1567.

Govt. of 18 Madras.

PUBLIC WORKS.

From 24/2/90

SS 1/3/90

Dated

Recd.

Encl.

G.O., 22 July 1890, No. 2778R.

Covered goods wagons for the M. Ry. —

"Ordered, that the estimate for 100 wooden — be fwd to the Govt of India for sanction.

E.T.

Covered goods wagons for the M. Ry.

Fwds. for sanction estimate Rs. 1,98,000, for 100 wooden —

30

No. 3. 277 R dated 22nd Febry: 1890.

C.S.
20.2.90

29 R

Ordered to be
rwarded for the sanction
the Government of India

E. No 278 R d/ 22nd Feby: 1890

Forwarded.

C.S.
15. 2. 90

No. 527 R d/ 11-9-80
" 528 R - 11-9-80
" 662 R - 9-9-87
" 376-7 R - 6-4-89
" 561 R - 17-5-89
" 776 R - 16-7-89

From
THE CONSULTING ENGI. R
FOR RAILWAYS,
MADRAS,

No. 116

Dated 14th } February 1890.
Received 15

No. OF ENCLOSURES. 9

Subject.

Submitting for the sanction of the Government of India, an Estimate amounting to Rs. 196,000 for 100 wooden covered goods wagons – Madras Railway

A
No. 277-78 R d/ 22. 2. 90

The Agent and Manager is supported by his Board, and is recommended for the sanction of the Government of India. If it be sanctioned the equipment of the wagons under reference authorized to date will be

		No
Open Goods	15 10 8	1537
" Stone	16 tons	50
Covered Goods wood	6 tons	40
" " "	10 tons	400
" " iron	10 tons	400
Total		2,427

Sidney Smith
Major R.E.
~~H.G.~~ for Consg. Engr. for Rlys

It will be noticed that, with the addition of the 100 wagons now asked for, the sanctioned equipment will be less in point of numbers by 13, but greater as regards carrying-capacity by 4,770 tons than the equipment sanctioned in 1880. The decrease in numbers is due to the operation of the arrangement sanctioned in 1880, under which 8 ton wagons are converted on renewal into 10 ton stock, in the proportion of

of 5 to 4, so that 4/5 only of the number of 8 ton wagons are renewed.

5. Although the carrying capacity, with the addition now asked for, will be greater by 4,770 tons, i.e. 23.8%, than that sanctioned in 1880, the increase in tonnage dealt with has risen during this period from 303,587 t in 1st half of 1880, to 532,808 tons in 1st half of 1889 being an increase of 75.5%

6. The proposal of the

wagons, including "open" "covered" and "stone" stock as sanctioned by the Government of India in its No: 101 R.T. dated 3rd May 1889, in comparison with the equipment sanctioned in G. O. No: 527 R. dated 11th September 1880.

Nature of wagons	Carrying capacity	Sanctioned equipment in 1881		Sanctioned equipment in 1889		Increase		Decrease	
		Number	Carrying capacity	Number	Carrying capacity	Number	Carrying capacity	Number	Carrying capacity
	Tons		Tons		Tons				Tons
Open goods	15 10 8	2300	18400	1537	15,370	"	"	763	3030
" Stone	16	"	"	50	800	50	800	"	"
Covered goods wood	6	40	240	40	240	"	"	"	"
" "	10	"	"	300	3,000	300	3,000	"	"
" Iron	10	100	1,000	400	4,000	300	3,000	"	"
Grand Total	"	2,440	19640	2,327	23,410	"	3,770	113	"

Dt.

Agent and Manager's No: $\frac{4460}{237}$ | 776 dated 10th July 1889.

3. After full discussion the Agent and Manager has decided to recommend to Government that these wagons be made of wood instead of iron, as was originally proposed by him. The grounds for this decision will be found in the Agent and Manager's No: $\frac{4460}{1336}$ dated 10th December 1889 and its enclosures.

4. The following statement shows the equipment of goods

wagons

26P

From the

FORM NO. 1.

PUBLIC WORKS DEPARTMENT.

OFFICE OF CONSULTING ENGINEER FOR RAILWAYS,

Madras, 14th February 1890.

Letter from the Agent & Manager, Madras Railway

No: 4460/237 | 776 dated 10th July 1889
———— Do ———— " 4460/237 | 13068 dt 25th Sept. 1889
———— Do ———— " 4460/1336 dt 7th December 1889 with encls
———— Do ———— " 4460/107 dt 28th January 1890 with encls

Estimate for 100 wooden covered goods wagons.

No. 116

SUBMITTED for the sanction of the Government of India.

2. With his letter No: 4460/107, dated 28th January 1890, the Agent and Manager, Madras Railway, submitted for sanction an estimate amounting to Rs 1,96,000/- chargeable to Capital, for 100 wooden covered goods wagons. The necessity for this additional rolling stock is fully explained in the

Agent

Sn 107/1

P.W. Inc 7/1567/90

		Rs
Brought over		2110
Add for loss by exchange on English charges, viz. 25% Rs 1925/		481
Actual cost to the Company of an Iron wagon........		2591
Estimated cost of wooden wagons....	1960.	
Add for loss by exchange on English charges, viz: 25% of Rs 613/.	153	
Actual cost to the Company of a wooden wagon.......		2113
Saving on one wagon		Rs 478
Total saving on 100 wagons if built of wood......		100×478 = Rs 47,800

Yours faithfully
(sd) C. E. Phipps
Ag Loco Supdt

(True Copy)

Mead
Ag Agent & Manager.

Agent

2420

No. A/12430/821

Madras Railway
Locomotive Superintendent's office
Perambur 24th December 1889.

The Ag. Agent and Manager.

My dear Sir,
Your No. 4460/10031 of 17th instant

I send herewith, as requested, an estimate, in duplicate, for the cost of construction of 100 wooden Covered Goods wagons.

2. It will be noticed that the cost per wagon is estimated at Rs 1960 and as the following figures will shew, it is anticipated that a saving of Rs 47,800 upon the 100 wagons will result, if it is decided to build the wagons of wood instead of iron.

	Rs
Cost per wagon of Iron Covered Goods now being sent out from England	2020
Add for anticipated increase in cost as pointed out in Board's D.O. letter of 25th Oct 1889 - Say 5%	90
Estimated cost of Iron Covered Goods wagons exclusive of loss by exchange - -	2110

REGISTER
No. 107
FILE
No.

Enc 3. including Esti in dup

P.10 Enc 4
1567/90

MADRAS RAILWAY.

From
The Agent and Manager.

To
The Consulting Engineer
for Railways.

C.T.S.

papers

Dated 28th Janury 1890

Recd. 29th

No. 4460/107

Forwarding for Sanction an Estimate for 100 Covered Goods Wagons additional wagons maybe conveyed, as soon as this can conveniently be done, in order that the growing demand of the traffic may not be neglected.

I have the honour to be
Sir
Your Most Obedient Servt

W W Neal
for Actg Agent & Manager

MADRAS RAILWAY.

From
The Agent and Manager.

To
The Consulting Engineer
for Railways.

Dated 188

Recd.

No.

An estimate was, as you are aware, submitted with this office letter No $\frac{4460B}{237}$/1068 dated 25th September 1889, for 100 Iron Covered Goods Vehicles and from that letter it will be seen that the Board are satisfied of the necessity for the additional Rolling Stock.

The question of "wood versus iron" is fully dealt with in the Locomotive Superintendent's letter No $\frac{A\ 12430}{787}$ of 4th December 1889, a copy of which accompanied this office letter No $\frac{4460}{1366}$ dated 7th December 1889 to your address.

A copy of the Acting Locomotive Superintendent's letter No $\frac{A\ 12430}{821}$ dated 24th December 1889 is forwarded herewith in which figures are given explaining the saving expected to accrue by the use of wood instead of iron, in the construction of these wagons.

It is therefore requested that you will be so good as to recommend that the sanction of Government to the construction of these

2 22P

Print

(No. I.) No. 4460/107 5,000—14-11-85.

MADRAS RAILWAY. 21P

AGENT AND MANAGER'S OFFICE,
MADRAS, 28th Jany 1890

From

The Agt Agent and Manager. M.R.C.

To

The Consulting Engineer for Railways.

SIR,

Estimate for 100 wooden covered goods wagons.

Your No 1065 dated 19th December 1889

As requested in your letter quoted above, I have the honour to forward herewith an estimate amounting to Rs 1,96,000/- chargeable to Capital, for 100 wooden Covered Goods wagons, proposed to be added to the Rolling Stock of this Railway.

Information as to the Budget provision and the date on which the sanction will lapse is given on the estimate.

3

En 1260
2

P.W. Inc 8
1367/90

important there is no difficulty at all in building wooden vehicles of exactly the same cubic capacity as the iron ones.

3. As explained in the letter above quoted, these 100 vehicles may now be turned out from Perambur as rapidly as they could be procured from England and, having regard to the rise in prices, particularly in the iron trade, now in progress at home, it is probable that the difference of cost in favour of the wooden wagons now, would be still greater than that calculated in the letter under reference.

4. With regard to the durability of the two types of vehicle, we have no experience as yet from which to state, with any certainty, the life of these iron covered goods wagons but we know that the wooden ones will last some 25 years. The plates of the iron wagons recently supplied have been made very thin in order to reduce the weight and only time will shew whether this may not have been overdone.

5. It is desirable that a decision should be arrived at as early as possible as to whether these vehicles are to be built at Perambur or not as, if they are, certain materials which will be required for them should be included in the General Stores indent now under preparation.

Yours faithfully,
Sd. F. H. Trevithick,
Loco. Superintendent.

(True Copy)

J. W. Mead
for Agent & Manager

2

1926

M. A/12430/787

Madras Railway
Loco. Superintendent's Office
Perambur Works 4th Decr 1889.

The Agent & Manager,

My dear Sir,

Question of wood versus iron
to be used in construction of 100
covered Goods Wagons.

In compliance with your remarks upon this subject made at the Official Meeting yesterday and in continuation of this Office letter upon the same subject, A/12430/730 dated 6th November ultimo, I write to say that I think it would be desirable to construct these vehicles of wood mainly for these two strong reasons, that wooden vehicles can be constructed at Perambur Works at a saving in round figures of Rs. 500/ per vehicle, equal to half a lac on the whole order and that, having regard to the rapid corrosion observed in some of our iron wagons used for the conveyance of salt, it is desirable that a proportion of wooden vehicles should be maintained for the conveyance of salt or other material likely to damage the iron.

2. You alluded particularly to two points yesterday, namely, that the wooden vehicles were some 15 Cwts: heavier than the last sample of iron vehicles; also that the wooden vehicles were slightly less in cubic capacity. The weight of the wooden vehicles can and will be reduced and I think those built in future will be as nearly as possible of the same weight as the last new iron ones. The difference in cubic capacity is but slight in itself and is not, so far as I am aware, of importance; if it should be considered —

En 1260/1

P.W. Eng
1567/90.

1826

iron work would, as explained above, have to be obtained from England. I do not however think that, as an outside estimate, this should make more than from 100 to 150 Rs: a wagon difference.

Yours faithfully
(Sigd) H. E. Phipps
Ag: Locomotive Superintt.

(True Copy)

J.W. Read
Ag. Agent & Manager.

1786

MADRAS RAILWAY COMPANY

completed in about the same time or by February 1892. I anticipate that by the end of 1890 or early in 1891 the arrears of renewals of wagon stock will have been very nearly, if not quite, brought up to date and we shall, in that case, be free to begin work upon other stock. If then it should be decided to build the 100 new wagons at Perambur of wood they could, I think, be all completed by about, say, September 1891 without interfering with the regular work of renewal. It would be necessary to indent at once in this case for wheels, axles and other Iron work but this could probably be done without causing any material delay.

6. For your information I would also quote the following figures:—

	Rs	As.	P.
Cost per wagon of the 200 Iron wagons now being delivered.	2020	0	0
Loss by exchange	469	0	0
	Rs 2,489	0	0
Cost of wooden Covered Goods wagons now being built at Perambur.	Rs 1786	0	0

The latter price, it must be remembered, is the cost of the wagons now being built as renewals in which certain of the old Iron work of the condemned High Sided Open Goods wagons is being utilized and it is possible therefore that entirely new wagons though of the same type would cost rather more than this sum, as a portion of the "earliest, the beginning of 1891. I should "therefore recommend that they be ordered "complete from England and that they be "of Iron and of exactly similar pattern to "those now being delivered". Since, however, this was written, Government have approved in Government Order No. 776 R. dated 16th July last, of the principle of constructing, as renewals, wooden rather than iron wagons and the question seems to me now to arise as to whether it would not be more to the Company's advantage to build the 100 wagons now indented for locally, of wood rather than to obtain from England Iron wagons.

4. "The chief reason why I recommended, in my letter above quoted, that they should be of iron was that, in view of the Traffic Manager's representation, it was thought they would probably be obtained from England with less delay than if they were constructed here but, though this might have been the case had the Indent been then submitted, it is, I think, questionable whether much, if any, time would now be saved.

5. "The indent for the 200 wagons, 100 of which have now been received, was sent in from this Office on the 18th June 1887 and the wagons have consequently taken 2 years and 5 months to construct, ship and deliver and the Indent now being forwarded may therefore be expected to be

2

Enclosures.

15 ~~30~~

Madras Railway

No. A/$\frac{12430}{730}$. Locomotive Superintendent's Office,
Perambur Works, 6th November 1889.

To
The Agent and Manager.

My dear Sir,

Your letter No. $\frac{4460}{7222}$ of the 27th Sept.

I beg to forward herewith 5 copies of an Indent on the Board of Directors, together with 11 drawings and an outline specification for 100 Iron Covered Goods wagons.

2. With reference to the conversation that took place after the last Official Meeting on the 24th ultimo upon this matter, I would record as follows:–

3. In your letter No. $\frac{4460}{237}$/4720 dated 29th June last you remark, "Mr Moss suggests that if these additional wagons are "sanctioned, unless you are prepared to construct them rapidly in India, they should "be specially indented for from England", and in my reply to this letter, No. A/$\frac{12430}{480}$ of the 6th of the following month, it is stated, "Presuming that it was decided to construct "this 100 wagons locally of wood it would be "necessary to send home for wheels, axles, "springs, buffers and other iron work and "I do not think that, even if this material "were at once ordered, we could arrange to "commence work upon them until, at the

---

MADRAS RAILWAY.

From
The Agent and Manager.

To
The Consulting Engineer
for Railways.

REGISTER
No. 1260
FILE
No.

Inv. 2

PW Inv. 3
1567/90

Dated 7th } Decr 1889
Recd. 11th }

No. $\frac{4163}{1366}$

Recommending that the 100 Covered Goods wagons required by the Company be built locally of wood instead of iron wagons being obtained from England as previously suggested and to state that I entirely approve of the present recommendation.

I have the honour to be
Sir
Your most Obedt. Servant

Francis W. Hamel
Agent and Manager

Print

130

(No. 1.)

5,000—14-11-85.

No. $\frac{4460}{1366}$

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

MADRAS, 7th December 1889

Despatched 13 Decr/89

From

The Agent and Manager. M. R. Co.

To

The Consulting Engineer for Railways.

SIR,

With reference to what passed at the last Official Meeting and to previous correspondence on the subject of the additional 100 Covered Goods wagons now required by the Company. I have the honour to forward copies of letters from the Locomotive Superintendent No. A $\frac{12430}{787}$ of the 4 instant and No. A $\frac{12430}{730}$ of the 6 ultimo recommending that under the present altered circumstances these wagons should be built locally of wood, instead of Iron wagons being obtained from England

as

REGISTER No. 1961 FILE No.

MADRAS RAILWAY.

From The Agent and Manager.

To The Consulting Engineer for Railways.

P10 Inc 2
1567/90

No. $\frac{4460}{237}$ /1068

Dated 25th Septr: 1889

Recd. 28

Regarding the proposal to increase the vehicle stock on the M. Ry:

12P

"different conclusion".

I have the honour to be,
Sir,
Your most obed! Servant,

Agent & Manager.

MADRAS RAILWAY.

From
The Agent and Manager.

To
The Consulting Engineer
for Railways.

Dated 188
Recd.
No.

" Capacity; and I am to add that nothing
" more in this direction will be approved
" until the whole subject has been dealt
" with thoroughly and comprehensively, so
" that for a good many years to come, at
" any rate, the carrying capacity will be
" settled with definite reference to work
" to be done.

" "The Board will take an opportunity
" of discussing this important question
" with Mr. Moss before he returns to
" Madras".

I also quote paragraph 27 from my letter No. 1892 dated 3rd August 1889 to the Board and request that you will kindly give the matter your early and cordial support.

" 27. It may be thought that on a
" railway like this Company's line, traffic
" not accepted when ready for conveyance
" must necessarily be carried subsequently;
" but the decrease in our receipts during a
" half year in which an obstruction has
" interrupted the working for a few days
" only, seems to point forcibly to a

MADRAS RAILWAY.

From
The Agent and Manager.

To
The Consulting Engineer
for Railways.

Dated 188

Recd.

No.

10 P

"sanctioned by the Board) being at once supplied. In paragraph 43 of 1890 you further state that it is recommended that these wagons should be ordered complete from England, and that they should be built of iron exactly similar in pattern to those now being delivered.

"In reply I am to inform you that under the altered circumstances the Board will be prepared to modify the view expressed in their letter No. 783 in respect to the number of wagons required for the traffic, believing that the 100 more wagons are wanted; and as it will take a considerable time to provide them, and get them on to the rails at Madras, I am instructed to write this in anticipation of the Board's next official letter, and to convey sanction to your applying to Government for permission to send home the necessary Indent at the earliest possible date.

"It is assumed that these wagons would be chargeable to Capital, and an addition to the Rolling Stock Tonnage

---

25th September 9

The [illegible] M. R. Coy.

Sir

With reference to your letter No. 689 of 26th July 1889 requesting that the views of the Consulting Board might be obtained on the proposal to increase the stock of Covered Goods vehicles to the extent of 100, I now have the honour to quote for the information of Government the following extract from a letter dated 6th September 1889 addressed to me by the Company's Secretary in London.

"I have submitted to the Directors your letters No. 1590 and 1597 in the former of which you enclosed a letter from the Traffic Manager in which he urges the absolute necessity for the 100 additional wagons asked for in 1887 (when only 200 instead of 300 were

(No. I.)

No. 4460 B/1068
237

5,000—14-11-85.

Print

98

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,
MADRAS, 25th September 1889.

From

The *Agent and Manager*, M. R. Coy.,

To

The *Consulting Engineer for Railways.*

SIR,

With reference to your letter No. 627 of 26th July 1889 requesting that the views of the Company's Board might be obtained on the proposal to increase the stock of Covered Goods vehicles to the extent of 100, I now have the honour to quote for the information of Government the following extract from a letter dated 6th September 1889 addressed to me by the Company's Secretary in London:—

"I have submitted to the Directors "your letters Nos. 1890 and 1892 in the former "of which you embody a letter from the Traffic "Manager in which he urges the absolute ne-"cessity for the 100 additional wagons asked "for in 1887 (when only 200 instead of 300 were

---

REGISTER
No. 721
FILE

PW
1567/9

MADRAS RAILWAY.

From
The Agent and Manager.

To
The Consulting Engineer
for Railways.

Dated 10th July 1889
Recd. 11 " "

papers

No. 176

Regarding the proposal to increase the Company's stock of Goods Vehicles

Letter to A.M. No 625
d 26/7/9

7 2

the 100 additional Iron covered goods wagons which the responsible officers of the Company have found to be as demanded by the traffic presented for conveyance.

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

Read

for Agent and Manager.

MADRAS RAILWAY.

From
The Agent and Manager.

To
The Consulting Engineer for Railways.

No.
Dated 188
Recd.

such orders were sent immediately, the wagons could not be commenced until the beginning of 1891. He consequently recommends that they should be ordered complete from England and that they should be built of iron exactly similar in pattern to those which are now being delivered.

No expenditure on the stock alluded to would be incurred until 1890 provided that the sanction is accorded.

"The respective carrying capacity, weight, carrying power, tare, &c of the Iron and wooden wagons are as follows:—

	Internal Cubic capacity.	Weight carrying power.	Tare without wheels.	Total tare with new wheels.	Total tare with worn wheels.
	C.ft.	Tons.	Tons. Cwts. qrs	Tons. Cwts. qrs	Tons. Cwts. qrs
Wooden wagons	1,033	10	4 - 18 - 0	7 - 4 - 3	6 - 12 - 0
Iron wagons	1,100	10	4 - 8 - 0	6 . 15 . 2?	6 - 2 - 0

Tare in diagram book is
t c q
8 . 4 . 2

I have the honour to request that the sanction of Government may be conveyed to me for an Indent to be forwarded to the Board of Directors for the

---

MADRAS RAILWAY.

From
The Agent and Manager.

To
The Consulting Engineer
for Railways.

No.

Dated 188

Recd.

6R

"traffic offers and a wagon is on hand.

"If the goods traffic continues to "increase it will be necessary to indent "for a still further number of wagons "but for the reasons explained in the "closing paragraphs of my letter of the "20th January 1887 to the Locomotive Super-"intendent (this letter will be found as "printed with G. O. 662 R. of the 9th September "1887) I am not anxious to add a single "wagon to our stock which we cannot "find work for."

The Acting Locomotive Superintendent in his letter No. A/ $\frac{10783}{204}$ of the 16th March last a copy of which accompanied my letter No. 325x of 18th idem entered fully into the cost of constructing covered goods wagons of wood and showed the saving which would be effected by such a course, but in reference to the wagons now asked for Mr. Phipps states it would be necessary to send home for wheels, axles, springs, buffers and other iron work and he is therefore of opinion that if such

x Vide G.O. No. 375R d/6-4-89.

7

MADRAS RAILWAY.

From
The Agent and Manager.

To
The Consulting Engineer
for Railways.

No.

Dated 188

Recd.

4P

"take steps to still further increase our stock "by the permanent addition of 100 covered "goods wagons and that these wagons should "be ordered from England if the Locomotive "Department is not in a position to construct them in this country without delay.

"The following table of figures will "shew you the work we have done year "by year since the 1st January 1881.

Years. 13 ½	Tons of goods carried include Railway material and Revenue Stores.	Average load per wagon. Tons.	Average number of Tons in train.	Number of goods vehicles hauled one mile		Carrying Capacity hauled one mile. Tons.
				Loaded.	Empty.	
	7	6	6	7	7	7
1881 —	693,613	4·55	76·0	15,713,403	3,428,460	156,900,183
1882 —	710,067	4·58	79·4	18,112,564	3,729,712	180,478,928
1883 —	708,310	4·64	79·5	32 17,625,112	3,639,097	177,893,687
1884 —	989,136	4·97	80·2	19,807,683	5,182,415	210,760,850
1885 —	891,147	4·97	80·9	21,201,876	5,563,210	226,380,227
1886 —	902,023	5·04	85·8	22,090,266	4,516,490	228,541,852
1887 —	996,352	5·18	87·3	22,139,733	4,732,149	236,103,508
1888 —	1,088,774	5·12	85·8	22,378,660	4,946,947	245,253,532

"The pressure during the current year "has been greater than I have felt it before and "I have repeatedly during the last 3 months

such

No. 277-278½ of 22/2/

5

MADRAS RAILWAY.

From
The Agent and Manager.

To
The Consulting Engineer
for Railways.

No.

Dated 188

Recd.

"that of carrying road material to Madras from the Avadi and Ambatur Quarries for the Municipality and these wagons can hardly therefore be taken as a set off against the 484 wagons we should eventually have been short of.

"The 200 covered wagons sanctioned by the Government of India in 1887 has reduced the deficiency to 284 wagons.

"From the 1st January 1887 to the 31st May 1889 I find 293 eight ton wagons were broken up, so that in a period of 29 months assuming that the eight ton wagons have been replaced by 10 ton wagons we have actually lost for carrying purposes 59 wagons.

"We have some 976 eight ton wagons still running and presuming that these wagons are broken up at the rate of 125 a year and renewed as 10 ton wagons we shall in some 9 years have a further deficiency in number of 215 wagons. 195

"The traffic on the line has not remained stationary and it seems to me the time has now arrived when we should take

such

MADRAS RAILWAY.

From
The Agent and Manager.

To
The Consulting Engineer
for Railways.

Dated 188

Recd.

No.

it is confidently hoped that better results in the working expenses will be obtained by reason of smaller wagons being replaced by those of 10 ton capacity still Mr. Moss points out, the number of vehicles at his disposal is gradually decreasing, and with an increasing traffic additional goods wagons are absolutely necessary-

"Our original 8 ton stock consisted "of 2296 wagons and when the whole of those "wagons have been renewed as wagons "of a greater carrying power, we shall "have in place of them,

50 ✓ 15 ton wagons
1762 ✓ 10 " " and wagons
1812 ✓

"It will be seen from these figures that if "the stock had not been added to by a "further sanction for additional vehicles, "we should have been expected to work the "traffic with some 484 wagons short of "the number we had available in 1883.

"The 50 stone or laterite wagons were "applied for. for a special purpose.- viz.

that

(No. I.) 5,000—14-11-85.

No. $\frac{4460}{237}$/776 MADRAS RAILWAY. 1P

AGENT AND MANAGER'S OFFICE,
MADRAS, 10th July 1889.

From

The *Agent and Manager,* M. R. Coy.

To

The *Consulting Engineer for Railways.*

SIR,

I have the honour to request your attention to the papers under Proceedings of Government No. 66^{2} R. dated 9th September 1887 on the subject of a proposal to increase the stock of goods vehicles on the Madras Railway. I also quote for the information of Government an extract from the following letter No. C/$\frac{204\,arm}{13362}$ dated 25th June 1889 from the Company's Traffic Manager in which he explains that the time has now arrived when the additional 100 wagons asked for in 1887 (when only 200 were sanctioned) should be built, as the goods traffic on the line is steadily growing, and although it

---

RAILWAY.

Govt. of {1890} Madras.

PUBLIC WORKS.

Dated February, 22nd.

Recd. *Encl.*

G.O., 22nd Feb. 1890, Nos. 277 R., 278 R.

FEBRUARY.

Covered Goods Wagons for the Madras Railway

Forwarding for sanction estimate of Rs. 1,96,000 for 100 wooden —.

(No. I.)

5,000—14-11-85.

No. 4460/237/776

1 R

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

MADRAS, 10th July 1889

From

The *Agent and Manager,* M. R. Coy.

To

The *Consulting Engineer for Railways.*

SIR,

I have the honour to request your attention to the papers under Proceedings of Government N° 662 R. dated 9th September 1887 on the subject of a proposal to increase the stock of goods vehicles on the Madras Railway. I also quote for the information of Government an extract from the following letter N° C/204 A&M/13362 dated 25th June 1889 from the Company's Traffic Manager in which he explains that the time has now arrived when the additional 100 wagons asked for in 1887 (when only 200 were sanctioned) should be built, as the goods traffic on the line is steadily growing, and although it

---

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers :—

From the Consulting Engineer for Railways, dated Madras, 14th February 1890, No. 116.

From the Agent and Manager, Madras Railway Company, to the Consulting Engineer for Railways, dated Madras, 10th July 1889, No. 4460-237/776.

I have the honor to request your attention to the papers under Proceedings of Government, No. 662 R., dated 9th September 1887, on the subject of a proposal to increase the stock of goods vehicles on the Madras Railway. I also quote for the information of Government an extract from the following letter No. C. 204 A. & M./13362, dated 25th June 1889, from the Company's Traffic Manager, in which he explains that the time has now arrived when the additional 100 wagons asked for in 1887 (when only 200 were sanctioned) should be built, as the goods traffic on the line is steadily growing, and although it is confidently hoped that better results in the working expenses will be obtained by reason of smaller wagons being replaced by those of 10-ton capacity still Mr. Moss points out, the number of vehicles at his disposal is gradually decreasing, and with an increasing traffic additional goods wagons are absolutely necessary :—

"Our original 8-ton stock consisted of 2,296 wagons, and when the whole of these wagons have been renewed as wagons of a greater carrying power, we shall have in place of them—

50	15-ton wagons and
1,762	10-ton wagons.
Total ...	1,812

It will be seen from these figures that if the stock had not been added to by a further sanction for additional vehicles, we should have been expected to work the traffic with some 484 wagons short of the number we had available in 1883.

"The 50 stone or laterite wagons were applied for for a special purpose, viz., that of carrying road material to Madras from the Avadi and Ambatúr quarries for the Municipality, and these wagons can hardly therefore be taken as a set-off against the 484 wagons we should eventually have been short of.

"The 200 covered wagons sanctioned by the Government of India in 1887 has reduced the deficiency to 284 wagons.

"From the 1st January 1887 to the 31st May 1889 I find 293 8-ton wagons were broken up, so that in a period of 29 months, assuming that the 8-ton wagons have been replaced by 10-ton wagons, we have actually lost for carrying purposes 59 wagons.

"We have some 976 8-ton wagons still running, and presuming that these wagons are broken up at the rate of 125 a year and renewed as 10-ton wagons, we shall in some 7 years have a further deficiency in number of 215 wagons.

"The traffic on the line has not remained stationary, and it seems to me the time has now arrived when we should take steps to still further increase our stock by the permanent addition of 100 covered goods wagons and that these wagons should be ordered from England if the Locomotive Department is not in a position to construct them in this country without delay.

"The following table of figures will show you the work we have done year by year since the 1st January 1881:—

Years.	Tons of goods carried include railway material and revenue stores.	Average load per wagon.	Average number of tons in a train.	Number of Goods Vehicles hauled one mile.		Carrying capacity hauled one mile.
				Loaded.	Empty.	
		tons.				tons.
1881	693,613	4·55	76·0	15,713,403	3,428,460	156,900,183
1882	710,067	4·58	79·4	18,112,564	3,729,712	180,478,928
1883	708,310	4·64	79·5	17,632,112	3,639,097	177,893,687
1884	989,136	4·97	80·2	19,807,683	5,182,415	210,760,850
1885	891,147	4·97	80·9	21,201,876	5,563,210	226,380,227
1886	902,023	5·04	85·8	22,090,266	4,516,490	228,541,852
1887	996,352	5·18	87·3	22,139,733	4,732,149	236,103,508
1888	1,088,774	5·12	85·8	22,378,660	4,946,947	245,253,532

"The pressure during the current year has been greater than I have felt it before, and I have repeatedly during the last three months had to refuse non-perishable traffic when it offered because wagons were not available to carry it.

"The returns for the half-year that is closing show the following result as compared with the year 1888:—

Months.	Goods traffic.			
	Tons carried.		Amount earned.	
	1888.	1889.	1888.	1889.
			rs.	rs.
January	55,545	56,603	3,33,051	3,55,578
February	56,938	54,794	3,33,005	3,36,398
March	61,768	56,196	3,55,227	3,58,340
April	57,777	64,612	3,33,657	4,01,269

"The experience we have had in working covered stock since I addressed you early in 1887 induces me to ask for 100 covered instead of 100 open wagons.

"The introduction of covered wagons will undoubtedly save us a very large sum yearly in the cost of keeping up tarpaulins, and generally the covered wagons are more satisfactory as there is no delay in waiting for tarpaulins and ropes when traffic offers, and a wagon is on hand.

"If the goods traffic continues to increase it will be necessary to indent for a still further number of wagons, but for the reasons explained in the closing paragraphs of my letter of the 20th January 1887 to the Locomotive Superintendent (this letter will be found printed with G.O., No. 662 R. of the 9th September 1887), I am not anxious to add a single wagon to our stock which we cannot find work for."

2. The Acting Locomotive Superintendent in his letter No. A 10783/204 of the 16th March last, a copy of which accompanied my letter No. 325 of 18th idem, entered fully into the cost of constructing covered goods wagons of wood and showed the saving which would be effected by such a course, but in reference to the wagons now asked for Mr. Phipps states it would be necessary to send home for wheels, axles, springs, buffers and other iron work, and he is therefore of opinion that, if such orders were sent immediately, the wagons could not be commenced until the beginning of 1891. He consequently recommends that they should be ordered complete from England and that they should be built of iron exactly similar in pattern to those which are now being delivered.

3. No expenditure on the stock alluded to would be incurred until 1890 provided that the sanction is accorded.

4. The respective carrying capacity, weight, carrying power, tare, &c., of the iron and wooden wagons are as follows:—

——	Internal cubic capacity.	Weight carrying power.	Tare without wheels.			Total tare with new wheels.			Total tare with worn wheels.		
	c. ft.	tons.	tons.	cwt.	qr.	tons.	cwt.	qr.	tons.	cwt.	qr.
Wooden wagons	1,033	10	4	18	0	7	4	3	6	12	0
Iron wagons	1,100	10	4	8	0	6	15	2	6	2	0

5. I have the honor to request that the sanction of Government may be conveyed to me for an indent to be forwarded to the Board of Directors for the 100 additional iron covered goods wagons which the responsible officers of the company have found to be demanded by the traffic presented for conveyance.

From the Agent and Manager, Madras Railway Company, to the Consulting Engineer for Railways, dated Madras, 25th September 1889, No. 4460-237 B./1068.

With reference to your letter No. 627 of 26th July 1889, requesting that the views of the Company's Board might be obtained on the proposal to increase the stock of covered goods vehicles to the extent of 100, I now have the honor to quote for the information of Government the following extract from a letter, dated 6th September 1889, addressed to me by the Company's Secretary in London:—

"I have submitted to the Directors your letters Nos. 1890 and 1892, in the former of which you embody a letter from the Traffic Manager in which he urges the absolute necessity for the 100 additional wagons asked for in 1887 (when only 200 instead of 300 were sanctioned by the Board) being at once supplied. In para. 43 of 1890 you further state that it is recommended that these wagons should be ordered complete from England, and that they should be built of iron exactly similar in pattern to those now being delivered.

"In reply, I am to inform you that under the altered circumstances the Board will be prepared to modify the view expressed in their letter No. 783 in respect to the number of wagons required for the traffic, believing that the 100 more wagons are wanted; and as it will take a considerable time to provide them, and get them on to the rails at Madras, I am instructed to write this in anticipation of the Board's next official letter, and to convey sanction to your applying to Government for permission to send home the necessary indent at the earliest possible date.

"It is assumed that these wagons would be chargeable to Capital, and an addition to the rolling stock tonnage capacity; and I am to add that nothing more in this direction will be approved until the whole subject has been dealt with thoroughly and comprehensively, so that for a good many years to come, at any rate, the carrying capacity will be settled with definite reference to work to be done.

"The Board will take an opportunity of discussing this important question with Mr. Moss before he returns to Madras."

2. I also quote para. 27 from my letter No. 1892, dated 3rd August 1889, to the Board, and request that you will kindly give the matter your early and cordial support.

"27. It may be thought that on a railway like this Company's line traffic not accepted when ready for conveyance must necessarily be carried subsequently; but the decrease in our receipts during a half-year in which an obstruction has interrupted the working for a few days only, seems to point forcibly to a different conclusion."

From the Agent and Manager, Madras Railway Company, to the Consulting Engineer for Railways, dated Madras, 7th December 1889, No. 4460/1366.

With reference to what passed at the last official meeting and to previous correspondence on the subject of the additional 100 covered goods wagons now required by the Company, I have the honor to forward copies of letters from the Locomotive Superintendent, No. A 12430/787 of the 4th instant, and No. A 12430/730 of the 6th ultimo, recommending that, under the present altered circumstances, these wagons should be built locally of wood instead of iron wagons being obtained from England as previously suggested, and to state that I entirely approve of the present recommendation.

Enclosures.

From the Locomotive Superintendent, to the Agent and Manager, Madras Railway Company, dated Perambúr Works, 6th November 1889, No. A 12430/730.

[Your letter No 4460/7222 of the 27th September.]

I beg to forward herewith five copies of an indent on the Board of Directors, together with eleven drawings and an outline specification for 100 iron covered goods wagons.

2. With reference to the conversation that took place after the last official meeting on the 24th ultimo upon this matter, I would record as follows.

3. In your letter No. 4460-237/4720, dated 27th June last, you remark, "Mr. Moss suggests that if these additional wagons are sanctioned, unless you are prepared to construct them rapidly in India, they should be specially indented for from England," and, in my reply to this letter, No. A 12430/480 of the 6th of the following month, it is stated, "Presuming that it was decided to construct this 100 wagons locally of wood it would be necessary to send home for wheels, axles, springs, buffers and other iron work, and I do not think that, even if this material were at once ordered, we could arrange to commence work upon them until, at the earliest, the beginning of 1891. I should therefore recommend that they be ordered complete from England and that they be of iron and of exactly similar pattern to those now being delivered." Since, however, this was written, Government have approved, in G.O. No. 776 R., dated 16th July last, of the principle of constructing, as renewals, wooden rather than iron wagons, and the question seems to me now to arise as to whether it would not be more to the Company's advantage to build the 100 wagons now indented for locally of wood rather than to obtain from England iron wagons.

4. The chief reason why I recommended, in my letter above quoted, that they should be of iron was that, in view of the Traffic Manager's representation, it was thought they would probably be obtained from England with less delay than if they were constructed here, but, though this might have been the case had the indent been then submitted, it is, I think, questionable whether much, if any, time would now be saved.

5. The indent for the 200 wagons, 100 of which have now been received, was sent in from this office on the 18th June 1887, and the wagons have consequently taken two years and five months to construct, ship and deliver, and the indent now being forwarded may therefore be expected to be completed in about the same time or by February 1892. I anticipate that by the end of 1890 or early in 1891 the arrears of renewals of wagon stock will have been very nearly, if not quite, brought up to date, and we shall, in that case, be free to begin work upon other stock. If then it should be decided to build the 100 new wagons at Perambúr of wood, they could, I think, be all completed by about, say, September 1891 without interfering with the regular work of renewal. It would be necessary to indent at once in this case for wheels, axles and other iron work, but this could probably be done without causing any material delay.

6. For your information I would also quote the following figures:—

	RS.
Cost per wagon of the 200 iron wagons now being delivered... ...	2,020
Loss by exchange	469
Total ...	2,489
Cost of wooden covered goods wagons now being built at Perambúr.	1,786

The latter price, it must be remembered, is the cost of the wagons now being built as renewals in which certain of the old iron work of the condemned high-sided open goods wagons is being utilised, and it is possible therefore that entirely new wagons though of the same type would cost rather more than this sum, as a portion of the iron work would, as explained above, have to be obtained from England. I do not, however, think that, as an outside estimate, this should make more than from 100 to 150 rupees a wagon difference.

From the Locomotive Superintendent, to the Agent and Manager, Madras Railway Company, dated Perambúr Works, 4th December 1889, No. A 12430/787.

Question of wood versus *iron to be used in construction of* 100 *covered goods wagons.*

In compliance with your remarks upon this subject made at the official meeting yesterday, and in continuation of this office letter upon the same subject, A 12430/730, dated 6th November ultimo, I write to say that I think it would be desirable to construct these vehicles of wood mainly for these two strong reasons, that wooden vehicles can be constructed at Perambúr Works at a saving in round figures of Rs 500 per vehicle, equal to half a lakh on the whole order, and that, having regard to the rapid corrosion observed in some of our iron wagons used for the conveyance of salt, it is desirable that a proportion of wooden vehicles should be maintained for the conveyance of salt or other material likely to damage the iron.

2. You alluded particularly to two points yesterday, viz., that the wooden vehicles were some 15 cwts. heavier than the last sample of iron vehicles; also that the wooden vehicles were slightly less in cubic capacity. The weight of the wooden vehicles can and will be reduced, and I think those built in future will be as nearly as possible of the same weight as the last new iron ones. The difference in cubic capacity is but slight in itself and is not, so far as I am aware, of importance; if it should be considered important, there is no difficulty at all in building wooden vehicles of exactly the same cubic capacity as the iron ones.

3. As explained in the letter above quoted, these 100 vehicles may now be turned out from Perambúr as rapidly as they could be procured from England, and, having regard to the rise in prices, particularly in the iron trade now in progress at home, it is probable that the difference of cost in favor of the wooden wagons now would be still greater than that calculated in the letter under reference.

4. With regard to the durability of the two types of vehicles, we have no experience as yet from which to state, with any certainty, the life of these iron covered goods wagons, but we know that the wooden ones will last some 25 years. The plates of the iron wagons recently supplied have been made very thin in order to reduce the weight, and only time will show whether this may not have been overdone.

5. It is desirable that a decision should be arrived at as early as possible as to whether these vehicles are to be built at Perambúr or not, as, if they are, certain materials which will be required for them should be included in the General Stores indent now under preparation.

From the Agent and Manager, Madras Railway Company, to the Consulting Engineer for Railways, dated Madras, 28th January 1890, No. 4460/107.

Estimate for 100 *wooden covered goods wagons.*

[Your No. 1065, dated 19th December 1889.]

As requested in your letter quoted above, I have the honor to forward herewith an estimate, amounting to Rs. 1,96,000, chargeable to Capital, for 100 wooden covered goods wagons proposed to be added to the rolling-stock of this railway.

2. Information as to the budget provision and the date on which the sanction will lapse is given on the estimate.

3. An estimate was, as you are aware, submitted with this office letter No. 4460-237B/1068, dated 25th September 1889, for 100 iron covered goods vehicles, and from that letter it will be seen that the Board are satisfied of the necessity for the additional rolling-stock.

4. The question of "wood *versus* iron" is fully dealt with in the Locomotive Superintendent's letter No. A 12430/787 of 4th December 1889, a copy of which accompanied this office letter No. 4460/1366, dated 7th December 1889, to your address.

5. A copy of the Acting Locomotive Superintendent's letter No. A 12430/821, dated 24th December 1889, is forwarded herewith, in which figures are given explaining the saving expected to accrue by the use of wood instead of iron in the construction of these wagons.

6. It is therefore requested that you will be so good as to recommend that the sanction of Government to the construction of these additional wagons may be conveyed, as soon as this can conveniently be done, in order that the growing demands of the traffic may not be neglected.

Enclosure.

From the Locomotive Superintendent, to the Agent and Manager, Madras Railway Company, dated Perambúr, 24th December 1889, No. A 12430/821.

[Your No. 4460/10031 of 17th instant.]

I send herewith, as requested, an estimate, in duplicate, for the cost of construction of 100 wooden covered goods wagons.

2. It will be noticed that the cost per wagon is estimated at Rs. 1,960, and, as the following figures will show, it is anticipated that a saving of Rs. 47,800 upon the 100 wagons will result if it is decided to build the wagons of wood instead of iron :—

	RS.	RS.
Cost per wagon of iron covered goods now being sent out from England	2,020	
Add for anticipated increase in cost as pointed out in Board's demi-official letter of 25th October 1889, say, 5 per cent.	90	
Estimated cost of iron covered goods wagons exclusive of loss by exchange		2,110
Add for loss by exchange on English charges, viz., 25 per cent., Rs. 1,925		481
Actual cost to the Company of an iron wagon		2,591
Estimated cost of wooden wagons	1,960	
Add for loss by exchange on English charges, viz., 25 per cent. of Rs. 613	153	
Actual cost to the Company of a wooden wagon		2,113
Saving on one wagon		478
Total saving on 100 wagons if built of wood, 100 × 478 =		7,800

Submitted for the sanction of the Government of India.

2. With his letter No. 4460/107, dated 28th January 1890, the Agent and Manager, Madras Railway, submitted for sanction an estimate, amounting to Rs. 1,96,000, chargeable to Capital, for 100 wooden covered goods wagons. The necessity for this additional rolling-stock is fully explained in the Agent and Manager's No. 4460-237/776, dated 10th July 1889.

3. After full discussion the Agent and Manager has decided to recommend to Government that these wagons be made of wood instead of iron, as was originally proposed by him. The grounds for this decision will be found in the Agent and Manager's No. 4460/1336, dated 10th December 1889, and its enclosures.

4. The following statement shows the equipment of goods wagons, including "open," "covered" and "stone" stock as sanctioned by the Government of India in its No. 101 R.T., dated 3rd May 1889, in comparison with the equipment sanctioned in G.O., No. 527 R., dated 11th September 1880 :—

Nature of wagons.	Carrying capacity.	Sanctioned equipment in 1881.		Sanctioned equipment in 1889.		Increase.		Decrease.	
		Number.	Carrying capacity.	Number.	Carrying capacity.	Number.	Carrying capacity.	Number.	Carrying capacity.
	TONS.		TONS.		TONS.		TONS.		TONS.
Open goods ..	15 10 8	2,300	18,400	1,537	15,370	..	..	763	3,030
Do. stone	16	..	..	50	800	50	800		
Covered goods wood ..	6	40	240	40	240	..	..	..	..
Do. do. ..	10	..	..	300	3,000	300	3,000	..	..
Do. iron ..	10	100	1,000	400	4,000	300	3,000	..	..
Grand Total ..	..	2,440	19,640	2,327	23,410	..	3,770	113	..

It will be noticed that, with the addition of the 100 wagons now asked for, the sanctioned equipment will be less in point of numbers by 13, but greater as regards carrying capacity by 4,770 ton than the equipment sanctioned in 1880. The decrease in numbers is due to the operation of the arrangement sanctioned in 1880, under which 8-ton wagons are converted on renewal into 10-ton stock, in the proportion of 5 to 4, so that four-fifths only of the number of 8-ton wagons are renewed.

5. Although the carrying capacity, with the addition now asked for, will be greater by 4,770 tons, *i.e.* 23·8 per cent. than that sanctioned in 1880, the increase in tonnage dealt with has risen during this period from 303,587 in first half of 1880 to 532,808 tons in first half of 1889, being an increase of 75·5 per cent.

6. The proposal of the Agent and Manager is supported by his Board, and is recommended for the sanction of the Government of India. If it be sanctioned, the equipment of the wagons under reference authorised to date will be—

			NO.
Open goods ...	15 10 8	tons	1,537
Do. stone ...	16	"	50
Covered goods, wood,	6	"	40
Do. do	10	"	400
Do. iron,	10	"	400
		Total ...	2,427

Order—dated 22nd February 1890, No. 277 R., Public Works.

Ordered to be forwarded for the sanction of the Government of India.

(Here enter No. 278 R., dated 22nd February 1890.)

(True Extract.)

(Signed) C. J. SMITH, Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

Endorsement—dated 22nd February 1890, No. 278 R., Public Works.

Forwarded.

(By Order.)

Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

Exd. J. Moses.
Spare Copies

RAILWAY.

Govt. of {1890} Madras.

PUBLIC WORKS.

Dated February, 22nd.

Recd. *Encl.*

G.O., 22nd Feb. 1890, Nos. 277 R., 278 R.

FEBRUARY.

Covered Goods Wagons for the Madras Railway

Forwarding for sanction estimate of Rs. 1,96,000 for 100 wooden —.