

(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.	2929-30	Press
B.P. No.		Mis.
330-332		
Dated	14-10-1894	185 .

Not to be folded or roughly handled

11

*Proceedings of the Madras Government, Public Works Department,
14th October 1874.*

No. 330. Read the following letter from Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Madras, 22nd September 1874, No. 561:—

ADVERTING to my letter, dated 23rd June 1874, No. 365,* I have the honor

* Proceedings of Government, 27th July 1874, No. 2,021.

† With three plans and Agent's letters Nos. 779, 835, and 837, dated 2nd and 19th September 1874.

to forward, for the sanction of the Government of India, revised estimates† of the cost of the two bridges to be constructed at 105-11 miles and 123-23 miles on the South-West Line of the

Madras Railway, amounting to Rupees 29,451 and Rupees 36,456 respectively.

2. In the letter from the Acting Chief Engineer, which accompanies the Agent's No. 779, it is explained that in excavating the foundations for the bridge at 105-11 miles it is found that a hard substratum cannot be obtained at a less depth than 26 feet, and it therefore becomes necessary to resort to wells. These are to be of 6 and 8 feet diameter and filled with hydraulic concrete. As the bridge is situated within the Mailputty station siding, it becomes necessary to provide two sets of girders, and as one set only was allowed in the original estimate, two extra pairs of 30 feet girders have been now included. These alterations and additions raise the estimate from Rupees 14,892 to Rupees 29,451.

3. With reference to the bridge at 123-23 miles, it is now proposed to allow four openings, instead of three, of 30 feet each, and to raise the level of the road at this point 2 feet in order to increase the headway. I have discussed this point with Mr. Going, and am of opinion that although the waterway provided in the former estimate would be sufficient, under ordinary circumstances, for the area drained, yet considering that the rainfall will be discharged rapidly from the steep slopes of the hills, it is desirable, in order to secure absolute safety, to add the fourth opening. By these additions the estimate is increased from Rupees 27,866 to Rupees 36,456.

4. If the terms of Sir Charles Wood's despatch, referred to in my former letter, be held to be applicable in these cases, of the cost of the new bridge at 105-11 miles, Rupees 21,684 will be chargeable to Capital and Rupees 4,767 to Revenue. And of the cost of the new bridge at 123-23 miles, Rupees 17,271 will be chargeable to Capital and Rupees 19,185 to Revenue.

5. To meet the Capital expenditure which it is proposed to incur in the current official year, viz., Rupees 6,584 and Rupees 4,249 in the two cases, funds are available from Schedule B, "Unforeseen requirements," in the Budget Estimate for 1874-75. The sanctions will lapse at the eighth quarter after their receipt.

6. In my former letter I reported that, in anticipation of the sanction of the Government of India, I had communicated authority for the commencement of these works, and as it is important that no delay should occur in their construction, I have now authorized the substitution of the revised plans and estimates for those originally submitted. I trust this will meet with the approval of Government.

*Proceedings of the Madras Government, Public Works Department,
14th October 1874.*

From R. B. ELWIN, Esq., Agent and Manager of the Madras Railway Company, to Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, dated Madras, 2nd September 1874, No. 779.

UNDER the circumstances explained in the enclosed copy of the Acting Chief Engineer's letter, No. 588 of the 2nd instant, I have the honor to request that you will be so good as to communicate to me the sanction of Government for the adoption of the revised design for the reconstruction of the bridge at 105-11 miles, South-West Line, as shown in the accompanying drawing.

From T. H. GOING, Esq., Acting Chief Engineer, to R. B. ELWIN, Esq., Agent and Manager of the Madras Railway Company, dated Madras, 2nd September 1874, No. 588.

I beg to forward, herewith, a revised design for the re-construction of the bridge at 105-11 miles, South-West Line.

2. It has been ascertained that foundations of a sufficiently solid nature cannot be obtained at a less depth than about 26 feet below ground. It therefore becomes necessary to introduce wells. These are designed to be of 6 and 8 feet in diameter, and to be built of bricks set in hydraulic mortar and filled with hydraulic cement. As the bridge has to be built to carry two lines of rails, being at Mailputty station, I have included two extra pairs of 30 feet iron girders in the estimate. These were inadvertently omitted in the first estimate.

3. I shall feel much obliged if the Consulting Engineer will accord sanction to my proceeding with the altered design without delay, as it is most important that no time should be lost in proceeding with the work. Finished plan and revised estimate will follow directly.

From R. B. ELWIN, Esq., Agent and Manager of the Madras Railway Company, to Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, dated Madras, 19th September 1874, No. 835.

With reference to your letter, No. 489 of the 26th of May last, and to my No. 779 of the 2nd instant, I have the honor to forward here-

* No. 189.

with a revised plan* and estimate (both in duplicate) of the cost of constructing a bridge of two 30 feet openings with wrought iron girders to span the breach at 105 miles 11th telegraph post, South-West Line, and I request that you will be so good as to communicate to me the sanction of Government for the required expenditure, viz., Rupees 29,451.

2. It is proposed to meet the Capital expenditure in respect of this work from Schedule B, "Unforeseen requirements," the appropriation of which is shown below, and the Revenue expenditure from Schedule G, Budget 1874-75.

Schedule B. "Unforeseen requirements."	Budget allotment, 1874-75.	Already charged.	Proposed expenditure.	Balance available.
	RS.	RS. A. P.	RS. A. P.	RS. A. P.
Two 30 feet openings with wrought iron girders, etc., at 105 miles 11th telegraph post	87,004	62,292 5 1		
	...		6,584 0 0	
	87,004	62,292 5 1	6,584 0 0	18,127 10 11

3. You will observe from the estimate that in the column "to be expended departmentally" the capital allocation, Rupees 14,211, is shown. Out of this amount the Acting Chief Engineer

*Proceedings of the Madras Government, Public Works Department,
14th October 1874.*

proposes to incur expenditure during the current official year to the extent of Rupees 6,584 only on the above work.

4. The date on which the sanction will lapse is shown on the face of the estimate in red ink.

From the same Officer, dated Madras, 19th September 1874, No. 837.

With reference to your letter of the 26th of May last, No. 489, I have the honor to forward you herewith a revised plan* and estimate (both in duplicate) of the cost of constructing a bridge of four 30 feet openings with wrought iron girders to span the breach at 123 miles 23rd telegraph post, South-West Line, and I request that you will be so good as to communicate to me the sanction of Government for the required expenditure, viz., Rupees 36,456.

* No. 190.

* Letter No. 597, 5th September.

2. The Acting Chief Engineer in forwarding to me this plan and estimate observes* as follows:—

"The calculation on which was based the design furnished with my letter* No. 336 of 21st May, provides an amount of water-way which would in all probability be sufficient. In recently discussing the subject, however, with the Consulting Engineer, we came to the conclusion that as the catchment basin includes the precipitous slopes of the Yallagerry Hills, it will be a safe measure to provide for a maximum flood discharge in excess of what all previous registers would indicate. I have accordingly added another 30 feet opening to the original design and raised the head way 2 feet."

3. As Mr. Going states that it is most important that the construction of this bridge should be proceeded with, I request that you will be so good as to communicate sanction to the altered design now submitted in anticipation of the formal sanction of Government to the plan and estimate.

4. It is proposed to meet the Capital expenditure in respect of the above work from Schedule B, "Unforeseen requirements," the appropriation of which is shown below, and the Revenue Expenditure from Schedule G, Budget 1874-75:—

Schedule B. "Unforeseen requirements."	Budget allotment, 1874-75.	Already charged	Proposed expenditure.	Balance available.
	RS.	RS. A. P.	RS. A. P.	RS. A. P.
Four 30 feet opening with wrought iron girders, etc., at 123 miles 23rd telegraph post	87,004	62,292 5 1		
			4,249 0 0	13,878 10 11
	87,004	62,292 5 1	4,249 0 0	13,878 10 11

5. You will observe from the accompanying estimate that in the column "to be expended departmentally" the Capital allocation, Rupees 9,900, is shown. Out of this amount the Acting Chief Engineer proposes to incur expenditure during the current official year to the extent of Rupees 4,249 only in this work.

6. The date on which the sanction will lapse is given on the face of the estimate in red ink.

*Proceedings of the Madras Government, Public Works Department,
14th October 1874.*

No. 331. ORDER THEREON, 14th October 1874, No. 2,929.

RAILWAY, No. 45.

ORDERED that these papers be forwarded to the Government of India and that sanction be requested to the revised estimates.

(Here enter No. 2,930, dated 14th October 1874.)

(True Extract.)

Colonel, R.E.,
Secretary to Government.

PUBLIC WORKS DEPARTMENT,
OOTACAMUND, 14th October 1874.

No. 332.

No. 2,930.

FROM

COLONEL G. W. WALKER, R.E.,

Secretary to the Government of Madras,

Public Works Department,

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,

Public Works Department.

RAILWAY, No. 46.

Bridge at 105-11 miles, Rupees 14,892.
Do. at 123-23 „ „ 27,866.

SIR,—With my letter No. 2,022, dated 27th July 1874, plans with estimates as shown in the margin were submitted for the re-construction of two bridges at the 105-11 miles and 123-23

miles, on the South-West Line of the Madras Railway. The Consulting Engineer now submits revised designs and estimates amounting in the case of the bridge at the 105-11 miles to Rupees 29,451 and in the case of the second bridge to Rupees 36,456. The causes which have led to the increased cost appear to be satisfactorily explained; and I am accordingly to request that the revised designs and estimates, which are now being carried out under the authority of the Consulting Engineer, in anticipation of sanction, may be passed by the Government of India.

2. Assuming that the terms of Sir Charles Wood's despatch, No. 17 of the 9th March 1864, are applicable to the circumstances, the expenditure has been allocated as follows:—

						RS.
Bridge at 105-11 miles	Capital	...	...	...	...	24,684
	Revenue	...	...	...	...	4,767
Do. at 123-23 „	Capital	...	...	...	...	17,271
	Revenue	...	...	...	...	19,185

3. It is proposed that these sanctions shall lapse at the end of the eighth quarter after receipt.

I have the honor to be,

Sir,

Your most obedient servant,

Colonel, R.E.,
Secretary to Government.

Exd. S. T. Austin.
Spare Copies

1888

Madras Railway Co.
Chief Engineer's Office
Madras 2^d September 1874

7V

The Agent and Manager,
Dear Sir,

I beg to forward herewith a revised
Design for the re-construction of the Bridge
at $\frac{10.5}{11}$ mile, South West Line.

2. It has been ascertained that
foundations of a sufficiently solid nature
cannot be obtained at a less depth than
about 26 feet below ground. It therefore
becomes necessary to introduce wells.
These are designed to be of 6 and 8 feet
in diameter and to be built of brick set
in hydraulic mortar and filled with
hydraulic Cement. As the Bridge has
to be built to carry two lines of Rails,
being at a rail putting station, I have
included two extra pairs of 30 feet
Iron Girders in the Estimate. These
were inadvertently omitted in the first
Estimate.

3. I shall feel much obliged
if the Consulting Engineer will second
sanction to my proceeding with the
altered design without delay as it is
most important that no time should be
lost in proceeding with the work.
Finished Plan and Revised Estimate

will

will follow directly.

Yours faithfully
J. H. Jones
Chief Engineer

True Copy
W. J. Jones
Agent & Manager

W.

25. 2/14 Oct 74
25. 13. 10. 330.

P. W. 100/74

No. 779

MADRAS RAILWAY.

AGENT AND MANAGERS' OFFICE.

Madras, 2^d September 1874

From

A. B. Oliver Esq.
Agent and Manager of the M. R. Co.

To

Col. E. H. Ell. & Co. & Stewart, & Co.
Consulting Engineer for Railways.

SIR,

Under the circumstances explained in the enclosed copy of the Acting Chief Engineer's letter of 588 of the 2^d instant, I have the honour to request that you will be good enough to communicate to me the sanction of Government for the adoption of the revised design for the reconstruction of the bridge at 10.5 miles South West Line as shown in the accompanying drawing.

I have the honour to be,
Sir,

Yours most obedient servant.

W. J. Jones
Agent and Manager.

will follow directly.

Yours faithfully
for J. H. Posing
Chf. Chief Engineer

True Copy
W. J. Posing
Chf. Chief Engineer

W.

W. J. Posing
Chf. Chief Engineer

P. W. 100/74

No. 779

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE.

Madras, 2^d September 1874

From

P. B. Oliver Esq.
Agent and Manager of the M. R. Co.

To

Lt Col. J. H. Ell. & Son, & Stewart, & Co.
Consulting Engineer for Railways.

SIR,

Under the circumstances explained
in the enclosed copy of the Acting Chief
Engineer's letter of 5th of the 2^d instant, I have
the honour to request that you will be
good enough to communicate to me the sanction
of Government for the adoption of the revised
Design for the reconstruction of the Bridge
at 105 miles South West Lane as shown in
the accompanying Drawing.

I have the honour to be,
Sir,
Your most obedient Servant.

W. J. Posing
Agent and Manager.

No. 835

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE

Madras, 19th September 1874

From

Robt. B. Clavin Esq.
Agent and Manager of the M.R.

To

Lieut. Colonel J. H. M. Shaw Stewart Esq.
Consulting Engineer for Railways.

Sir,

With reference to your letter No 489 of the 26th of May last, and to my No 779 of the 2nd instant, I have the honour to forward herewith a revised Plan and Estimate (both in duplicate) of the cost of constructing a Bridge of two 30 feet openings with wrought iron girders to span the broad at 105 miles N Telegraph Post, South West Line, and I request that you will be so good as to communicate to me the sanction of Government for the required expenditure, viz Rs 29,457.

2. It is proposed to meet the Capital Expenditure in respect of this work from Schedule B "Unforeseen Requirements", the appropriation of which

No 189

From

MADRAS RAILWAY.

The Agent and Manager.

The Consulting Engineer

for Railway.

No 774 of 26th May 74

No 779 of 2nd Sept 1874

Recd 3rd Sept

No 779

Respecting sanction

for the construction of the

proposed bridge over

the river at 105 miles

N Telegraph Post, South

West Line

is shown below, and the Revenue
Expenditure from Schedule C, Budget 1874-75

Schedule B "Unforeseen Requirements"	Budget Allocation 1874-75	Already Charged	Proposed Expenditure	Balance Carried
	87,004	62,292-5-1		

Two 30 feet openings
with H. I. Piers P. 1st
105 miles 11 1/2 Post -

6584-0-0

87,004- 62,292-5-1 6584-0-0 1874-75

3. You will observe from the
Estimate that in the Column "to be expended
departmentally" the Capital Allocation,
Rs 14211, is shown. Out of this amount
the Acting Chief Engineer proposes to
make expenditure during the current
Official year to the extent of Rs 6584
only on the above work.

4. The date on which the
sanction will lapse is shown on the
face of the Estimate in red ink.

I have the honour to be,
Sir,
Yours most obedient servant
W. J. Brown
Agent and Manager.

No. 837

MADRAS RAILWAY.

AGENT AND MANAGERS OFFICE

Madras, 19th September 1874.

From

A. B. Chinn - Esq^r

Agent and Manager. M. A. Co.

To

St Col. J. H. Stewart, R.E.

Consulting Engineer for Railways.

Sir,

With reference to your letter of the 26th of May last at 489, I have the honour to forward you herewith a revised Plan and Estimate (both in duplicate) of the cost of constructing a Bridge of four 20 feet openings with Wrought Iron girders to span the Breach at 12.3 miles 23 Y. P. South West River, and I request that you will be so good as to communicate to the sanction of Government for the required expenditure, viz Rs. 36,456.

The Acting Chief Engineer in forwarding to me this Plan and Estimate observes as follows:

"The calculation on which was based the design furnished with my letter at 500 of 21st May provides an amount of waterway which would in all probability be sufficient. I recently discussing the subject however with the Consulting Engineer

Letter at 597 - 5th September

Widened letter to Cons. Eng^r at 452 - 23rd May 1874.

P. W. 6000/74

MADRAS RAILWAY.

From

The Agent and Manager.

To

The Consulting Engineer

for Railways.

Date 19th Sept. 1874

Recd. 21st Sept.

No. 837

Forwarding for the
revised plan and
estimate of the cost
of constructing a bridge
to span the breach
at 12.3 miles
S. W. River.

P. W. 6000/74
Jan 13th 1874

we came to the conclusion that as the Catchment Basin includes the precipitous slopes of the Yailagherry Hills it will be a safe measure to provide for a maximum flood discharge in excess of what all previous registers would indicate. I have accordingly added another 30 feet opening to the original design and raised the headway two feet.

3. Mr. Goring states that it is most important that the construction of this Bridge should be proceeded with. I request that you will be so good as to communicate sanction to the altered design now submitted, in anticipation of the formal sanction of Government to the Plan and Estimate.

4. It is proposed to meet the capital expenditure in respect of the above work from Schedule B Unforeseen requirements the appropriation of which is shown below and the Revenue Expenditure from Schedule C Budget 1874-75.

Schedule B.

Unforeseen Requirements	Budget 1874/75	already charged	Proposed expenditure	Balance available
	87,004/-	62,292.5.1		
		6854/-		
		56,275.5.1		

Four 30 feet opening
with wrought iron
Girders 12" at 123 lbs
23 Telegraph Post

42,249.0.0 + 5554	13,878-10-11
87,004/- 62,292.5.1	42,249.0.0
	13,878-10-11

19V 10

5. You will observe from the accompanying Estimate that in the column "to be expended departmentally" the Capital allocation Rs. 9,900 is shown out of this amount the Acting Chief Engineer proposes to incur expenditure during the current official year to the extent of Rs. 4,249 only in this work.

6. The date on which the sanction will lapse is given on the face of the Estimate in red ink.

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

W. J. L. M.
Agent and Manager.

MADRAS RAILWAY.
From
The Agent and Manager.
To
The Consulting Engineer
for Railways.
Dated 187
Recd. No.

Railway Department.

CONSULTING ENGINEER'S OFFICE.

No.

FROM

LIEUT. COLONEL J. H. M. SHAW STEWART, R.E.,

Consulting Engineer for Railways,

To

COLONEL G. W. WALKER, R.E.,

Secretary to Government,

Public Works Department.

Fort Saint George.

Adverting to my letter dated 23rd June, 1874, No. 360, I have the honour to forward, for the sanction of the Government of India, revised estimates of the cost of the two bridges to be constructed at 105-11 miles, and 123-23 miles on the South-west line of the Madras Railway, amounting to Rs. 29,451 and Rs. 36,456 respectively.

2. In the letter from the Acting Chief Engineer, which accompanies

*
Proc. of Govt.
27 July. 74.
No 2021.

*
with plans and
agents' letters Nos.
779, 835, and 837
d/24 19 Sept. 74.

8

MADRAS RAILWAY.

From

The Consulting Engineer

for Railways.

To

Dated

Recd.

19th Sept. 1874

Wm. No. 837.

Resolving for the
construction of the
bridges of the Govt.
of constructing a bridge
to span the river as
shown in plan.

1874
In P. N. 330

P. W. 1000/74
3

accompanies the Agents No 779, it is explained that in excavating the foundations for the bridge at 105.11 miles, it is found that a hard substratum cannot be obtained at a less depth than 26 feet, and it therefore becomes necessary to resort to wells. These

are to be of 6 and 8 feet diameter and filled with hydraulic concrete.

As the bridge is situated within the mailputty station siding, it becomes necessary to provide two sets of girders, and as we seek only what was allowed in the original estimate, two

extra pairs of 30 feet girders have been now included. These alterations and additions raise the estimate

from £14,892 to £29,451.

With

23V 2
3. With reference to the bridge at 123.23 miles, it is now proposed to allow four openings, instead of three, of 30 feet each, and to raise the level of the road at this point two feet, in order to increase the headway. I have discussed this point with Mr. Goring and am of opinion that, although the waterway provided in the former estimate would be sufficient under ordinary circumstances, for the area drained, yet considering that the rainfall will be discharged rapidly from the steep slopes of the hills, it is desirable in order to secure absolute safety to add the fourth opening. By these additions the estimate is increased from £24,866 to £36,456.

If

4. If the terms of Sir Charles Woods' despatch, referred to in my former letter, be held to be applicable in these cases, of the cost of the new bridge at 105-11 miles, —

Rs 24,684 will be chargeable to Capital, and Rs 4,764 to Revenue. And of the cost of the new bridge at 123-23 miles Rs 17,271 will be chargeable to Capital, and Rs 19,185 to Revenue.

5. To meet the Capital expenditure which it is proposed to incur in the current official year, — viz. Rs 6584 and Rs 4249 in the two cases, funds are available from — schedule B "Unforeseen requirements" in the Budget estimate for 1874-75. The sanctions will lapse at the eighth quarter

quarter after their receipt: 25/3

6. In my former letter I reported that, in anticipation of the sanction of the Government of India, I had communicated authority for the commencement of these works, and as it is important that no delay should occur in their construction, I have now authorised the substitution of the revised plans and estimates for those originally submitted. I trust this will meet with the approval of Government.

I have the honour to be
Sir

Your most obedient servant.

Walter W. L. Hol. C.E.

Cons. Engineer for Railways

Madras

22 September
1874

Public Works Department
 Proceedings of the Madras Govt

Read the following

From the Joint Engineers } (H. E. No 561 of 22 Sept 1874)
 for Railways } 29 29

Ordered that these
 papers be forwarded
 to the Govt of India and
 that sanction be requested
 to the revised Estimates.

H. E. No 293 dated

To the Govt of India
 Sd/-

Sir,
 With my letter No.
 2022, dated 27 July 1874,
 plans with estimates
 as shown in the margin
 were submitted for the
 reconstruction of two
 bridges at the 105-11 miles
 and 123-23 miles, on the

* Bridge at 105-11 miles Rs 14,892
 " 123-23 " " 27,866

29/9

RAILWAY DEPARTMENT.

From The Consulting Engineer
 for Railways.

To The Secretary to Government,
 P. W. Department,
 Fort Saint George.

Dated 22nd September 1874.
 Recd. 27th Oct 1874.

No. 561

Joint Engineers - J
 Madras Railway

The sanction of Govt of
 India is required for the revised
 estimates for the construction
 of two bridges at 105-11
 and 123 miles on the
 Madras Railway
 Ld. No. 2925. H. E. No. 10-74.

Depot copy 24 Oct 1874

South West line of the
Madras Railway. The
Chief Engineer now
submits revised designs
and estimates amounting
in the case of the bridge
at the 105.11 miles to
Rs 29,451 and in the
case of the second
bridge to Rs 36,456.
The causes which have
led to the increased cost
appear to be satisfactorily
explained; and I am
accordingly to request
that the revised designs
and estimates, which
are now being carried
out under the authority
of the Chief Engineer, in
anticipation of sanc-
tion, may be passed

22 ✓
by the Govt of India.
Assuming that
the terms of Sir
Charles' ^{Govt's} ~~Govt's~~ des-
patch No 14 of the 9th
March 1864 are appli-
-cable to the circum-
-stances, the expendi-
-ture has been allo-
-cated as follows:-

Bridge at 105.11 miles { Capital Rs 24,684
Revenue " 4,767

Bridge at 123.23 " { Capital " 17,271
Revenue " 19,185

It is proposed that
these sanctions shall
at the end of the eighth
quarter after receipt.

C. M. M.

desd. P. B. V. Copies & 30 Copies
of previous Proceedings
with 5 Encls. to G. of S. 19/10/74.

6000

Govt. of Madras.

PUBLIC WORKS.

The Civil Engineer

Secy. to Govt. of Madras

Dated

Recd.

Encl 4

G.O. No. 2929

2920

No. 330-332

(In Ry.)

revised Estimates

for the two

bridges to be constructed

11 miles, and 123-23

the South-West

Madras Ry order

warded for the

the Govt. of India

Requesting sanction
to the revised Estimates
of the cost of the two
bridges to be constructed
at 105-11 miles, &
123-23 miles on the
South West line of the
Madras Ry amounting
to Rs. 29,451 & Rs.
36,456 respectively.

29/10/1900