

(1) Number of pages

(2) Date of repair

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

DEPARTMENT.

G.O. No. 1710

Press
Mis.

Dated 18

Not to be folded or roughly handled

No. 275. Read the following letter from the Consulting Engineer for Railways, to the Secretary to Government, Public Works Department, dated Madras, 24th June 1872, No. 325 :—

UPON receipt of the Order of Government dated the 21st March 1872, No. 803, the Chief Engineer of the Great Southern of India Railway was requested to make such alterations and modifications in his plans and estimates for station arrangements on the Southern Extension as were necessary to bring the total estimated cost within the limit sanctioned by the Government of India, namely, Rupees 4,000 per mile, or a total sum of Rupees 8,63,000.

2. The Chief Engineer has accordingly made an approximate revision of his estimates for "stations and buildings," and by a reduction of Rupees 3,37,213 has brought the total within the sanctioned limit. The enclosed correspondence shows clearly the manner in which the reduction has been effected. It will be observed that, in order to keep within the prescribed limit, it has not been possible to leave for contingencies a greater sum than Rupees 17,934, being about 2 per cent. on the revised estimate.

3. In submitting this approximate statement of revisions, the Chief Engineer begs that he may be informed whether his proposals meet with the approval of Government before the expense of preparing a third set of station plans is incurred. I trust that this Government will consider that there has been a loyal desire to give effect to the views of the Government of India, and I beg that I may be favoured with orders on the subject as soon as possible, in order that no time may be lost in preparing the revised plans and estimates.

From the Agent of the Great Southern of India Railway, to the Consulting Engineer for Railways, dated Negapatam, 29th April 1872, No. 4,487.

WITH reference to the 3rd paragraph of your letter No. 127 of the 4th instant, I have the honour to attach hereto, for submission to Government, a copy of the Chief Engineer's report upon the revision of his estimates for station accommodation on the Southern Extension.

2. Will you please ascertain and let me know, as soon as possible, whether the revision and reductions meet with the approval of Government.

From the Chief Engineer, to the Agent and Manager of the Great Southern of India Railway, dated Trichinopoly, 27th April 1872, No. 499.

I now send you an approximate statement to show the result of a revision of my estimates for stations, so as to meet the order of the Government of India, that Rupees 4,000 per mile should suffice for such work. The explanation embodied in the statement renders it unnecessary for me to enter into much detail here. The reduced rates for masonry, I hope to accomplish by adopting a cheaper class of masonry. In looking at masonry rates it must be remembered that there is nothing like the amount of skilled labour necessary for our works on the districts through which the line passes. The population is chiefly agricultural, and labour will have to be largely imported. It will be observed also that, in making the reductions, I have been able to retain only a margin of about Rupees 11,000 for contingencies.

*Proceedings of the Madras Government, Public Works Department,
16th July 1872.*

2. I send the statement in the hope that it may enable Government to say whether the revision and reductions are such as meet their wishes, as I think it would be a pity to incur the expense of a third set of station plans, unless there is some certainty of their being adopted.

3. While on this subject I should like to take the opportunity of making a few remarks with reference to paragraphs 2 and 3 of the Consulting Engineer's letter. The principles referred to as enunciated within the last two years by the Government of India are identical with those enunciated by our Board and followed by their Executive for the last fourteen years.

4. Indeed, at the outset, we went further than the Government of India, and did not even provide shelter for engines and vehicles, nor in many cases for goods.

5. Stations were only enlarged as the absolute necessity for further accommodation forced itself upon the staff.

6. So far from the railway executive being the element tending to expenditure there were not a few items of expenditure ordered by Government which were by us considered unnecessary. For instance, latrines were built without roofs, as the Government now direct them to be. It was by Order of Government that the roofs were put on to enable the dry conservancy system to be carried out. The line was worked for several years without semaphore signals, until an Order of Government in opposition to your own views on the subject caused them to be put up.

7. It will be observed on the report of Colonels Strachey and Dickens to the Government of India on narrow gauge railways that your view of this question is adopted by them, namely, that on long level straight lines only run on by day, semaphore signals can be dispensed with to a very great extent.

8. It was with difficulty that we prevented very considerable shelter accommodation for native passengers being constructed at some of the principal stations; our own views being that enough for current purposes was provided, while at one time the Government of India proposed to make us fortify railway stations, and doubtless there are other examples which will readily occur to you of expenditure being ordered by Government in opposition to our views of economy.

9. If there has lately been any change in the system therefore, I think that it has not been on the part of the Railway Company or its officers.

10. When I wrote what is quoted in paragraph 2 of Consulting Engineer's letter, *i. e.*—"No doubt all the suggestions made by you could be carried out, but as all the designs were matured after full and careful consideration in the light of our past experience in working this Railway, I should be acting contrary to the dictates of my own judgment were I to acquiesce in the changes." My meaning was that we had gone through nearly fourteen years' experience of the actual requirements of traffic at the different classes of stations in this part of the country, and that it was therefore unnecessary to the same extent as at first to feel our way as to what was absolutely required for accommodation on the extension.

11. The extension is being carried out as undoubtedly not only a great stride towards the development of the Great Southern of India Railway system, but as a much more likely to be profitable portion than the one already constructed. Yet in framing my estimates I only allowed for traffic accommodation such as has been found necessary on the present line. In short, the principle which guided me in framing the designs and estimates was that to arrive at a fair and trustworthy estimate of the cost of the Railway it should be estimated for, with at least the accommodation and equipment necessary to carry on the ordinary and current work of the country through which it is to pass during the first few years of its working, and it was for this reason that I desired to adhere to my original designs so far at least as station accommodation was concerned.

12. These remarks have been called forth by a desire to place on record, that in this part of the country at all events our best efforts have all along been devoted to economy and to the carrying out of the very principles lately laid down by the Government of India.

13. That we have been in some measure successful is borne out by the fact that this railway has so far been the most cheaply constructed in India, and I believe that it is also acknowledged to be more economically managed than any line in the country. I do not point out these matters

*Proceedings of the Madras Government, Public Works Department,
16th July 1872*

from any motive but one of justice to men and the memories of men with whom I have been associated on this undertaking for the past fourteen years, all of whom have spent their best energies and many of the best years of their lives in struggling to carry out the principles which are now held forth to us as a novelty.

Statement to show reduction made in Estimate of Stations and Buildings to meet the Order of the Government of India not to exceed Rupees 4,000 per mile on such works.

	Stations.	Original Estimate exclusive of Contingencies.	Revised Estimate exclusive of Contingencies.	Saving.
		RS.	RS.	RS.
1.	Trichinopoly	1,89,934	1,59,415	30,519
2.	Madura	2,26,255	1,67,388	58,867
3.	Tuticorin	2,24,647	1,86,392	38,255
4.	Tinnevely	1,31,564	1,00,015	31,549
5.	Dindigul and Virduputty	76,202	49,780	26,422
6.	Collatoor, Manaparay, Yellengacoorchy, Ammanaikennoor, Vadamadura, Solavundan, Tripanacondum, Tiroomungalum, Satoor, Covilputty, Kuddumboor, Ganigoondan, and Muniachee	2,71,078	1,57,548	1,13,530
7.	Thuttaparay and Thatchanellore, done away with. Inspectors' bungalows, No. 3 to each district, No. 42.	38,071	14,700	38,071
	Engineers' temporary bungalows, No. 1 to each District, No. 14	14,700	16,800	
	Total ...	11,72,451	8,52,038	3,37,213
	215½ Miles at Rupees 4,000 as sanctioned by Government		8,63,000	
	Leaving for Contingencies only ...		10,962	

(Signed) D. LOGAN,
Chief Engineer, G. S. I. R.

Explanation showing reductions made in the preparation of revised estimate.

TRICHINOPOLY STATION.—A reduction of Rupees 2 per cubic yard has been made in the rate of masonry. The iron roof over local traffic platform has been done away with. The latrine has been reduced in size by cutting off the portion originally provided for the accommodation of natives entering from the station yard, and the space provided for natives entering from platform has been unroofed, and the walls reduced to 7 feet in height. The engine shed has been reduced 4 feet in height. The coal shed and tanks have had the panels reduced to 1 foot 6 inches in thickness. The metalling throughout has been reduced in thickness. The station master's bungalow has been estimated at Rupees 1,000.

2. MADURA.—The same reduction as above has been made in the rate of masonry; the iron roof over platform has been done away with, and a verandah of the same description as that at Trichinopoly been provided. The station-house has been somewhat modified in plan, and the first floor taken away; the latrine has been treated in the same manner as at Trichinopoly. The goods shed has been reduced from 200 to 100 feet in length, and the godown dispensed with. The engine shed, tool shop and smiths' shop have been reduced 4 feet in height. The coal shed and tanks have been treated as at Trichinopoly. The metalling of the goods yard and approach to stations has been decreased in area, and the depth reduced throughout. The station master's bungalow has been estimated at Rupees 1,000.

*Proceedings of the Madras Government, Public Works Department,
16th July 1872.*

3. **TUTICORIN.**—No reduction in the rate of masonry has been made. The iron roof over platform has been removed, and a verandah similar to that at Trichinopoly substituted; the station offices have been somewhat modified in plan. The latrine has been dealt with as at Trichinopoly. The goods shed has been reduced 100 feet in length, and the godown dispensed with. The engine shed has been reduced 4 feet in height. The coal shed and tanks have been treated as at Trichinopoly. The metalling of the goods yard has been decreased in area, and the depth reduced throughout. The station master's bungalow is estimated at Rupees 1,000.

4. **TINNEVELLY.**—The rate of masonry has been reduced 1 Rupee. The iron roof over platform, station offices, latrine, goods shed, godown, engine shed, coal shed and tanks, and metalling have been dealt with as at Tuticorin. The station master's bungalow is estimated at Rupees 1,000.

5. **DINDIGUL AND VIRDUPUTTY.**—The rate of masonry has been reduced Rupees 2. The station-houses have been somewhat modified, but not reduced in size; but the building at the back proposed for godown has been done away with.

The latrines have been altered to the same design as that proposed for Trichinopoly, and no saving has been effected. The goods warehouses have been reduced from 100 to 70 feet in length. No. 1 water crane with pipes, etc., has been deducted from each station. The metalling in the goods yards has been decreased in area, and the depth reduced throughout. The station masters' bungalows have been estimated at Rupees 1,000.

6. **THIRD-CLASS STATION.**—The rate of masonry has been reduced Rupees 2. The latrine has been unroofed, and the walls reduced to 7 feet in height. The godown has been reduced from 610 x 18' to 30' x 15'. No. 1 water crane and pipes have been deducted from each station. The metalling in the goods yards has been decreased in area, and the depth reduced throughout. The station masters' bungalows have been estimated at Rupees 1,000.

7. **THATTAPARAY AND THATCHANELLORE.**—These stations have been done away with.

(Signed) D. LOGAN,
Chief Engineer, G. S. I. R.

From the Consulting Engineer for Railways, to the Agent and Traffic Manager of the Great Southern of India Railway, dated Negapatam, 10th May 1872, No. 183.

I HAVE the honour to acknowledge your letter No. 4,487, dated 29th April 1872, giving cover to a statement showing the result of the Chief Engineer's revision of his estimates for station accommodation. I observe that the required reduction is effected partly by reducing the masonry rates, by omitting the Thattaparay station, by reducing the margin for contingencies, and by certain other reductions principally in the accommodation afforded.

2. I observe that the following alterations which met the approval of the Government of India, namely, the modification of the engine pits at Madura, Tinnevelly and Tuticorin, and the substitution of open work for the venetians in engine sheds, together saving Rupees 5,640 on the original estimates, find no place in the statement of proposed reductions. This sum should be added to the amount estimated for contingencies. But I would suggest, for the consideration of the Chief Engineer, whether the margin for contingencies can, with any likelihood of its representing the actual expenditure, be safely reduced even to Rupees 16,600.

3. I would also invite attention to the fact that the Government of India, when suggesting 4,000 Rupees per mile as the limit of expenditure on station buildings, expressed their opinion that the designs for the stations and goods sheds appeared too costly.

4. In the standard designs lately forwarded, it will be observed that the goods shed is referred to as having an overhanging verandah towards the rails, and that the third-class station provides only one small room, verandah, and lamp room.

5. The Chief Engineer may perhaps see his way to dispense with so wide an iron roof, and so economize in the goods sheds. I am unwilling, if it can possibly be avoided, to effect the required saving by dispensing with the Thattaparay station; unless, as is quite possible, the Chief Engineer has some information at his disposal, leading him to think it of less importance than

*Proceedings of the Madras Government, Public Works Department,
16th July 1872.*

when the original estimate was submitted. At the same time I fully recognize the great difficulty of meeting the wishes of the Government of India, without in some way or other curtailing the accommodation which it has been thought advisable to offer to the public. On the Madras Railway a moveable timber ticket office was tried with success at a small roadside station; some such contrivance might perhaps save the omission altogether of any station accommodation.

6. With these remarks I am content to leave the matter in the hands of the Chief Engineer, whose proposals, as detailed with any further modification he may find it in his power to recommend, I shall be prepared to submit for the approval of the Government of India.

From the Agent of the Great Southern of India Railway, to the Consulting Engineer for Railways, dated Negapatam, 20th June 1872, No. 4,559.

A copy of the Chief Engineer's reply to your letter No. 183 of the 10th ultimo, regarding the revision of station estimates, is hereto attached.

2. I hope the suggestions made by Mr. Logan will receive your support.

Copy of letter from Chief Engineer to the Agent, No. 1,101, dated 19th June 1872.

I BEG to forward you explanations called for in the Consulting Engineer's letter No. 183, respecting the revision of station estimates.

2. With reference to the saving to be effected, by assimilating the design of the engine pits at Madura, Tinnevelly and Tuticorin, to the pattern proposed for those at Trichinopoly, the main difference being in the provision of concrete under the pits at the first-named places, I was so convinced in my revision of the estimates, that the provision was not in excess but rather the reverse of what would be eventually required at those places, that I made no reduction in the original estimate. I find that there might be a saving of 6 inches in the depth of the masonry, and this would reduce the estimate by about Rupees 788 (Madura Rupees 270, Tinnevelly Rupees 140, Tuticorin Rupees 378).

3. The saving by the substitution of honeycomb work, for venetian windows, in the engine sheds at Trichinopoly, Madura, Tuticorin and Tinnevelly, would be as follows:—

	RS.
Cost of venetian windows as per original estimate	3,384
Deduct cost of filling in with honeycomb work	600
Total saving...	2,784

4. In my revised estimate a considerable reduction was made in the accommodation at the principal station offices, amounting at Madura to Rupees 6,000, Tuticorin Rupees 2,750, Tinnevelly Rupees 2,256, being a total of Rupees 11,006; and, looking at the importance of these towns as centres of traffic, I do not feel justified in making any further reduction in the area provided for passenger accommodation.

5. As regards the suggestion in the standard designs for goods sheds for providing an awning over the rails in the place of carrying the rails through the shed, I have gone into the comparative cost of the two designs, and find that the saving on constructing a verandah, as proposed, would be so trifling, that set against the inconvenience of having goods during transshipment exposed to the weather as they must be to a great extent under a verandah, I would suggest that our design be adhered to.

6. The substitution of a tiled and timber trussed roof for the wrought iron roof proposed for goods sheds would probably reduce the first outlay as follows:— Dindigul Rupees 500, Virduputty Rupees 500, Madura Rupees 800, Tuticorin Rupees 800, Tinnevelly Rupees 800, or a total of Rupees 3,400; but it is a question whether it would not be advisable to use the iron roof as proposed and save the maintenance, which would be necessitated by the adoption of a tiled roof.

7. The original dimensions of the goods sheds were arrived at after mature consideration and consultation with yourself as Traffic Manager; and unless our previous experience of fourteen years is of no avail, I am certain that the accommodation for goods has been reduced considerably

*Proceedings of the Madras Government, Public Works Department,
16th July 1872.*

below what will be the actual requirements of the country. With respect to the accommodation provided for third-class stations, I would call your attention to the fact that although our design differs from the standard design in so far that the building is divided into three instead of two rooms, the area is far less; the two rooms in the standard design measuring, respectively, $5\frac{1}{2}$ metres $\times$ 5 metres and 3 ms. and 3 ms. = 390 s. feet, and the rooms in our design being respectively, $10' \times 10' - 10' \times 8'$ and $10' \times 8' = 260$ s. feet being less by 130 s. feet than the provision recommended by the Consulting Engineer.

8. The total saving to be effected by the above suggested alterations would produce the following result:—

	RS.
Saving by alteration of engine pits	788
Do. by substitution of honeycomb work for venetians in engine sheds	2,784
Do. by tiled roofs for goods sheds	3,100
Contingencies as per revised estimate	10,962

Increasing the sum for contingencies to being about 2 per cent. on the revised estimate. 17,934

9. The site for the proposed station at Thuttaparay, being within $8\frac{1}{2}$ miles of Tuticorin, I think it may be left out to begin with. If the call for accommodation there turns out to be urgent, a wooden ticket office can at any time be provided as suggested by the Consulting Engineer.

No. 276.

ORDER THEREON, 16th July 1872, No. 1,710.

RAILWAY, No. 65.

THE Consulting Engineer submits for the approval of Government the modifications proposed by the Chief Engineer of the Great Southern of India Railway in the designs and estimates for the station arrangements on the Great Southern Extension, in order that their cost may not exceed 4,000 Rupees per mile, the limit imposed by the Government of India in their letter No. 325—G. R., 2nd March 1872. The modifications proposed appear calculated to secure the end in view with the least possible sacrifice of efficiency; and in according their approval to the construction of the works upon designs prepared in accordance with these proposals, the Government desire to record their appreciation of the earnest efforts on the part of the Chief Engineer to give effect to their views.

(True Extract.)

Colonel, R.E.,

Secretary to Government.

To the Consulting Engineer for Railways.

F. L. E. C. Shunker.

RAILWAY DEPARTMENT.

CONSULTING ENGINEER'S OFFICE.

No. 325.

From

Lieut Colonel J. A. M. Shaw Stewart I.C.
Consulting Engineer for Railways.

To

Colonel L. W. Walker I.C.
Secretary to Government,
Public Works Department,
Fort Saint George.

SIR,

Upon receipt of the order of Government dated the 21st March 1872, No. 800, the Chief Engineer of the Great Southern of India Railway was requested to make such alterations and modifications in his plans and estimates for station arrangements on the Southern extension as were necessary to bring the total estimated cost within the limit sanctioned by the Government of India, namely, Rs. 4,000 per

N^o 499.

Great Southern of India
Chief Engineer's Office
Tuchinopoly April 27th 1872.

W. S. Betts Esq
My dear Sir

I now send you an approximate Statement to show the result of a revision of my estimates for Stations, so as to meet the order of the Government of India, that Rupees Four thousand per mile should suffice for such work. The explanation embodied in the Statement renders it unnecessary for me to enter into much detail here. The reduced rates for masonry I hope to accomplish by adopting a cheaper class of masonry. In looking at masonry rates it must be remembered that there is nothing like the amount of skilled labour, necessary for our works on the districts through which the line passes. The population is chiefly agricultural, and labour will have to be largely imported. It will be observed also that in making the reductions I have been able to retain only a margin of about Rupees Eleven thousand for contingencies.

I sent the Statement in the hope that it may enable Government, to say, whether the revision and reductions are such as meet their wishes, as I think it would be a pity to incur the expense of a third set of Station plans, unless there is some certainty of their being adopted.

While on this subject I should like to take the opportunity of making a few remarks with reference

RAILWAY DEPARTMENT
1872.

From
The Consulting Engineer
for Railways

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

Dated 24th June 1872.
Recd. 25th

Encl. No. 575.

Enclosed for the
Secretary to Government
for P.W. Department
and for the
Chief Engineer
of the Great Southern
Railway.

W. S. Betts Esq
Chief Engineer
Tuchinopoly

reference to paras 2 & 3 of the Consulting Eng^r 2
letter. The principles referred to as enunciated
within the last two years by the Government
of India are identical with those enunciated
by our Board and followed by their Executive
for the last 14 years.

Indeed at the outset we went
further than the Government of India, and
did not even provide shelter for Engines and
Vehicles, nor in many cases for goods.

Stations were only enlarged as the
absolute necessity for further accommodation
forced itself upon the Staff.

So far from the Railway Executive being
the element tending to expenditure, there were not
a few items of expenditure ordered by Government,
which were by us considered unnecessary. For
instance latrines were built without roofs, and
the Government now direct them to be. It was
by order of Government that the roofs were put on, to
enable the dry Conservancy System to be carried
out. The line was worked for several years without
Semaphore Signals, until an order of Government
in opposition to your own views, on the subject
caused them to be put up.

It will be observed on the report of
Colonels Strachey and Dickens to the Government
of India on narrow gauge railways that your view
of this question is adopted by them, namely that
on long level straight lines, only run out by day
Semaphore signals can be dispensed with to a
very great extent.

It was with difficulty that we prevented
very considerable shed accommodation for native
passengers being constructed at some of the principal
stations; our own views being that enough for
current

When I wrote what is quoted in para 2 of Consulting Engineer letter v. r. no doubt all the suggestions made by you could be carried out, but as all the designs were matured after full and careful consideration in the light of our past experience in working this Railway, I should be acting contrary to the dictates of my own judgment were I to acquiesce in the changes. The meaning was that we had gone through nearly 14 years experience of the actual requirements of Traffic at the different Classes of Stations in this part of the Country and that it was therefore unnecessary to the same extent as at first to feel our way as to what was absolutely required for accommodation on the Extension.

6

Sept 16 West 25 Ave/Lynx
\$10.17 D & B - Decal/22

be estimated for, with at least the acc-
and Equipment necessary to carry on the ord-
and current work of the country through which
it is to pass during the first few years of its work-
ing - and it was for this reason that I decided
to adhere to my original designs, so far at least
as station accommodation was concerned.

These remarks have been called forth by a
desire to place on record, that in this part
of the country at all events our best efforts have
all along been devoted to economy and to the
carrying out of the very principles lately laid down
by the Government of India.

That we have been in some measure
successful is borne out by the fact that this
Railway has so far been the most cheaply con-
-structed in India, and I believe that it is
also acknowledged to be more economically
managed than any line in the country - I do
not point out these matters from any motive but
one of justice to men and the memories of men
with whom I have been associated on this
undertaking for the past 14 years.

All of whom have spent their best energies
and many of the best years of their lives in
struggling to carry out the principles which are
now held forth to us as a novelty.

(Sigs) Yours faithfully
David Logan
Chief Engineer

ES.

/ True copy /
William Stott
agent

Statement to show reduction made in Estm
of Stations and Buildings to meet the Order of the
Government of India not to exceed Rs. 4000 per Mile on such
Works.

	Stations	Original Estimate etc =clusive of contingencies	Revised Estm = made each = size of Contn = genies	Saving
1	Tiruchinopoly	Rs 1,89,934	Rs 1,59,415	30,519
2	Madurai	2,26,255	1,67,388	58,867
3	Tuticorin	2,24,447	1,86,392	38,255
4	Simmerville	1,31,564	1,04,015	31,549
5	Dindigul & Virudupetty	76,202	49,780	26,422
	Kollator, Manapara,			
	Yellengacore, Anna =			
	= naikennore, Vadamadurai,			
6	Splavundan, Tripunacundam,	2,71,078	1,57,548	1,13,530
	Tirumungalam, Saloor,			
	Kovilpatty, Kuddumboor,			
	Gajagondam, Muncachee			
7	Thattaparay, and Thatcha =	38,071		38,071
	= nallor, done away with			
	Inspectors Bungalows No. 3			
	to each District No. 2	14,700	14,700	
	Engineers Temporary Bungalows			
	No. 1 to each District No. 2		16,800	
		Rs 11,72,451	852,038	3,37,213
	215 3/4 Miles at Rs. 4000 as sanctioned by Govt		863,000	
	Leaving for contingencies only		Rs 10,962	

/s/ David Logan
Chief Engineer
G. I. R.

Explanation shewing reductions made in the preparation of Revised Estimate

1. Trichinopoly Station. - A reduction of Rupees 2 per cubic yard has been made in the rate of Masonry. - The Iron Roof over Local Traffic Platform has been done away with. - The Latrine has been reduced in size by cutting off the portion originally provided for the accommodation of natives entering from the station yard and the space provided for natives entering from Platform has been un-roofed and the walls reduced to 7 feet in height. - The Engine shed has been reduced 4 feet in height. - The Coal shed and Lanks have had the panels reduced to 1 1/2" in thickness. - The Metalling throughout has been reduced in thickness. - The Station Masters Bungalow has been estimated at Rupees 1000.

2. Madurai

The same reduction as above has been made in the rate of Masonry. - The Iron Roof over Platform has been done away with and a Verandah of the same description as that at Trichinopoly been provided. - The Station House has been somewhat modified in plan and the 1st floor taken away. - The Latrine has been treated in the same manner as at Trichinopoly. - The Goods shed has been reduced from 200 to 100 feet in length and the Godown dispensed with. - The Engine shed, Tool shop and Smiths shop have been reduced 4 feet in height. - The Coal shed and Lanks have been treated as at Trichinopoly. - The Metalling of the Goods yard and approach to Station has been decreased in area and the depth reduced throughout. - The Station Masters Bungalow has

MS. 3112/72

3 Inticorin

has been estimated at Rs. 1000.—

No reduction in the rate of Masonry has been made.— The Iron Roof over Platform has been removed and a Verandah similar to that at Trichinopoly substituted. The Station Offices have been somewhat modified in Plan.— The Satrine has been dealt with as at Trichinopoly.— The Goods Shed has been reduced 100 feet in length and the Godown dispensed with.— The Engine Shed has been reduced 4 feet in height.— The Coal Shed and Junks have been treated as at Trichinopoly.— The Metalling of the Goods yard has been decreased in area and the depth reduced throughout.— The Station Masters Bungalow

Estimated at Rupees 1000.—

4 Finnievelly

The rate of Masonry has been reduced Rs. 1.— The Iron Roof over Platform, Station Offices, Satrine, Goods Shed, Godown, Engine Shed, Coal Shed and Junks and Metalling have been dealt with as at Inticorin.— The Station Masters Bungalow Estimated

at Rs. 1000.—

5 Dindigul & Virudupetty. The rate of Masonry has been reduced Rs. 2.— The Station Houses have been somewhat modified but not reduced in size, but the building at the end proposed for Godown has been done away with.—

The Satrine have been altered to the same design as that proposed for Trichinopoly, and no saving has been effected.— The Goods Warehouses have been reduced from 100 to 70 feet in length.— The Water Crane with Pipes &c. has been reduced from each station.— The Metalling in the Goods yards has been decreased in area and the depth reduced throughout.— The Station Masters Bungalows have been estimated at Rs. 1000.—

6 Shirdabla Station

The rate of Masonry has been reduced Rs. 2.— The Satrine has been unroofed and the walls reduced

reduced to 7 feet in height. — The Godown has
reduced from $610 \times 18' 6"$ to $30' 0" \times 15' 0"$. — As Water
and Pipes have been deducted from each station. — The
Metalling in the Goods yards has been decreased in
area and the depth reduced throughout. — The Station
Masters Bungalows have been estimated at Rs. 1000. —
7 Shettaharay & Shalchandhar. These stations have been done
away with.

/Signed/ David Logan
Chief Engineer
G. I. R.

William A. Betts.
agent.

The Agent and Traffic Manager,
Great Eastern of India Railway
Kagapetam

Sir,

I have the honour to acknowledge your letter No. 4487, dated 29th April 1873, giving cover to a statement showing the result of the Chief Engineer's revision of his estimates for station accommodation. I observe that the required reduction is effected partly by reducing the masonry rates, by omitting the Tadipatry station, by reducing the margin for contingencies, and by certain other reductions, principally in the accommodation afforded.

2. I observe that the following alterations which met the approval of the Government of India, viz.

The

the modification of the engine pits at Madurai, Tirunelveli and Tuticorin, and the substitution of ~~the~~ open-work for the venetians in engine sheds, together saving Rs 5,640 on the original estimates, find no place in the statement of proposed reductions.

This sum should be added to the amount estimated for contingencies.

But I would suggest for the consideration of the Chief Engineer whether the margin for contingencies can, with any likelihood of its representing the actual expenditure, be safely reduced even to Rs 16,600.

3. I would also invite attention to the fact that the Government of India, when suggesting Rs 4,000 per mile as the limit of expenditure on station buildings, expressed

pressed their opinion that the designs for the stations and goods-sheds appeared too costly.

4. On the standard designs lately forwarded it will be observed that the goods-shed is referred to, as having an overhanging verandah towards the rails, and that the 3rd class station provides only one small room, verandah, and lamp room.

5. The Chief Engineer may perhaps see his way to dispense with so wide an iron roof and so economise in the goods-sheds. I am unwilling, if it can possibly be assisted, to effect the required saving by dispensing with the Tatiparai station; unless, as is quite possible, the Chief Engineer has some information at his disposal leading him to think it of less importance than

than when the original estimate was submitted. At the same time I fully recognise the great difficulty of meeting the wishes of the Government of India, without in some way or other curtailing the accommodation which it has been thought advisable to offer to the public. On the Madras Railway a movable timber ticket office was tried with success at a small roadside station. Some such contrivance might perhaps save the imposition altogether of any station accommodation.

With these remarks I am content to leave the matter in the hands of the Chief Engineer, whose proposals, as detailed, with any further modification he may find it in his power to recommend, I

shall

shall be prepared to submit for the approval of the Government of India.
I have &c.

Madras
10 May 1872

/s/ J. R. B. Shaw Stewart, Esq.,
Cons. Engineer for Railways

/s/ J. R. B. Stewart, Esq.,
Cons. Engineer for Railways

Copy of letter from Chief Engineer to the
Agent at No 1101 dated 19th June 1872.

I beg to forward your explanations calling
for in the Consulting Engineer's letter No 183,
respecting the revision of Station Estimates.
With reference to the saving to be
effected, by assimilating the design of the
Engine Poles at Madras, Trimvelly and
Tuticorin, to the pattern proposed for those
at Trichinopoly - the main difference being in
the provision of concrete under the pits at
the first framed places - I was so convinced
in my revision of the Estimates, that the
provision was not in excess, but rather the
reverse, of what would be eventually required
at those places, that I made no reduction
in the original Estimate. I find that
there might be a saving of 6 inches in the
depth of the Masonry, and this would reduce
the Estimate by about Rs 788 (elladura Rs 270
Trimvelly Rs 140. Tuticorin Rs 378)

The saving by the substitution of
Honey Comb work, for French Windows, in the
Engine Sheds at Trichinopoly, elladura, Tuticorin,
and Trimvelly, would be as follows
Cost of French windows as per original
Estimate Rs 3,384
Deduct cost of filling in with Honey
Comb work " 600
Total saving Rs 2,784

In my revised Estimate, a considerable
reduction was made in the accommodation
at the principal Station offices, amounting at
Madras

109. 3112/72.

Madura to Rs 6000 Tuticorin Rs 2750: Timoree
Rs 2,256: being a total of Rs 11006: and looking
at the importance of these towns, as centres
of traffic, I do not feel justified, in making
any further reduction in the area provided
for passenger accommodation.

As regards the suggestions in the
Standard designs for Goods Sheds, for providing
an awning over the rails, in the place of carrying
the rails through the shed, I have gone into the
Comparative cost of the two designs and find
that the saving on constructing a Verandah, as
proposed, would be so trifling, that set against
the inconvenience of having goods during trans-
shipment exposed to the weather, as they must
be to a great extent under a Verandah - I
would suggest, that our design be adhered to.

The substitution of a Tiled and Timber
bussel roof, for the wrought Iron Roof proposed
for goods sheds, would probably reduce the
first outlay as follows: Tirupatty Rs 500:

Madura Rs 800, Tuticorin Rs 800
Timoree Rs 500: or a total of Rs 3,400. but,
it is a question, whether it would not be
advisable to use the Iron roof, as proposed
and save the maintenance, which would
be necessitated by the adoption of a tiled roof.

The original dimensions of the Goods
Sheds were arrived at, after mature considera-
tion and consultation with yourself, as Traffic
Manager, and unless our previous experience
of 14 years is of no avail, I am certain that
the accommodation for Goods has been reduced,
considerably below what will be the actual
requirements of the Country

with

With respect to the accommodation provided for third class Stations, I would call your attention to the fact, that although our design differs from the standard design, in so far that the building is divided into three instead of two rooms, the area is far less; the two rooms in the standard design measuring, respectively, $5\frac{1}{2}$ metres $\times$ 5 metres and 3 m. and 3 m. = 391 sq. ft. and the rooms in our design being respectively, $10' \times 10'$ - $10' \times 8'$ - and $10' \times 8'$ = 260 sq. ft. being less, by 130 sq. ft. than the provision recommended by the Consulting Engineer.

The total saving to be effected, by the above suggested alterations, would produce the following result -

Saving by alteration of Engine Pits	Rs 788
do Substitution of Honey Comb work for Venetians in Engine Sheds	2784
do Tiled roofs for Goods Sheds	8400
Contingencies, as per revised Estimate	10962
Increasing the sum, for Contingencies to	Rs 17934

being about 2 per cent on the revised estimate

The site for the proposed Station at Shukla-parag, being within $8\frac{1}{4}$ miles of Luleorin, I think it may be left out to begin with. If the call for accommodation there, turns out to be urgent, a wooden Ticket office can, at any time, be provided, as suggested by the Consulting Engineer.

True copy,

William Blith
agent.

J. W. Deft
No 10 18

Proceedings of the Madras Government
Under date the 16th July 1872
Had the following
From the Cons^l Engineer
for Railways - (For enter No 325 of 24 Aug 72)

The Consulting
Engineer submits for
the approval of Govt,
the modifications pro-
posed by the Chief
Engineer of the Great
Southern of India
Railway in the designs
and estimates for the
Station arrangements
on the Great Southern
extension, in order
that their cost may
not exceed 4,000 Rs
per mile the limit

[Signature]

(7 lines)
D. 11 - Dec-16 "July 1872 L. B. S. 25"

Dr. 5112/12

Recd 22nd July 72
with No 4559 of 20-8-72

imposed by the Govt
of India in their letter
No. 325 G. R. 2nd March
1872. The modifications
proposed appear cal-
culated to secure the
end in view with the
least possible sacrifice
of efficiency, and in
accordance with their appro-
val to the construction
of the works upon
designs prepared in
accordance with
these proposals, the
Govt desire to record
their appreciation of
the earnest efforts on
the part of the Chief
Engineer to give effect
to their views.

C. J. G. M. M.

26
2
To. The Chief Engineer.
for Railways
Decr. 22/7/72.

C/2 3112

Govt. of 1872, Madras.

PUBLIC WORKS. ✓

*The Counciling Regs
for Railways*

Dated

Recd.

Encl. 1/1

G. O., 16th July 1872, No. 1710.

No. 275876

Station arrangements on
the Great Southern Extension.

Proposed modifications
in the designs and esti-
mates for the Station
arrangements on the
Great Southern Exten-
sion, approved with
marks.