6	5	6	
	60	64	92	

The large increases in 1874 under heads 2 and 3, are chiefly due to the fact that in former years minor cases were not reported. Two derailments were due to running over cattle and one to the breakage of an axle of a goods wagon. Catchers are now being fitted to all engines. The number of derailments at Jallapett, where a great deal of shunting takes place at night, has attracted attention, and preventive measures have been taken.

19. The numbers of persons killed and injured during the same years

were

were as follow:

	1872	1873	1874
	killed	injured	killed injured
<u>Passengers</u>			
From causes beyond their own control.	1	8	
From their own misconduct or inattention	"	"	1 1 1
Total.	1	8	1 1 1
<u>Servants of the Company or of Contractors</u>			
From causes beyond their own control.	"	2	3 6
From their own misconduct or inattention.	7	4	9 2 6 7
Total.	7	6	9 2 9 13
<u>Other persons</u>			
Crofting at level crossings	"	"	"
Trespassers including suicide	4	2	5 1 5
Miscellaneous.	1	"	1 2
Total	5	2	6 1 7
Grand Total	15	16	15 4 17 14
Mean length of line open.	832	843	857
Number of passengers carried.	2,495,454	2,743,751	2,773,017

Train mileage (Goods & Passengers)	1,738,770	2,014,876	1,925,473
Passenger's mileage.	12,708,874	14,138,067	13,674,504

During the year 1874 five passengers died in trains or at stations.

20. Interruptions to traffic. Through goods traffic on the South-West line was interrupted by the break at Vanimbady from 6th to 13th May 1874, and on the North-West line from 16th to 22nd June 1874 by the Pampunee accident. In the Traffic Manager's report for the half-year ended 31st December 1874 the interruptions during that period are thus summarised:—
Through breaking to and from Bangalore was suspended from the 18th to the 28th September in consequence of a break at the 208th mile on the Bangalore Branch, and from the

the 17th November to the 2nd Decem-
ber in consequence of the removal
of a part of the Tiger Rocks on the
Coopum Ghaut. Through booking
was suspended on the South-West
main line from the 25th October
to the 14th November, and a day
service of trains for mails and
passengers was only maintained
by transshipment at the Gaoriattum
river. On the North-West line
where the floods were more severe,
traffic was entirely suspended be-
tween Sirupetty and Gady on
the 25th, 26th and 27th October.
On the 28th October a day service
of trains was resumed between
Sirupetty and Pajampett / 130 miles
from Madras. On the 30th October
a

15/15
a day service of trains was resumed
between Nundalare and Buddappah,
thus providing a daily service for Passengers
and mails between Madras and Bud-
dappah. The distance between Pajampett
and Nundalare stations / 7 miles / being
performed partly by road and across the
Chennai river on rafts. On the 3rd Novem-
ber a day service of trains was resumed
for Passengers and mails between Bud-
dappah and the south bank of the Pau-
pugnee river; between the north bank of
the Paupugnee and Moodanore stations;
and between the north bank of the Pennair
river and Gady; still leaving a gap of
37 miles between Moodanore and the south
bank of the Pennair to be performed on
foot or by country cart. Passengers and
mails were carried across the rivers on rafts.
On the 17th November a day service of
trains

trains for Passengers and mails was resumed between Moodanore and the south bank of the Chittanully river, and between the north bank of the Chittanully and south bank of the Pennair, thus completing a day service between Gudalaph and Gooty, enabling passengers and mails to perform the journey between Madras and Bellary in 2 days, and between Madras and Paichare in $2\frac{1}{2}$ days; Passengers and mails were then carried across the rivers in bullock carts.

The goods traffic was entirely suspended on the North-West line between Pajampett and Gooty from the 25th October to the 17th November when communication was restored between Tadpatri and Gooty by hand chunting wagons over the Pennair bridges. On the 12th December goods traffic was backed through between Gudalaph and stations south, all traffic being transhipped at the Cheyair river.

On

14
On the 21st December goods traffic was resumed throughout the North-West line by transhipping at the Cheyair, Paupugner and Chittanully rivers.

21. A temporary road through the bed of the Cheyair was opened for traffic on the 14th January 1875, and similar roads across the Paupugner and Chittanully on the 18th idem, since which date no interruption has occurred. The traffic was worked over the diversions up to the 26th May 1875 when the bridges were reopened.

22. The interruption at the Tiger Rock was caused by the falling across the line of a large boulder which had to be removed by blasting. Considerable anxiety has been felt for the safety of the line at this point and strong retaining walls are now being built at

an

an estimated cost of Rs. 8347 to prevent any further slips which are liable to occur from the disintegration of the rock on which the boulders rest.

23. At the Buggri river goods traffic had to be worked across in boats on the following occasions.

From 9 th May to 22 nd June	44 days
2 nd September to 3 rd October	31
15 th October to 13 th November	30
Total.	<u>105</u>

The temporary roadway through the bed of the river has been much strengthened and consists now of rough stone throughout. It is hoped therefore that such lengthened interruptions will hereafter be avoided.

24. Condition of line and stock.
With the exception of the portions injured by floods the line was maintained in good working order throughout the year.

Between

Between Pothaneri and Palghat iron pot sleepers are being gradually substituted for jungle wood. Ten miles of creosoted pine sleepers have been obtained from England and are being experimented with on the west coast. The Railway authorities were desirous of extending the iron road from Palghat to Beypore but the Government of India have decided that sleepers of creosoted pine, which are shown to be the more economical, shall be used on this section, where the laterite ballast is not well suited for iron. The stations and out offices were kept clean and in good condition. The provision of waiting rooms for 3rd class passengers was extended and they are now available at all the principal stations. The rolling stock

stock has been efficiently kept up. The third class carriages for night travelling were improved by the additions of sliding shutters to keep out rain and wind. New second class night carriages, with sleeping accommodation, were constructed and are much appreciated by the public. Four additional double saloon first class carriages were sanctioned and are now under construction. The substitution of oil for grease as lubricant was continued.

25. Railway Commission. The goods traffic on the Madras Railway having shown no improvement during the last three years the Government of India suggested that a Commission be appointed to enquire into the question and the Order of Government dated the 14th

February

February 1875, No. 314, such a Commission was nominated. The following general points of inquiry were indicated:-

- (1) Is the alignment of the railway suitable in all respects, and if not how can it be improved?
 - (2) Is the railway connected to the best advantage with the main roads of the country, and are the minor roads laid out so as to bring traffic to the railway?
 - (3) Are the rates and fares suited to the condition of the goods and people?
 - (4) What measures are recommended for fostering the traffic on the Railway?
- A long list of complaints of the inconveniences said to be experienced by native travellers was also referred for inquiry.

The

The Commission examined witnesses from all the Railway Districts, and invited information from all parties competent to afford the same. A lengthy report, now under the consideration of Government, contains numerous recommendations, which, if carried out, would in the opinion of the Commission prove advantageous both to the Company and the public.

26. Indian coal. During the year 1874 some interesting experiments were made to determine the relative values for locomotive purposes of English, Australian, and Indian coals which may be thus summarised:-

Coal	Madras Railway			South Indian Railway		
	Cost per Ton	Average consumption per mile	Cost per mile run	Cost per Ton	Average consumption per mile	Cost per mile run
	R. S. P.	lbs.	S. P.	R. S. P.	lbs.	S. P.
Australian	27. 13. 1	27.35	4. 5.21	25. 12. 0	31.45	5. 9.41
Indian	21. 8. 0	31.08	4. 9.28	19. 0. 0	32.32	4. 4.64
English	31. 11. 5	31.23	7. 4.29	30. 6. 0	35.72	7. 9.

The

The results agree in placing English coal at the bottom of the list, and in assigning to Indian coal a value much greater than was expected. The latter coal burns freely and is liked by the drivers. Consignments are now being delivered in store at Masham for Rs. 20-10-0 per ton, and if special arrangements could be made for carriage from Calcutta it is probable that this figure might be still further noticed.

27. Mileage of trains &c. The following table shows in comparison for the years 1873-74 and 1874-75 some particulars of the working of the traffic.

	1873-74	1874-75
Mean mileage worked	849	856 $\frac{3}{4}$
Average receipts per week per mile	147.912	132.865
Traffic train mileage per year	1,988,416	1,942,495
do per mile of line worked over	2,342	2,267
Average number of trains per day in each direction over the whole line	3.208	3.073
Receipts per train mile	3.284	3.047
Expenses per do	2.003	2.045
Profits per do	1.281	1.002
Average number of train miles run per day per engine (including those under repair)	43.23	42.23

Train

Train service. The ordinary week day train service in each direction on the 31st March 1875 was as follows:

South-West line.

Mixed Goods Stat.

Between Madras and Arcanum	5	1	6
do Arcanum and Vellare	4	1	5
do Vellare and Jallarpett	3	2	5
do Jallarpett and Erode	3	1	4
do Erode and Pothanore	2	1	3
do Pothanore and Beypore	2	.	2

Bangalore Branch.

Between Jallarpett and Bangalore	3	..	3
----------------------------------	---	----	---

Velphery Branch.

Between Pothanore and Coimbatore	3	..	3
do Coimbatore and Mettupallem	1	..	1

North-West line

Between Arcanum and Tirupathy	3	"	3
do Tirupathy and Godavari	2	1	3
do Godavari and Adoni (including Bellary Branch)	2	"	2
do Adoni and Raichur	1	"	1

This

This corresponds with the service of the previous year with the exception of a mixed train between Gonsalval and Adoni which commenced running on the 1st April 1874.

Goods and early class trains do not run on Sundays. Extra goods trains are run according to requirements. During the latter half of the official year under review the grain traffic between Vellare and Beypore was such as to necessitate a daily special between these stations.

29. Rates and fares. No alterations were made in the passenger fares or in the ordinary rates for the different classes of goods. From the 1st February 1875, early class carriages were attached to the local trains between Arcanum and

and. Gudolapah, and Gudolapah and Bellary, so that at present this class of traffic extends over the whole of the line with the following exceptions: Pothanore to Beyfere 104 1/2 miles. in Coimbatore to Mettupalium 22 miles. Gaondacul to Peicharee 77 1/2 miles.

30. Traffic and Earnings. The numbers of passengers and tons of goods carried, as well as the receipts from the several descriptions of traffic are shown in the following table for the years 1874-75 and 1873-74 in comparison:

Table

Madrass Railway

1874-75 mean mileage				1873-74 mean mileage			
Numbers		Receipts		Numbers		Receipts	
No or Tons	Percentage of total	Receipts	Percentage of total	No or Tons	Percentage of total	Receipts	Percentage of total
<u>Passengers</u>							
<u>Coaching</u>							
First class	15.53	0.48	128,666	150.18	5.90	13,302	1,31,079
Second class	59.63	1.83	130,350	152.14	5.98	64,778	1,24,872
Third class	2450.32	75.34	16,682.12	1947.14	76.53	2,132,998	14,09,907
Fourth or less class	726.70	22.35	252,535	294.76	11.59	820,070	2,09,422
Total	3252.20	100.00	21,79,763	2544.22	100.00	2,731,148	2,178,280
<u>Miscellaneous</u>							
<u>Coaching</u>							
Goods			24,25,135	2830.62			3,16,129
<u>Merchandise</u>							
Less stock	440.70	99.49	32,57,684	3795.37	98.94	389,144	37,80,986
Railway materials	2.25	.57	14,089	16.45	.43	1,845	22,210
Total	442.96	100.00	32,86,411	3835.91	100.00	390,989	38,11,716
<u>Miscellaneous</u>							
Goods			6,933	8.09			5598
Electric telegraph			32,93,344	3844.00			38,17,314
Quarries			23,017	26.86			18,177
Grand Total			1,78,055	207.83			2,00,148
			59,19,551	6,909.31			65,30,048

The

31. Goods traffic: The ordinary goods traffic thus compares for three official years:

The loss of traffic in consequence of the
breaks on the North-West line and
Bangalore Branch, has been estimated
at 2½ lacs of Rupees, and making
allowance for the breaks at Vaniambadi,
in May and at Bangalore in June,
it

[The page contains a large, faint, diagonal watermark or bleed-through from the reverse side, which is not legible.]

Comparative Statement showing the Receipts from the Chief Commodities carried on the Madras Railway, during the years 1873-74 and 1874-75.

Description	1873-74	1874-75	Increase or Decrease	
			in 1874-75	in 1874-75
Beef.	65,814	61,069	.	4,745
Cloth and fruit goods.	1,29,233	1,08,357	.	20,876
Coffee.	74,724	57,682	.	17,042
Commensurate Stores.	71,985	54,655	.	17,330
Cotton.	2,93,691	3,32,999	39,308	.
Firewood.	28,161	32,397	4,236	.
Grain.	73,032	65,049	.	8,003
Gram.	2,05,449	1,87,382	.	18,067
Gunnies.	48,283	44,355	.	3,928
Iron of all kinds.	73,235	52,213	21,022	.
Jaggery.	59,522	64,019	4,497	.
Oil of all kinds.	57,277	50,276	.	7,001
Potatoes.	47,092	21,720	.	25,372
Raggy.	1,69,179	1,23,149	.	46,030
Rice.	5,35,867	4,98,762	.	37,045
Salt.	2,99,360	2,93,969	.	5,391
Sugar of all kinds.	79,157	1,12,594	33,437	.
Skins.	1,04,687	89,749	.	14,938
Snobacco.	7,00,709	7,04,960	4,251	.
Tamarind.	44,948	33,796	.	11,152
Timber.	1,07,403	89,144	.	18,259
Tobacco.	34,331	34,176	.	155
Twist.	87,442	70,137	.	17,305
Wines and Spirituous liquors.	33,783	40,359	6,576	.
Total.	3,424,324	3,353,968	101,283	2,72,639

Owing to the interruptions to traffic, it is not possible to trace definitely the causes of the falling off in the different items, and they can only be attributed generally to the break.

32. Cotton traffic. The tonnage of cotton exceeds that of any year since 1868-69, but the receipts are comparatively small owing to the smaller quantity of loose cotton carried to Madras, the ryot apparently preferring to sell it where it was grown, whence it was carried for short distances to the press, and thence to Madras or Bombay at the full pressed rate. A certain proportion of cotton is thus hooked twice and increases the tonnage fictitiously. The following table shows the number of tons carried, the total receipts, and the average receipts per ton, during the last six years.

Table

Cotton traffic & Madras Railway

Official years	Suez		Bread		Total	Proportion of freight cotton to total		Average receipts per ton	
	Cotton	Other	Cotton	Other		Cotton	Other	Cotton	Other
1869-70	16287		1712		17999	9.5	657783	36.55	
1870-71	3632		4510		8142	55.4	218093	26.78	
1871-72	5665		12682		18347	69.1	577066	31.30	
1872-73	4710		12232		16942	72.2	357903	30.77	
1873-74	3672		14374		18046	79.6	293691	16.33	
1874-75	3084		19277		22361	86.2	332995	14.89	

During

During the break on the ¹²²North-West line a good deal of cotton found its way to Bombay. In the official year, 142.8 tons in all took the route to Bombay in preference to Madras, though the cost of carriage to the former port greatly exceeds that to the latter. This had also some effect in reducing the average rate earned from each ton carried on the Madras line.

33. Working expenses and profits. The following figures show the working expenses in the several departments, and the profits for the years 1874-75 and 1873-74 in comparison:-

Madras Railway

1874-75

1873-74

	Amount	Per mean mile open	Percentage of total expenses	Percentage of gross earnings	Amount	Per mean mile open	Percentage of total expenses	Percentage of gross earnings
Maintenance of Ry. Works &c.	13,29,734	* 15,92,007	33.442	22.463	14,62,465	* 17,57,771	36.749	23.396
Locomotive expenses.	1,28,386	1,55,494	33.438	22.441	1,24,070	1,43,555	30.986	18.898
Carriage & Wagon expenses	2,52,037	2,94,178	6.344	4.258	2,16,040	2,64,471	5.424	3.309
Traffic expenses	5,98,840	6,98,967	15.074	10.116	5,77,530	6,80,285	14.501	8.844
General Charges	2,93,929	4,59,794	9.916	6.653	4,34,584	571,88	10.941	6.658
Steam boat Service								
Special & Miscellaneous expenses	69,762	81,427	1.756	1.178	58,129	68,471	1.459	0.890
Total	39,72,678	4636,916	100.000	67.111	39,82,878	4691,18	100.000	60.992
Profits	19,46,873	2,272,393		32.889	25,47,330	3,000,38		39.008
Gross earnings.	59,19,551	6,909,309		100.000	65,30,048	7,691,46		100.000

* Per mean miles maintained from Revenue funds (832.00 in 1873-74 and 835.25 in 1874-75).

+ Includes Rs 108,891 on account of Chygaur Bridge reclamation.

⊗ — do — , 326,053

Comparison

34. Comparison of working expenses. The working expenses are about the same as during the previous year, but owing to the reduced earnings the proportion borne to gross receipts is 67.11 per cent against 60.0 per cent. Allowing for the exceptional expenditure in connection with the new Chygaur bridge, the expenses of the year under review show an increase of Rs. 2,07,022. as follows:-

Increase in Engineering Department.	811,421
do Locomotive	94,316
do Carriage and wagon	35,997
do Traffic	21,310
do Special and Miscellaneous	11,653
Decrease in General Charges	2,47,677
Net increase	Rs. 2,07,022

In the Engineering Department the increase is accounted for by the very heavy repairs to the

large bridges damaged by floods; and in the Locomotive department by the extensive repairs and renewals of engines, and the enormous cost at which fuel was issued. During the second half of 1874, three engines were thoroughly renewed, while repairs were executed to 36 others, in 19 cases amounting to almost partial renewal. Under carriage and wagon the repairs were unusually heavy, owing to the renewal of a large number of timber trucks. The cause in the Traffic department is attributed to the cost of working the Nilgerry branch, and the accelerated mail service; and to the additional cost of working the passenger traffic and mails on the North-West line during the break, there being at one time no less than seven different trains engaged in carrying the traffic between Madras and Paichere.

Progress

Progress of works. 26th
35. Cheyair bridge. The new bridge has made fair progress, but some of the cylinders were forced out of the perpendicular by the floods of last year, when the bed of the river was greatly disturbed. Two of these have since been got back to their proper position by means of strong tackle, but around the others it will be necessary to excavate by the aid of cofferdams. A revised estimate bringing the total cost of the work to about Rs. 8,00,000 was submitted in October 1874, but as it has been determined to raise the level of the bridge 3 feet and to add four more openings, its completion will be delayed, and its cost still further enhanced. The cylinders are to be embedded in the rock when necessary by divers working in helmets, it having been found impossible to use the pneumatic apparatus, owing to the joints of the segments not being air tight.

When

When the cylinders were put together the use of compressed air was not contemplated, and no special care was taken with the joints. Sir John Hawkshaw has now decided that when the cylinders, having reached a considerable depth, pass into a hard stratum in which they can be firmly embedded, it will not be necessary to resort to heavy weighting in order to get them down to the solid rock. It was found at the Buggy that the bottom segments of some of the cylinders had been broken by this excessive weighting.

36. Buggy bridge. Considerable progress has been made in sinking the cylinders to form the piers of this bridge, and the pneumatic apparatus has been effectively used in embedding some of the shallow ones in the rock. In the present design for this bridge 9 of the piers are of screw piles, and the

25
the remaining 24 of cylinders; but owing to the failure of piles at the Paupugne and Chittravutti it is now considered desirable to use cylinders throughout, and to sink them well into the rock in the shallow parts of the bed. The revised estimate amounts to Rs. 7,01,174 being at the rate of Rs. 295 per foot run. An indent of Rs. 295 per foot run. An indent has been sent to England for the cylinders, and the work will be proceeded with as fast as possible.

37. Protective works. The protective works to the Palav, Paine, Gaariatum, and Vaggery bridges have not made good progress owing to the bad working season of last year. A considerable portion of the well sinking has been done, but owing to the high level of the water in the beds, great difficulty was experienced in laying the bottom courses of the curtain walls. Sir John

John Hawkshaw considers some alterations in the sanctioned design called for, and the works are now stopped pending the preparation of revised designs and estimates. If the whole of his recommendations be carried out the cost of the works will be very materially increased and a portion of the wells already sunk will become useless.

38. Madras Harbour works. The construction of the Madras Harbour having been sanctioned, a large quantity of laterite will be brought from Ambattur, 9 miles from Madras, and of granite from Tirutany, 31 miles from Madras. For the safe working of this extra traffic it is considered necessary to double the line between Perambore and Aradhy, and an estimate amounting to Rs. 3,40,000 for the purpose has been submitted for the sanction

26
sanction of the Government of India. Some addition to the stock of high sided wagons is also required, and 100 low sided wagons, for which there has been but little use of late years, are being altered for this work.

39. Proposed Extension to the Nilgerry Hills.
The importance of the traffic to and from the Nilgerry Hills, which has largely increased of late years, renders it desirable in the opinion of the Government, that communication by rail should be extended from the present terminus at Mettupalilam up to the Nilgerry plateau. From statistics compiled in the Public Works Department it is computed that a fair return upon the outlay may reasonably be looked for, and the question has been remitted for the consideration of the Board of Directors with a view to the submission of proposals for carrying out the work upon one of the recognised systems for ascending steep inclines. Here the question

at present rests.

South Indian Railway

40. Amalgamation. The Act amalgamating the Great Southern of India and Carnatic Railway Companies, under the title of The South Indian Railway Company, received the Royal assent on the 16th July 1874, and took effect from the 1st idem, on which date the accounts of the two Companies were thrown into one. Under clause 2 of the new Con. tract it is agreed that the rate of exchange shall be one shilling and eleven pence per rupee, with retrospective effect, in lieu of one shilling and ten pence for the late Great Southern of India, and two shillings per rupee for the late Carnatic

41. Barnatic Company.

Open mileage. The mileage work-
ed during 1874-75 was the same as
for the preceding year. Viz:-

Negapatam to Erode — 5' 6" gauge 167 miles
Arconam to Conjevaram — 3' 6" — 18 3/4 —
Total 185 3/4 miles

42.

Capital expenditure. The amount of
Capital expended on the open line up
to the 31st March 1875, was Rs 1,59,69,097,
being at the rate of Rs 95,623 (£ 8,765)
per mile. The total Capital expen-
diture including line under construc-
tion and stores was Rs 2,85,04,884,
on which the net profits Rs 4,12,996
gave a dividend at the rate of £ 1.9.0
per cent per annum. The amounts
expended on the metre gauge
extensions

20'
extensions fell far short of the Budget
allotments, for reasons explained in
paragraphs 53 & 54, the figures being
as follow:-

Southern Extension.

	Expenditure Rs	Budget allotment Rs	Short expenditure. Rs
Construction of Line	3,31,331	7,78,791	4,47,460
Ballast & Permanent way	1,51,752	5,39,122	3,87,370
Stations and Buildings	1,49,903	4,05,902	2,55,999
Plant	3,205	2,18,370	2,15,165

Total 6,36,191 19,42,185 13,05,994

Northern Extension (Madras & Coimbatore)

	Expenditure Rs	Budget allotment Rs	Short expenditure Rs
Construction of Line	2,45,980	6,82,680	4,36,700
Ballast & Permanent way	2,13,42	1,20,000	98,658
Stations and Buildings	32,178	2,13,550	1,81,372
Plant	2,507	43,333	48,826

Total 3,02,087 9,79,563 6,77,556

Northern Extension (Buddalore to Tanjore)

	Expenditure	Budget	Short
		allotment	expenditure
	Rs	Rs	Rs
	25,050	4,50,000	4,24,950
Total Engineering Department	9,63,248	33,71,748	24,08,500

Locomotive Department

Rolling stock	32,112	2,00,000	1,67,888
---------------	--------	----------	----------

43. Flood damages. Upon the 24 October 1874, considerable damage was caused to the line between Arconum and Conjeeveram by heavy floods. In the 3rd mile the wing walls and flooring of a bridge of two 14 feet girder openings were carried away, and at the Cortilliar bridge, where the water rose to the bottom of girders, the approaches sustained

29
31
sustained some injury. In the 6th and 7th miles, the bank was breached in many places, and in the 14th mile, a bridge of three 14 feet girder openings was entirely destroyed. The damaged works were repaired temporarily, and traffic resumed on the 14th November 1874. Between the 6th and 8th miles, the embankment is carried too low, & the waterway provided has also proved inadequate. This portion will be improved when the conversion of the line to the metre gauge is undertaken. The line between Negapatam and Erode enjoyed that immunity from flood damages which it has always possessed. With the

44. Condition of line and stock.

exception of the portions damaged by floods, the line was maintained in good order throughout the year.

The stations and offices were also kept clean and in good condition. The broad gauge rolling stock was maintained in good working order, but that on the Arconum-Conjeveram section is much in need of repair.

It is hoped however that the necessity for executing this will be obviated by the early conversion of this section to the metre gauge and the introduction of the new rolling stock.

45. Accidents. No serious accident occurred during the year 1874. Two derailments were caused by the fracture of the axles of an engine, and of a goods wagon, and on 22 occasions cattle

30
32
cattle were run over. Cow-catchers are not at present used, but in the metre gauge engines the orders of the Government of India on this point will be complied with. Two passengers were injured by falling out of trains in motion. On the line under construction there were five accidents, - two, being damages to bungalows by fire, - and three, injuries to coolies employed on the works.

46. Rates and fares. The passenger fares on the Negapatam - Erode section remained the same, vizt. 12, 5, and 2 pice per mile, and those on the Arconum - Conjeveram section, which previously stood at 12, 6, and 4 pice, were assimilated with the others.

others on the 1st February 1875.
The goods rates now consist of
the following classes:-

Special class _____ 8 pice

First _____ 12 "

Second _____ 24 "

A few excepted articles, such as com-
bustibles, are charged 54 pice per
mile. The simplification of the
classification continues to work
well, and is much appreciated
by native traders -

Train Service. Between Negapa-
tam and Erode the train service
was equivalent on week days to
two trains daily in each direction,
and to one through train in each
direction on Sundays. On the
Arconum - Conjeveram section, one
train

31
33
train was run daily in each
direction. Extra and Special
trains were run according to
requirements.

48. Traffic Earnings. The amount
of the traffic and the receipts
realised therefrom, are shown
in the following table for
the years 1874-'75, and 1873-'74
in comparison.

South

to show that the poorer classes of the community are not averse to using the railway when it is placed within the reach of their limited means. In a report on this measure after it had been in operation for two years / to the 30th June 1874 / it was stated that the change had not up to that time proved financially successful, as the small increase in receipts did not cover the additional cost of hauling such a large number of passengers, to the exclusion from the ordinary trains of goods vehicles which had to be worked by extra trains. It was considered that the two lowest fares / 5 & 2 pias / should be brought nearer together

33
35
together, so as to draw from the third class such of the passengers as are willing to pay a little more for the privilege of separation from those whom, from their habits or for other reasons, they consider objectionable; and the raising of the third class fare to 3 pias, and running carriages at the 2 pias rate on the slow trains only was advocated. The Board of Directors meanwhile suggested that two classes of accommodation would, as on some lines in England, meet the requirements of this country; but this was decidedly opposed by the Government and the Board then proposed the following fares:—
Upper

Upper class — 8 pias
Lower { 1st degree — 3
 2nd — 2

leaving for decisions in this country the question whether the three classes should be run on all trains. Under the contract the Government have the power of requiring in every train the provision of such accommodation as they may consider necessary, and in this case they insisted on carriages of the three classes being run by every train whether mail or local. The old denomination of first, second, and third class will also be preserved, the fares being 8, 3, and 2 pias per mile respectively. This change will come into operation on the opening

opening of the Southern Extension for public traffic.

50. Goods traffic. The ordinary goods traffic for the last three years thus compares:—

	1874-75	1873-74	1872-73
	Rs	Rs	Rs
Gross receipts	3,58,097	4,64,443	4,08,537
Muzau's Permanent way material	"	1,17,000	75,000
	3,58,097	3,47,443	3,33,537

showing a small difference in favour of the year under review. The following comparative statement shows the receipts from the principal descriptions of merchandise traffic during the official years 1873-74 and 1874-75.—
Comparative

Comparative statement shewing the receipts from the principal descriptions of Merchandise carried on the South Indian Railway during the Official years 1873-74 and 1874-75.

Description.	Total Receipts 1873-74.	Total Receipts 1874-75.	Sum of Receipts in 1874-75. 1874-75.	
Accounts	9,512.	6,252.	"	3,260.
Cloths	11,571.	10,461.	"	1,110.
Curry Stuffs	21,737.	19,959.	"	1,778.
Fruit and vegetables	14,841.	16,326.	1,485.	"
Grain of all kinds	96,737.	91,824.	"	4,913.
Granite Stones	8,720.	16,496.	7,776.	"
Hides	4,410.	4,348.	"	62.
Oil and ghee	6,855.	7,455.	600.	"
Oil cakes	7,161.	9,988.	2,827.	"
Salt	6,321.	6,225.	"	106.
Seeds of all kinds	21,391.	29,809.	8,418.	"
Sundries	83,257.	77,169.	"	6,082.
Tobacco	4,069.	4,638.	569.	"
Total.	3,53,576.	3,56,981.	21,675.	18,270.

No

No very considerable variations occur. The increase under granite stones is due to the larger quantity of laterite carried for the Public Works Department, and that under seeds to an exceptionally good season.

51. Working expenses and profits. The working expenses in the several departments, and the net profits, for the two years 1874-75 and 1873-74, are shown in comparison in the following table:-

South

52. Comparison of working expenses. The working expenses, as compared with those of the preceding year, showed a decrease of Rs. 31,017, equivalent to 5.2 per cent. Owing to the smaller earnings, however, the proportion borne to gross receipts is 57.6 as against 56.6 per cent. The maintenance charges do not vary much, but from the following figures it will be seen that the expenses in the Locomotive, Carriage and Wagon, and Traffic Departments have considerably increased during the last four years:—

	1871-72	1872-73	1873-74	1874-75
Locomotive	1,76,081	1,82,077	2,56,250	2,50,167
Carriage and Wagon	37,734	42,047	48,124	50,236
Traffic	67,259	67,788	87,542	87,177

South Indian Railway.

1874-75.

1873-74.

	Amount.	Per mean mile of line.	Percentage of total expenses.	Amount.	Per mean mile of line.	Percentage of total expenses.
Maintenance of way and fixtures	109,205	58,7914	11,19465	110,212	119,745	644657
Locomotive expenses	250,167	1346794	44542	256,804	1,256,250	1379342
Carriage and wagon expenses	50,356	270988	8973	5768	48,124	209080
Traffic expenses	87,177	469324	15534	8950	87,542	471289
General charges	58,426	303974	10058	5793	68,014	366790
Steam boat service	"	"	"	"	"	"
General Administration expenses	7,702	41464	1373	0791	12,353	66503
Total	561,013	3020258	100000	57998	592,058	3187241
Receipts	4,12,998	2223397	"	42442	4,53,573	244524
Excess Receipts	974,009	524,365	"	100,000	104,543	56,2865
						100000

In the Locomotive Department the large increase is due to heavy expenditure on repairs and up-keep of rolling stock, rendered necessary by increased age, - to the enhanced cost of fuel, - and to the greater train mileage run. In the Traffic Department the increased expenditure is due to extra staff employed in working trains conveying permanent way materials for the Vizam's State Railway, and for the Southern Extension, - and to increased payments to other lines for the use of foreign stock.

53. Progress of Works
Southern Extension 215 miles. The earthwork and masonry were completed

37 39
completed during the official year under review, but owing to the late arrival of some of the permanent way, girders, and rolling stock from England, the opening of the line has been delayed beyond the time when its completion was looked for. The large bridge of fifteen 70 feet girder openings over the Vygay river is now ready, but difficulties were met with at the Vypar (twelve 70 feet openings) and the Chitaur (ten 70 feet openings) which considerably retarded their progress. The station buildings were commenced somewhat late, but had made good progress by the end of the official year - the probable dates now

now fixed for opening are: Trichinopoly
to Madurai, 96 miles, August, 1875:

to Tuticorin and Tinnevely 119 miles,
November 1875. Some delay in opening
has been caused by the defective con-
dition of the telegraph, the trans-
fer of which to permanent posts
has only just now been undertaken.

54.
Northern Extension - Madras to Tanjore 217 miles.

The exceptionally wet season of last year
greatly delayed the progress of work
in this section. Considerable diffi-
culty was experienced in the manu-
facture of bricks for well-sinking at the
large bridges, and during the last three
months of the official year, the earth-
work was somewhat retarded by the
scarcity of labour during harvesting
operations.

38
60
operations. At the large bridges over
the Palar (eighteen spans of 120 feet)
and the Guddalam (ten spans of
100 feet) wells are being sunk and
good progress may be expected during
the current working season. Although
the earthwork between Guddalore and
Tanjore was sanctioned in April 1874,
the whole project was not finally ap-
proved until the 17th February 1875, so
that but little masonry was done on
this part of the line during the offi-
cial year. Up to the 31st March 1875
64 per cent of earthwork, and 30 per
cent of masonry in small bridges, on
the Northern Extension, had been com-
pleted. Out of 34 large bridges 14
were commenced and about 15 per cent
of

of the estimated quantity of masonry finished. Twenty miles of rail were laid and linked in. Engines and rolling stock are now being erected at Madras for opening as far as Chingleput (35 miles) which is looked for in October 1875. The probable dates of completion of the other portions are:-

Chingleput to Tindivanam 40 miles	April 1876
Tindivanam to Cuddalore 52—	} Augt. 1876
Combaconum to Tanjore 22—	
Cuddalore to Combaconum 67—	December 1876

Great delay has taken place regarding the terminal arrangements at Madras and the question is still unsettled. A revised estimate providing for raising the line and for additional waterway, where the heavy

floods

floods of 1874 shewed this to be necessary, is under preparation. Owing also to the greater depth to which it has been found necessary to carry many of the foundations, and to the high price at which the contracts for the permanent way materials, bridge works, and rolling stock, were let, this will it is thought considerably exceed the present sanctioned estimates averaging Rs 55,500 per mile.

55. Conjeveram to Chingleput Extension. The Secretary of State has been unable, with the information already furnished, to sanction the estimates for this link to connect Chingleput with Arcanum and to provide a shorter route

route for traffic going from South Arcot to the west and north by the Madras Railway. Further information is being obtained and an estimate framed of the additional cost of converting the open line between Arcotum and Conjeveram to the metre gauge. Considerable expenditure will in any case have to be incurred in improving this section, and in repairing the rolling stock.

56.
Conversion of the open line to metre gauge. The question of the best point for the break of gauge has been re-opened by the Government, and Trichinopoly is now recommended in preference to Erode on grounds of public convenience and for military and political

considerations

40.
62/
considerations. The wants of large bodies of troops can be better supplied at Trichinopoly, and it is also considered desirable that the large military centres of Madras, Bangalore, Cannanore and Trichinopoly should be in direct communication without break of gauge. The Board of Directors, however, see no good reason to depart from the decision already arrived at and are in favour of the conversion of the whole of the open line. The eastern section between Negapatam and Trichinopoly has since the close of the official year been altered, by sections of 16 miles between the last train on Saturday night and the first on Monday morning, and

Return C.
Madras Presidency Railways for 1874-75

Miles opened during the year.
Total miles opened.
First class
Second class
Third class
Fourth class
Total

Receipts from
Passengers
Receipts from
merchandise
Receipts from
Railway material
Total Receipts
from Passengers,
Goods &c.
Working expenses

Net
Profits or losses
No. of European
Staff
No. of Native
Staff
Total capital
expended up to
31st March 1875

Madras	558475	13325	57080	2099.34	622.603	2748.319	2779.763	3,237,604	14009	54445536	3072.678	970	8997	10965036
South Indian	18575	2761	16140	1574.603	1533.404	573.497	358.097	49.422	421.016	541.013				

Railway Department.

CONSULTING ENGINEER'S OFFICE.

No. 44 Madras 13 August 1875.

From
LIEUT.-COLONEL J. H. M. SHAW STEWART, R.E.,
Consulting Engineer for Railways,

To *Lieut. Colonel S. Mullins R.E.*
~~Colonel G. W. WALKER, R.E.,~~

Secretary to Government,
Public Works Department,
Fort Saint George.

SIR,

Enclosure 1.

I have the honour to forward the
Railway Administration Report of this Presi-
-dency for the Official year 1874-75, and to re-
-quest that the same may be printed in
pamphlet-form, separately from this letter and
the order of Government thereon.

2. A copy of the Report has, as usual, been
sent to the Chief Secretary to Government.

I have the honor to be,
Sir,

Your most obed. Servant.

C. Stewart Major R.E.
for Consulting Engineer for Railways.

P. W. 5246/75
20th August 1875
No 2396
2397

Recd

Public Works Dept

No 2396

Proceedings of the Madras Government
Under date the 20 Aug 1875
Read the following

Print reports
in pamphlet form
70 copies

From
The Comd Engineer for
Railways } H.C. No 448 of 13th Aug 1875
16
#8 copies of the Report
11 SC

Ordered to be
printed in the manner
desired
required by the Comd
Engr and communicated
to the Govt of India.

Comd Eng for Cys.

(H.C. Docket No 2397 dated
20 Aug 1875)
Docket No 2397 of 20 Aug 1875.
Copy of the above
forwarded to the Govt
of India.

35 copies of the Report &
6 SC of the order.

Disps - 13.9.75

Am. S
14/9

28th Aug 5/75 H.C. 56-58-
12th Aug 1875 - 282-283.

P. H. 1875 Report made
From
The Consulting Engineer,
for Railways,
To
The Secretary to Government,
P. W. Department,
Fort Saint George.
Dated 13th Aug 1875
Recd. 14th 3
Encls: One
No. 4448

Pb. 2396. 20-8-75

Submitting Ad.
ministration Report
when the Department
of the Government
Planning in this
Proceeding for the
year 1874-75
Pa-20 Aug 1875 No 2396.

Am-17-8-75 Date 20/8/75
Am-17-8-75 14-8-75 11/11/75

No 344.

125246
Oct. of 1875 Madras.
PUBLIC WORKS.

Consgruphys

Dated

Place

Recd.

Encl.

G. O., 20 Sept 1875, No. 2396
-2397

Nos. 344-345

346

Forwarding Administration
Report of the Guaranteed
of the Madras Presidency
for the year 1874-75.

Administration Report of
the Guaranteed Railways of
Madras Presidency for the

1874-75. Ordered that the
be printed in the manner
by the Comptroller and
sent to the Govt of India.