

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 808-7-9	Press
585-87	Misc.
Dated 21 3	1872.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
21st March 1872.*

No. 505. Read the following letter from the Acting Consulting Engineer for Railways, to the Secretary to Government, Public Works Department, dated Madras, 4th March 1872, No. 108 :—

I HAVE the honour to submit, for the sanction of the Government of India, an estimate of Rupees 12,87,381, received from the Agent and Manager of the Madras Railway, for substituting iron bowl for wooden sleepers on the 4th Division of the South-West line, between Muddikerry and Beypore, exclusive of the seven miles of the Coimbatore ghaut and the sidings at the Muddikerry station.

2. In forwarding the estimate the Agent quotes as follows from the Chief Engineer :—

“ I am of opinion that we should indent upon the Board of Directors for Greaves' bowl sleepers, similar to those now in use on our North and South-West lines.”

“ It is desirable, as far as possible, to preserve uniformity in the materials in use over our system of railway, and, moreover, as I have already in stock upwards of twenty-seven miles of Greaves' sleepers, I am in a position to commence renewals at once.”

3. The Board of Directors in London had written previously to the Agent on the 24th November 1871 :—

“ From the report contained in No. 966 of the detailed examination of the ballast on the 4th Division of the South-West line, it appears that by substituting sand for the laterite in the last thirty miles or so of the division, which the Acting Chief Engineer states could be done without much, if any, increase in the present gang of platelayers, the whole of the length, with the exception of about seven miles of the Coimbatore ghaut, where it is not considered desirable to attempt any modification of the present road, might be made suitable for potsleepers. Before coming to any decision as to the desirability of laying pot sleepers in the district in question, it was considered desirable to refer the matter to Mr. Hawkshaw, who has for some time had the subject under consideration. In his letter, dated 15th instant, copy of which is enclosed, he states that he considers it very desirable to introduce the pot sleepers wherever suitable ballast exists or can be provided. Under these circumstances, and considering also the great saving in the cost of maintenance that will result from the change, the Board approve of your applying to Government for sanction to substitute iron for wooden sleepers on the 4th Division, South-West line, with the exception of the seven miles above referred to. You will please call the Chief Engineer's attention to Mr. Hawkshaw's observations as to the manner in which the trenches should be cut. In connection with this subject, I may mention that we are led to believe that much trouble is caused by the sand getting into the bearings of the rolling stock, and it has occurred to the Board that this might possibly be obviated to some extent by covering over the sand ballast with some more solid material. This question has, however, doubtless engaged the attention of the Company's Chief Engineer.”

*Proceedings of the Madras Government, Public Works Department,
21st March 1872.*

Mr. Hawkshaw's letter of the 15th November 1871, referred to in the above, is as follows:—

"I have to acknowledge the receipt of your letter of the 7th instant, asking my opinion on the desirability of substituting pot sleepers for wooden ones on the 4th Division, South-West line.

"I have read the extract from the letter from the Acting Agent and Manager on the subject, and have now to report that I think it very desirable to introduce the pot sleepers on the division in question wherever the ballast is suitable or where suitable ballast can be provided.

"A very considerable portion of the line seems already to be ballasted with suitable ballast, and I see no objection to providing sand ballast on the other portion of the line referred to by excavating trenches in the way proposed, and filling them with sand ballast. I have only to observe, with respect to this proposal, that trenches should be cut at frequent intervals at right angles to the longitudinal trenches and filled with porous material, so as to drain away the water from the longitudinal trenches to the side of the railway."

4. The necessity for the substitution of iron for wooden sleepers on the 4th division of the South-West line was represented in my letter, No. 368, of the 14th September 1870, and the estimate for the section of line between Avanashy and Muddikerry (the latter place being six miles to the west of Coimbatore) was sanctioned by the Government of India on the 8th October 1870. The Chief Engineer in 1870 had come to the conclusion (*vide* paragraph 3 of my letter of 14th September 1870) that the road could not be maintained at a reasonable cost until the wooden sleepers are re-placed by iron, but considered that on account of there being principally rough laterite ballast between Palghaut and Beypore, a different form of sleeper would have to be adopted.

This difficulty has now been overcome by the proposal approved by Mr. Hawkshaw, of cutting trenches to be filled in with sand; and application is accordingly now made for sanction to lay down the pot sleepers as far as Beypore.

5. Of the total amount of the estimate now submitted, namely, Rupees 12,87,381, Rupees 3,18,577 is chargeable to Capital, and Rupees 9,68,804 to Revenue.

The allocation to Capital is arrived at by assuming the renewals to extend over a period of about four years, and taking the per-centage of the cost of sleepers chargeable to Capital as given in the tabular statement sanctioned under the Orders of Government marginally noted, the cost of English material, including 2½ per cent. estimated for contingencies,

G. O., No. 155, dated 23rd March 1860.
" " 495, " 27th August "

*Proceedings of the Madras Government, Public Works Department,
21st March 1872.*

Rupees 12,67,846, divided by four equals Rupees 3,16,961; the amount to be spent in each year and the proportion chargeable to Capital is in the—

	Per-centage to Capital.	Proportion chargeable to Capital.
	RS.	RS.
Official year 1872-73...	31.76	1,00,667
1873-74...	27.24	86,340
1874-75...	22.34	70,809
1875-76...	19.17	60,761
		3,18,577

Provision has been made for Rupees 1,00,667 in the Budget estimate of 1872-73 in Schedule B. of works not yet sanctioned, Item No. 6.
G. O., No. 165, dated 19th January 1872.

No. 506.

ORDER THEREON, 21st March 1872, No. 808.

RAILWAY, No. 81.

ORDERED that this letter with the accompanying estimate be forwarded to the Government of India, and that sanction be requested to the outlay of Rupees 12,87,381 on the substitution of iron bowl for wooden sleepers over 101 miles in the 4th Division of the South-West line of the Madras Railway, between Muddikerry and Beypore.

(Here enter No. 809, dated 21st March 1872.)

(True Extract.)

Colonel, R.E.,

Secretary to Government.

To the Acting Consulting Engineer for Railways.

Exd. S. T. Augustin..

PUBLIC WORKS DEPARTMENT,
FORT ST. GEORGE, 21st March 1872.

No. 507.

No. 809.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

PUBLIC WORKS DEPARTMENT.

RAILWAY, No. 82.

SIR,—Adverting to your letter of
the 8th October 1870, No. 1,759-R.,
communicating the sanction of the

Government of India to the cost of substituting iron bowl for wooden sleepers on
the portion of the South-West line of the Madras Railway between Avanashy and
Muddikerry, I am directed herewith to forward a letter from the Acting Consulting
Engineer for Railways, giving cover to an estimate amounting to Rupees 12,87,381
for similarly renewing 101 miles of the line between Muddikerry and Beypore.

2. It has been already explained to the Government of India that the heavy
cost of preserving in a state of efficiency
the wooden sleeper road in the 4th
Division of the South-West line, or that portion which it is now proposed to relay,
renders imperative the provision of metal sleepers, and there seems no reason to
doubt that, as in the case of the 3rd
division, though the first cost of renewal
appears considerable, the saving in
maintenance which the change will
effect will more than counterbalance the increased charge for interest on the
additional capital expended.

Letter No. 2,401, dated 5th October 1870.

Paragraph 4 of Consulting Engineer's letter,
recorded with G. O., No. 2,400, dated 5th
October 1870.

3. The difficulty which it was anticipated would be experienced in utilizing,
on the western portion of the division, bowl sleepers of the pattern in general use
is now proposed to be obviated by substituting sand for the laterite ballast of
which the road is formed. This arrangement, which consists in cutting longitu-
dinal trenches to be filled in with sand, and others at right angles to convey away
the drainage, can be carried out by the ordinary platelayers with little or no
addition to their normal strength.

4. Of the total amount of the estimate to which sanction is now requested,
it is explained that, under the principles approved by the Secretary of State in
his despatch of the 16th December 1864, No. 23, and assuming the renewals to
extend over a period of about four years, the allocation to Capital will be
Rupees 3,18,577, Revenue being charged with the remainder.

5. A provision of Rupees 1,00,667 has been made for the work in Schedule
B. of the Budget estimate for 1872-73.

I have the honour to be,

Sir,

Your most obedient servant,

Colonel, R.E.,

Secretary to Government.

Ed. S. T. Augustin.

Railway Depart

Comm. Engineer's Office

No 108

Sir,

Major H. P. Prendergast M.C.
Secy Commr Engineer for Railways
Madras.

Colonel J. A. Prendergast M.C.
Secretary to Government,
Public Works Departt,
Fort Saint George.

Sir,

I have the honor to
submit for the sanction of the Govern-
ment of India an estimate of Rs 12,87,281, received from the Agent and
Manager of the Madras Railway,
for substituting iron haul for wooden
slaps on the 1st Division of the
South West line between Muddikurly
and Raypore, exclusive of the 7 miles
of the Coimbatore Shant and the
sidings at the Muddikurly station.

In forwarding the statement,
the Agent quotes as follows from the
Chief Engineer:—

"I am of opinion that we
"should indent upon the Board of
"Directors for Green's best sleepers
"similar to those now in use on our
"North and South-West Lines."

"It is desirable as far as
"possible to preserve uniformity in
"the materials in use over our system
"of Railway, and moreover as I have
"already in stock upwards of 27 miles
"of Green's sleepers I am in a
"position to commence Renewals at once."

3 The Board of Directors in
London had written previously
to the Agent on the 24th November
1891:—

"From the report contained
in

"in Mr. G. L. G. of the detailed examination
"of the Ballast on the 11th Division of
"the South-West Line, it appears that
"by substituting sand for the laterite,
"in the last 20 miles or so of the
"division, which the Acting Chief
"Engineer states could be done without
"much, if any, increase in the present
"gang of platelayers, the whole of the
"length, with the exception of about
"7 miles of the locomotive & hault,
"where it is not considered desirable
"to attempt any modification of the
"present Road, might be made
"suitable for pot sleepers. Before
"coming to any decision as to the
"desirability of laying pot sleepers
"in the district in question, it was
"considered desirable to refer the
"matter to Mr. Hawkeshaw, who
"has

"has for some time had the subject
"under consideration. In his letter
"dated 15th instant, copy of which
"is enclosed, he states that he con-
"siders it very desirable to introduce
"the pot sleepers wherever suitable
"ballast exists or can be procured.
"Under these circumstances and considering
"also the great saving in the cost of
"maintenance that will result from
"the change, the Board approve of
"your applying to Government for
"sanction to substitute iron for wooden
"sleepers on the 11th Division South
"West Line, with the exception of the
"7 miles above referred to. You
"will please call the Chief Engineer's
"attention to Mr. Hawthorn's observation
"as to the manner in which the benches
"should be cut. In connection
"with

116
"with this subject, I may mention
"that we are led to believe that much
"trouble is caused by the sand getting
"into the bearings of the rolling stock,
"and it has occurred to the Board
"that this might possibly be avoided
"to some extent, by covering over the
"sand ballast with some more solid
"material. This question has, however,
"doubtless engaged the attention
"of the Company's Chief Engineer."
"Mr. Hawthorn's letter of
"the 15th November 1871, referred to, in
"the above is as follows:-

"I have to acknowledge
"the receipt of your letter of the 7th
"instant asking my opinion on the
"desirability of substituting pot
"sleepers for wooden ones on the 11th
"Division South-West Line.

I

130
"I have read the extract
"from the letter from the Acting
"Agent and Manager on the subject
"and have now to report that I
"think it very desirable to intro-
"duce the pot sleepers on the line
"in question wherever the ballast
"is suitable or where suitable ballast
"can be provided.

"A very considerable
"portion of the line seems already
"to be ballasted with suitable
"ballast, and I see no objection
"to providing sand ballast on the
"other portion of the line referred
"to, by excavating trenches in the
"way proposed, and filling them
"with sand ballast. I have only
"to observe with respect to the
"proposal that trenches should
"be

be cut at frequent intervals at
"right angles to the longitudinal
"trenches and filled with porous
"material so as to drain away the
"water from the longitudinal trenches
"to the side of the Railway".

131
The necessity for the
"substitution of iron for wooden
"sleepers on the 11th Division of the
"South West Line was represented
"in my letter No. 368 of the 14th
"September 1870, and the estimate
"for the section of line between
"Chomashel and Huddicurry,
"(the latter place being 6 miles to
"the west of Coimbatore) was
"sanctioned by the Government of India
"on the 8th October 1870. The Chief
"Engineer in 1870 had come to
"the conclusion (vide para 3 of my
"letter of 14th September 1870) that
"the

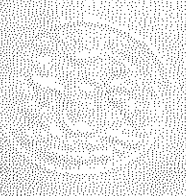
22200
1870/71

22827
1870/71

The road could not be maintained at a reasonable cost until the wooden sleepers are replaced by iron, but considered that on account of there being principally rough laterite ballast between Palghat and Beypore, a different form of sleeper would have to be adopted.

This difficulty has now been overcome, by the proposal approved by Mr. Mauleverer, of putting gravel to be filled in with sand, and application is accordingly now made for sanction to lay down the iron sleepers as for as Beypore.

5 Of the total amount of the estimate now submitted, Rs. 12,87,381, Rs. 8,18,577 is chargeable to



to Capital, and Rs. 4,68,800 to Revenue.

The allocation to Capital is arrived at, by assuming the term to extend over a period of about 10 years, and taking the percentage of the cost of sleepers chargeable to Capital as given in the Capital statement sanctioned under the orders of Government.

86,215 1/2
28 months
80 20,975 1/2
17 1/2 years

Accordingly, the cost of complete material including 2 1/2 per cent estimated for contingencies, viz. 12,64,846, divided by 4, equals Rs. 3,16,211 the amount to be spent in each year, and the proportion chargeable to Capital is, viz. the -

Official year	Percentage to Capital	Proportion chargeable to Capital.
1872-73	31.76	Rs. 1,00,667
1873-74	27.24	" 86,340
1874-75	22.34	" 70,809
1875-76	19.17	" 60,761
		Rs. 3,18,577.
		Provision

613 March 7th R. 15.

So. Railway between Ind
The Bombay & Poona Railway. Sir Barry and Beypoor.
Sept 22/32 - H. E. Re. dated
So

To,

Secretary,

The Secy: to the Govt.
of India, P. W. D.

Sir,

I advert to your letter
of the 8th October 1870 in which
communicating the sanction
of the Govt. of India to the
cost of substituting iron
bowl for wooden sleepers
on the portion of the South
West line of the Andam
Railway between Ara-
nashy and Muddikeri.
I am directed herewith
to forward a letter from the
Acting Secy: Genl: in charge
of Railways giving power
to an estimate amounting
to Rs 12,87,381 for similarly
renewing 101 miles of the
line

to the Secy: to the Govt.

for a copy of the estimate
recorded with the Secy:
dated 8th October 1870

line between Muddikeri
and Biggar.

It has been already
explained to the Govt.
of India that the heavy
cost of preserving in a
state of efficiency the
wooden sleeper road
in the 4th Division of the
South West line, or that
portion which it is now
proposed to relay, re-
quires imperative the
provision of metal sleepers,
and, there seems no rea-
son to doubt that, as
in the case of the 3rd Division,
though the first cost of
renewal appears con-
siderable, the saving
in maintenance which
the change will effect
will

will more than counter-
-balance the increased
charge for interest on the
additional Capital expended.

The difficulty which
it was anticipated would
be experienced in utilizing
on the Western portion
of the Division howl
sleepers of the pattern
in general use is now
proposed to be obviated
by substituting sand
for the laterite ballast
of which the road is
formed. This arrangement
which consists in cutting
longitudinal trenches
to be filled in with sand
and others at right
angles to convey away the
drainage

30
drainage, can be carried
out by the ordinary
platelayers with little
or no addition to their
normal strength.

Of the total amount
of the estimate to which
sanction is now requested,
it is explained that,
under the principles
approved by the Secy.
of State in his despatch
of the 16th December 1864,
No. 23, and assuming the
renewals to extend
over a period of about
four years, the alloca-
tion to Capital will
be Rs 3,18,577, Revenue
being charged with the
remainder.

a provision of
Rs 1,00,667 has been
made for the work
in schedule B of the
Budget estimate for 1872/73.

Page 11th

Desp. 22/3/72 with
7 Cps. of Rs 808 of 1872
+ three inclosures.

Primary, with enclosure
to Gov. Secretariat
and for wooden shed
a portion of the Rs.
to Madras 1/2.

6/13/72

a provision of
Rs 1,00,664 has been
made for the work
in schedule B of the
Budget estimate for 1872/73.

Ward 11th

12/35
Govt of India
PUBLIC WORKS.

to the Accountant, Cuz
for Railway
and
To the Secretary to the
Govt of India

Dated

Recd.

Encl.

021/1872-808-809.

Nos. 505-506 & 607

Warden Pechers. Ordered
that the sum of Rs. 12,07,381,
submitted by the Forest Deptt.,
for substituting iron rods
for wooden Pechers on a
portion of the S.V. line of the
Madras Ry, be forwarded
for the sanction of the
Govt of India.

Desp. 22/3/72
7 Cps. of Nos 808 of 1872
& three enclosures.