

(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.	1579-20	Press
B.P. No.		Mis.
Dated	1 - 6 -	C875 -195-

Not to be folded or roughly handled

No. 4. 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, 14th May 1875, No. 277 :—

I HAVE the honor to submit, for the sanction of the Government of India, an estimate, amounting to Rupces 1,45,539,

No. 1,042.

" 926.

" 1,044.

" 1,068.

of the cost of constructing a Smithy, Iron

and Brass Foundries, and making ground

for the same, at the Perambore Workshops

on the Madras Railway. Four plans accompany the estimate, No. 1,068, being a plan and section of the present smithy.

2. In forwarding the estimate the Agent quotes as follows from a letter addressed to the Acting Chief Engineer by the Acting Locomotive Superintendent :—

"The want of a smith's shop more commodious than the present one has been felt for some time past, and as the repairs and renewals of the locomotive stock have lately increased to a very great extent, the limited nature of the accommodation at present afforded and the inconvenience resulting therefrom have consequently become more apparent, and I consider that to effectually carry out the work required to be executed in the smith's shop, in connection with the upkeep both of the locomotive and carriage stock, it is most essential that an improvement should be made in the present smithy arrangements. In the present smith's shop the space will not allow of nearly so large a number of smith's fires as are required, and those that are erected are situated in so close proximity to each other that the men using them are crowded together in such a manner as is often detrimental to work. The walls and roof of this shop are not by any means in so good a condition as could be wished ; several of the arches are cracked, and were the large 30 cwt. steam hammer, which it is proposed to have put up in the new smithy, placed in the present shop, I fear that the vibration would affect the foundations to such an extent as to render the building scarcely a safe shelter for a large body of men.

"The erection of the new smithy will not render the old smith's shop useless, as it is proposed to utilize the latter building as a boiler smith's shop. The present accommodation provided for the boiler smiths consists only of a small temporary shed, and as this shed is not closed in, the men have to work under great difficulties during the rainy season of the year, and in heavy rains have frequently to carry on their work in the engine-erecting shop, which is a most inconvenient arrangement. The space provided in the boiler smith's shed is also insufficient for the present requirements. The repairs and renewals of boilers now form a very heavy item in the expenditure of this department, and this branch of the work here has considerably developed during the last two or three years. The lifting and turning of boilers and fitting in of the copper fire-boxes have now to be done entirely by manual labor ; but were the present smith's shop adapted as a boiler smith's shop, with the addition of a few supporting buttresses and an over-head travelling crane, now in the yard here, and which could be spared for the purpose, this work could be carried out not only with a large saving in the cost of labor but in less time and with additional safety.

"The erection of the large steam hammer in the proposed new smith's shop will, I think, need scarcely point out, be a great convenience, and will, I anticipate, be

*Proceedings of the Madras Government, Public Works Department,
1st June 1875.*

found to be an economical arrangement, as with the additional facilities thus afforded scrap iron, which it is now difficult to utilize in any way, could be worked up in various forms, and much iron work could be stamped out which has at present to be forged by hand.

"Iron and Brass Foundries.—The need of an iron foundry and a brass foundry is most urgent.

"For some years past a small building in the Royapooram locomotive yard has been used for the purpose of making both brass and iron castings, but the work has been carried out with considerable difficulty and under great disadvantages, in consequence of a want of the necessary space, and of the facilities requisite for the execution of work of so important a nature. The inconvenience has lately been greatly augmented, the building referred to having been condemned by your department as unsafe, and a removal having been rendered necessary in consequence to an adjacent shed having no conveniences, being only partly roofed and by no means fitted for the work.

"During the last few years the castings which have been made in the temporary building, used as a foundry, have greatly increased in weight, as is evidenced by the following figures, in which I show the weight of the outturn of castings during four successive years:—

	Brass Castings. Weights.	Iron Castings. Weights.
	LBS.	LBS.
" July 1869 to June 1870	21,632	86,274
" Do. 1870 to do. 1871	36,800	146,121
" Do. 1871 to do. 1872	40,217	164,814
" Do. 1872 to do. 1873	73,173	187,974

and with the increased facilities which would be afforded by the erection of the foundries for which application is made, I am of opinion that a largely increased outturn in castings, both iron and brass, may be looked for. Apart, however, from the consideration of the anticipated increase in the work, the particulars which I have given of the present accommodation afforded, will, I think, very clearly prove the desirability of the provision as early as possible of more suitable buildings.

"With regard to the situation of the new foundries, the convenience of their proximity to these works will, I think, be so readily perceived, for obvious reasons, that I need scarcely refer to such advantages as will be derived by an increased and more efficient supervision, and by the present necessity of the conveyance of patterns and castings between Perambore and Royapooram being obviated."

3. The additional permanent-way and the carriage turn-table are intended for the conveyance of fuel, &c., to the foundry.

4. The object for which this expenditure is proposed has been fully and frequently discussed of late years; but, before submitting the estimates to Government, I requested that the opinion of the Directors might be obtained regarding the necessity for incurring this expenditure. After considering the plans and estimates with the Chief Engineer and the Locomotive Superintendent, and also referring the question to Sir John Hawkshaw, the Directors have stated that they consider the proposed Smithy and Iron and Brass Foundries to be of great importance, and they express a hope that the requisite sanction for their construction may be accorded by Government. The extracts from the Board's letters on this subject, with the Agent's covering letter, have been submitted to Government with this Office No. 280 of this date; and I beg

*Proceedings of the Madras Government, Public Works Department,
1st June 1875.*

to express my concurrence with the opinion given by the Board regarding the necessity for these works.

5. Funds are available from Schedule B. of the Budget Estimate for 1875-76. Sanction will lapse at the end of the twelfth quarter after its receipt, provided no unexpected delay takes place in the receipt of the iron works from England.

6. The estimate for the above works was not included in the schedule submitted for the half-year ending 30th June 1875.

G. O., No. 1,218, dated 1st May 1875. It was received in this office in August 1874, and its submission has been delayed in consequence of the reference made to the Board.

ORDER THEREON, 1st June 1875, No. 1,519.

No. 5.

RAILWAY, No. 2.

THE plans and estimates submitted with this letter will be forwarded for the sanction of the Government of India.

(Here enter No. 1,520, dated 1st June 1875.)

(True Extract.)

Major, R.E.,

Offg. Joint Secretary to Government.

To the Consulting Engineer for Railways.

Exd. S. T. Austin.

Spare Copies

5722
PUBLIC WORKS DEPARTMENT,
OOTACAMUND, 1st June 1875.

No. 6.

No. 1,520.

FROM

MAJOR J. O. HASTED, R.E.,
Officiating Joint Secretary to the Government of Madras,
Public Works Department,

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,
Public Works Department.

RAILWAY, No. 3.

* Rupees 1,02,157.
† „ 32,759.
‡ „ 10,623.

SIR,—I am directed to submit the accompanying letter from the Consulting Engineer, giving cover to plans and estimates amounting to Rs. 1,45,539 for erecting a Smithy,* Iron and Brass† Foundries, and laying‡ out the ground with necessary permanent-way and carriage turn-

table in connection with the Perambore Workshops of the Madras Railway.

2. The necessity for these works, which has been felt for some time past, is fully explained in the extract from the Locomotive Superintendent's letter quoted by the Consulting Engineer, and the proposal for their provision has now been made after consideration by the Board of Directors, and an expression of their approval has been obtained. I am to recommend, therefore, that the sanction of the Government of India may be accorded to the estimated outlay.

3. Proposals for provision of funds are contained in paragraph 5 of the Consulting Engineer's letter.

I have the honor to be,

Sir,

Your most obedient servant,

Major, R.E.,

Offg. Joint Secretary to Government.

Ed. S. T. Austin.

Spare Copies

Madras, 14/11/1875.

Railway Department.

CONSULTING ENGINEER'S OFFICE.

No. 277

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.

SIR,

I have the honour to submit for the sanction of the Government of India an estimate amounting to Rs. 1,45,539 of the cost of constructing a Smithy, Iron and Brass Foundries, and making ground for the same, at the Perambore workshops on the Madras Railway. Four plans accompany the estimate; No. 1068 being a plan and section of the present Smithy.

2. In forwarding the estimate

Nos 1042
926
1044
1068.

-imate, the Agent quotes as follows
from a letter addressed to the
Acting Chief Engineer by the
Acting Locomotive Superinten-
-dent :-

"The want of a smith's
"shop more commodious than the
"present one has been felt for
"some time past, and as the
"repairs and renewals of the
"Locomotive stock have lately
"increased to a very great extent,
"the limited nature of the accom-
"-modation at present afforded
"and the inconvenience resulting
"therefrom have consequently be-
"-come more apparent, and I
"consider that to effectually
"carry out the work required to
"be executed in the smith's shop.

"in

90
"in connection with the repairs
"both of the locomotives and
"carriage stock; it is most
"essential that an improvement
"should be made in the present
"smithy arrangements. In the
"present smith's shop the space
"will not allow of nearly so large
"a number of smith's fires as are
"required, and those that are
"erected are situated in so close
"proximity to each other that the
"men using them are crowded to-
"gether in such a manner as is
"often detrimental to work. The
"walls and roof of this shop are
"not by any means in so good a
"condition as could be wished;
"several of the arches are cracked,
"and were the large 30 cwt steam
"hammer, which it is proposed
"to

11 a 4
"to have put up in the new smithy,
"placed in the present shop, &
"fear that the vibration would
"affect the foundations to such
"an extent as to render the
"building scarcely a safe shelter
"for a large body of men.

"The erection of the new
"Smithy will not render the old
"smith's shop useless, as it is
"proposed to utilize the latter
"building as a boiler smith's shop.
"The present accommodation pro-
"vided for the boiler smith's
"consists only of a small tem-
"porary shed, and as this shed
"is not closed in, the men have
"to work under great difficulties
"during the rainy season of the
"year, and in heavy rains have
"frequently to carry on their work

"in

"in the engine - erecting shop, which
"is a most inconvenient arrange-
"ment. The space provided in
"the boiler smith's shed is also
"insufficient for the present re-
"quirements. The repairs and
"renewals of boilers now form
"a very heavy item in the ex-
"penditure of this department,
"and this branch of the work
"here has considerably developed in
"during the last two or three
"years. The lifting and turning
"of boilers and fitting in of the
"copper fireboxes, have now to
"be done entirely by manual
"labour; but were the present
"smith's shop adapted as a
"boiler smith's shop, with the
"addition of a few supporting

"butterflies

132
"buttraces and an over-land
"travelling crane, now in the
"yard here, and which could
"be spared for the purpose, this
"work could be carried out, not
"only with a large saving in
"the cost of labour, but in life
"time and with additional
"safety. The erection of the large
"steam hammer in the proposed
"new smith's shop will, I think
"I need scarcely point out, be
"a great convenience, and will,
"I anticipate, be found to be
"an economical arrangement,
"as with the additional fa-
"cilities thus afforded, scrap
"iron, which it is now difficult
"to utilize in any way, could

"be worked up in various forms,
"and much ironwork could be
"stamped out which has at
"present to be forged by hand.

"Iron and Brass Foundries.

"The need of an iron Foundry
"and a brass Foundry is
"most urgent.

"For some years past a
"small building in the Ryapoo-
"ram locomotive yard has been
"used for the purpose of making
"both brass and iron castings,
"but the work has been carried
"out with considerable diffi-
"culty, and under great dis-
"advantages, in consequence of
"a want of the necessary space,
"and of the facilities requisite
"for the execution of work of

"so important a nature. The
 "inconvenience has lately been
 "greatly augmented, the building
 "referred to having been con-
 "demned by your department
 "as unsafe, and a removal
 "having been rendered necessary
 "in consequence to an adjacent
 "shed, having no conveniences,
 "being only partly roofed, and
 "by no means fitted for the work.

"During the last few
 "years the castings which have
 "been made in the temporary
 "building, used as a Foundry,
 "have greatly increased in
 "weight, as is evidenced by the
 "following figures, in which I
 "show the weight of the out-turn
 "of castings, during four suc-

-same

152
 "same years -
 "Castings
 "Weights

Period	Castings	Weights
July 1866 to June 1870	21,692 lbs	86,274 lbs
July 1870 to June 1871	36,800	146,121
July 1871 to June 1872	40,217	164,845
July 1872 to June 1873	73,175	287,974

"and with the increased facilities
 "which would be afforded by the
 "erection of the Foundries for
 "which application is made, I
 "am of opinion that a largely
 "increased outturn in castings,
 "both iron and brass, may be
 "looked for. Apart, however,
 "from the consideration of the
 "anticipated increase in the work,
 "the particulars which I have
 "given of the present accommo-
 "dation afforded will, I

"think

"think, very clearly prove the desirability of the provision, as early as possible of more suitable buildings.

"With regard to the situation of the new Foundries, the convenience of their proximity to the works will, I think, be so readily perceived, for obvious reasons, that I need scarcely refer to such advantages as will be derived by an increased and more efficient supervision, and by the present necessity of the conveyance of patterns and castings between Perambur and Royapuram being alleviated.

3. The additional permanent way and the carriage turntable are intended for the convenience

-venience of fuel &c. to the Foundry.

4. The object for which this expenditure is proposed has been fully and frequently discussed of late years; but, before submitting the estimates to Government, I requested that the opinion of the Directors might be obtained regarding the necessity for incurring this expenditure. After considering the plans and estimates with the Chief Engineer and the Locomotive Superintendent, and also referring the question to Sir John Hawkshaw, the Directors have stated that they consider the proposed Smithy and iron and brass Foundries to be of great importance, and they express a hope that the requisite sanction

sanction for their construction may be accorded by Government. The extracts from the Board's letters on this subject, with the Agents' covering letter, have been submitted to Government with this Office No. 280 of this date, and I beg to express my concurrence with the opinion given by the Board regarding the necessity for these works.

5. Funds are available from schedule B of the Budget estimate for 1875-76. Sanction will lapse at the end of the twelfth quarter after its receipt, provided no unexpected delay takes place in the receipt of the iron works from England.

6. The estimate for the
above

G.O. No. 1218
dated 1st May
1875.

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above works was not included in the schedule submitted for the half-year ending 30th June 1875. It was received in this Office in August 1874, and its submission has been delayed in consequence of the reference made to the Board.

I have the honour to be
Sir
Your most obedient servant

Wentworth D. B. B.
Consulting Engineer for P. F.

Public Works Dept.

Proceedings of the Madras Government
Under date the 18th 1875

Read the following

The Const. Eng^r for } H.C. No. 277 of 14th May 1875
Railways }
by O no: 1519 of 1st June 1875

The plans and
estimates submitted with
this letter will be for-
warded for the sanction
of the Gov^t of India.

Const. Eng^r for Ry.
Spec - Dispd - 16-6-75

(H.C. No. 15 dated 1st June 1875)

To
The Secy. to the Gov^t of India
Public Works Dept.

Sir,

I am directed to
submit

30.1.1875/1875-1-2

P. W. 1875 Sept.

RAILWAY DEPARTMENT.

From

The Consulting Engineer,

for Railways,

To

The Secretary to Government,

P. W. Department,

Fort Saint George.

Dated

14th May

1875

Recd.

17

L. 9 No. 277

Submitted for the

sanction of Gov^t of India

and estimates provided

for the construction of

small and long bridges

on the proposed line

between 1875-1875-1875-1875

1875-1875-1875-1875

submit the accompanying
letter from the Consulting
Engineer, giving cover to
plans and estimates
amounting to Rs 1,45,539
for erecting a Smithy, * Rs 102,157
Iron and Brass Foundries, & " 32,759
and laying out the ground # " 10,523
with necessary Permanent
way, and Carriage Turn-
table, in connection with the
Pembroke Workshops of
the Madras Railway.

The necessity for these works, which has been felt for some time past, is fully explained in the extract from the Locomotive Superintendent's letter quoted by the Consulting Engineer, and the proposal

proposal for their provision
has now been made after
consideration by the Board
of Directors, and an
expression of their ap-
proval has been
obtained. I am to
recommend, therefore,
that the sanction of
the Govt. of India may
be accorded to the
estimated outlay.

Proposals for provision of funds and ~~cancellation of same~~ are contained in para 5 of the Consulting Engineer's letter.

2/5/75

PUBLIC WORKS.

The Congress holds
 Secy of State of Ind.

11. 11. 7

17. 2. 2017

Figure 1

5. 2. 1. 2. 3.

G. 1 June 1875. No. 1519
1520

Nos. 4 75

Rs: 145; 539 for constructing
a Smithy and Iron Foundry
at the Serampore Workshops
on the Madras Railway.

Yacht and Iron Foundry
at the Lambore Works,
Madras Railway. — Plans,
and estimates amounting
to Rs. 539 Rs. for the
construction of ———,
forwarded to the Government
of India for sanction.