Public Works (1899) Department.

RAILWAY BRANCH.

G.O., No. 683 Ry

DATED 20th June 1899.

Includes G.O. No. 504-5 Ry of 29.4.99.

[Despatch Abstract.]

Remodelling the Tanjore Junction Station, S.I.Ry.

Forwg: to the Agent, letter from the Govt of India sanctioning an estimate amounting to Rs 4,01,353 of the cost of ——

[P. W. 28. 300—30-3-97.] Indexed.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.
	2319 Ry	dated	5-12-03				
	2035 Ry		28/10/03				
	458, 5-9 Ry		3/3/04				

RAILWAY.

Government {1899} of Madras.

PUBLIC WORKS.

Recd. } 1899. *Enclosures*

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G.O., No. 683 Ry., 20th June 1899.

JUNE.

Remodelling the Tanjore Junction Station, South Indian Railway

Communicating to the Agent letter from the Government of India sanctioning an estimate, amounting to Rs. 4,01,353, of the cost of —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read again the following paper :—

G.O., Nos. 504-5 Ry., dated 29th April 1899.

Read also the following paper :—

From—The Secretary to the Government of India, Public Works Department.
To—The Joint Secretary to the Government of Madras, P.W. Dept., Ry. Branch.
Dated—Simla, 8th June 1899, No. 1079 R.C.

I am directed to acknowledge the receipt of your letter No. 505 Ry., dated the 29th April 1899, and in reply to communicate the sanction of the Government of India to the estimate therewith forwarded, amounting to Rs. 4,01,353, of the cost of remodelling the Tanjore station of the South Indian Railway.

2. This sanction is chargeable in the proportion of Rs. 3,08,629 to Capital and Rs. 92,724 to Revenue and has been registered as No. 3, South Indian Railway, of 1899.

3. The plans received with your letter under acknowledgment are returned herewith.

Order—No. 683 Ry., dated 20th June 1899.

Communicated to the Agent, South Indian Railway.

2. This sanction has been registered as No. 5 R. of 1899–1900.

(True Extract.)

Francis J. E. Spring,
Joint Secretary.

To the Agent, South Indian Railway.
" Examiner, Railway Accounts, Madras.
" Consulting Engineer for Railways, Madras.

Exd. T. K. Narayana Aiyangar.

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RAILWAY.

Government {1898} of Madras.

PUBLIC WORKS.

Page 4

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G.O., No. 1097 Ry., 29th August 1898.

AUGUST.

Report of Inspection of the South Indian Railway System

The Government Inspector's — for the half-year ended the 30th June 1898, communicated to the Agent for information and necessary action; and copy of the Proceedings forwarded to the Government of India.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper:—

SOUTH INDIAN RAILWAY SYSTEM.

METRE GAUGE.

Total mileage open for traffic 1,119 *miles.*

INSPECTION REPORT FOR THE HALF-YEAR ENDED 30TH JUNE 1898.

The inspection was carried out between the 4th and 16th July. The Chief Engineer was present throughout; the District officers accompanied the train over their respective divisions.

2. *Formation.*—Banks and cuttings are in good order.

3. *Bridges and Culverts.*—With reference to paragraph 6 of the last inspection report, it appears that for many years the subject of removing the spoil heaps, which obstruct the waterway of the *Gingee* and *Tondiar* rivers (miles 84/10 and 86/1), has been under consideration. These spoil heaps have already been cut through in several places: to further remove the obstruction would cost a lot of money and involve the acquisition of valuable land. As no water has passed through the land spans since 1885, I am of opinion that the present *status quo* may be allowed to stand.

4. *Gadilam River* (*Mile* 124).—The longitudinal timbers are simply bolted to the rail bearer and not held in place by chubbs on the cross girders. With reference to paragraph 12 of the last report, it is expected that this bridge will be cross-sleepered in about 2 years' time, till then the present arrangement may be allowed to stand.

5. *Single* 25-*ft. girder* (*Mile* 216).—A laminated crack has been discovered in the top flange near one of the abutments and will be watched.

6. At mile 275, a hill stream which flows parallel to the railway shows a tendency to erode its banks, cutting towards the railway. It was agreed that the banks should be pitched in preference to groining.

7. *Level-crossings, Tanjore and Trichinopoly districts.*—A number of occupation level-crossings, the approaches of which were originally made by the railway, are now quite impassable for want of attention by the District Boards. This, of course, only concerns the convenience of the villagers.

8. At *Chetpat* station, an arrangement is on trial by which it is assured that the gates are shut and bolted before the gateman can pull off the gate signal. The arrangement worked satisfactorily and I think should be extended to all busy crossings.

9. *Gate lights.*—Most of the gate fixed signals show white instead of green as an all-right signal; this should be altered. Gate-keepers should also be instructed to show green and not white with their hand lamps.

10. *Fencing.*—On the Pondicherry Branch and south of Madura particularly, but all over the line generally, the aloe fencing is in a most unsatisfactory state. This is chiefly the result of dead plants having caught fire. The gaps thus formed have to

be replanted—a process which not only takes up the gangsmen's time, but which does not ensure the gap being effectually closed for some three years, during which period other gaps have formed. The Chief Engineer proposes to replace the worst portions with wire-fencing, an estimate for which is now before Government.

11. On the Erode Branch, the wire fence, though not erected on the boundary, has been undercut owing to encroachment by the ryots. The fencing is in its present condition quite useless as a preventative to cattle trespass, but to re-fix it will cost a lot of money. I suggest for consideration whether it would not be better to remove all the fencing from this branch and use it in re-placing the aloes on the main line.

12. *Ballast and Permanent-way.*—The road throughout has been kept up to its usual standard of efficiency; the Villupuram-Dharmavaram was, perhaps, as a whole, in the best order, while that south of Dindigul was the worst.

13. The Peralam-Karaikkal road ran very smoothly. The restriction of speed over this section might now be removed.

14. A new type of deep fish plate is being tried near Villupuram on the Pakala section.

15. In *Ammayanayakkanur* yard I noticed a very large proportion of loose fish bolts.

16. The work of arranging the point padlocks so that the switches can be locked over for the siding as well as for the main line is in progress.

17. *Stations and Buildings.*—In building the new goods shed at Madras Beach, provision must be made for the new suggested alignment outside of the Lighthouse Battery.

18. Some additional waiting shelter seems to be required at Chetpet where there is a large passenger traffic at certain times of the day.

19. Considerable delay and consequent disappointment to the people most concerned has taken place in the commencement of work on the new stations promised at Noyel, Mogaralapalle, Adudorai, Tirunellikaval. I understand the estimates are now ready and that no further delay is anticipated.

20. *Karur.*—The Traffic Department ask for a parcel office; one of the two waiting-rooms should be converted for the purpose.

21. At *Tinnevelly* and *Koilpati* the floor of the waiting-room needs attention.

22. At *Gudur* the new buildings are about half completed.

23. *Station yards—Chingleput.*—The outside points leading to the ballast siding should be taken out and the connection made at the platform end instead. Some other alterations, principally the provision of shunting necks, were discussed and approved.

24. *Kolatur, North.*—At this station there is a long dead end siding, sometimes used for crossing trains. On a recent occasion a goods train ran over the buffer stops at the end. I do not advocate any alteration owing to the station being on a grade of 1 in 200, but I consider the main line points should be fitted with Annett's locks.

25. *Villupuram.*—A new engine shed road should be included in the proposed alterations, the existing engine road being converted into a shunting neck. A scissors crossing at the north end of the yard would obviate the necessity for any shunting engine ever to go outside the points on the main line.

26. *Cuddalore Old Town.*—Some extensive alterations at the locomotive yard exit are proposed, but I do not think the work is justified in view of the impending abolition of this as a locomotive station.

27. The locomotive disc signal at present faces the wrong way. It should control engines coming on to the main line and should not refer to engines coming from off the main line or out of the sheds. Both the siding and the disc signals should be worked by the main line pointsman, the latter, if possible, being detected with the main line points.

28. *Tiruvallur.*—To satisfy the demands of the Traffic Department it was agreed that the island platform should be extended at the west end up to the water column and the cross-over road shifted further out.

29. *Mayavaram.*—The shunting neck agreed to at the last inspection was again discussed and approved of with the addition of a cross-over from the branch side of the station. The necessity for a new line for stabling goods wagons on, was agreed to.

30. *Madura.*—An estimate, amounting to Rs. 3,000, for re-arranging the locomotive yard exits, was discussed. In view of the construction of the Madura-Pamban Railway and the then necessary re-arrangement of the yard, I think small dead ends with weighted switches and inter-locked signals will suffice for the present.

31. *Satur.*—An extension of the goods shed is required. An engine turn-table is also necessary here as a number of goods trains stop at and return from this station.

32. *Tataparai.*—The land for the Ceylon Government cooly depôt has been transferred and the buildings are nearly complete.

33. *Tuticorin.*—A meeting between the principal officials concerned has been held, who I understand have settled the question of siding and shedding accommodation.

34. *Trichinopoly.*—The plan showing the proposed alterations to the yard was inspected and, with a few modifications, approved.

35. *Junction stations.*—At Villupuram, Mayavaram, Tiruvalur and Tanjore, where long island platforms have been provided, I put forward, for consideration, the suggestion that it would be both safer and more economical in permanent-way and interlocking arrangements to use the platforms as for a double line, *i.e.*, keeping all up trains, whether branch or main line, on one side and all down trains on the other side. This system will not only simplify the signalling, but all shunting outside the outermost facing points can be more easily avoided.

36. A large quantity of permanent-way, sufficient, for instance, to provide shunting necks at several stations is, I think, in excess of requirements at the following stations and might be transferred as opportunity occurs :—

Kadiri—the triangle which is never used.
Chinna Tippasamudrum—a long loop and half the goods shed line a connection being put in nearer the shed.
Chittoor—one long loop.
Vellore—one and a half long loops.
Katpadi—one and a half long loops.

37. *Mount Capper quarry.*—The upper portion of this siding is on a grade of 1 in 75 falling towards the main line. I think a slip point or dead end worked in connection with the siding home signal is advisable to prevent any possibility of wagons, which may have escaped during shunting operations at the quarry, running direct on to the main line.

38. *Signals.*—Several signals in the Mayavaram-Mutupet section require stops to prevent the arms being raised or lowered beyond the proper positions.

39. A recent case of averted collision, whereby two mail trains were only saved by the prompt use of the vacuum brake, points to the necessity of progress being made in the erection of proper home signals at the points.

40. Many signals, especially starting signals, show red and white instead of red and green. This defect should be speedily remedied.

41. Some uniformity might be arrived at in the matter of semaphore back lights. The English practice might be adopted with advantage, *i.e.*, when the signal is off—back light—*nil*, when on—*white*.

42. *Peralam Junction.*—The Dutton interlocking installation at the south end of this station was inspected and passed for opening. It is designed to prevent any collision occurring at the junction with the Karaikkal line. The back lights on the starting signals should be blocked up.

43. *Tiruvallur Junction.*—The interlocking at the east end of this station would be made more complete and safer were the points at the east end of the north island platform line (No. 20 I believe) weighted, and held only for shunting. By this arrangement no train from the Mayavaram side could possibly be turned on to the north side of the platform.

44. *Nidamangalam.*—The new siding signal should be of the semaphore type, and should be provided with an Annett's lock.

45. *Tirupati.*—The slip siding disc shows green and *nil* instead of red and green, respectively.

46. *Traffic.*—The inhabitants of Padalam have petitioned for the day mail to Madras to be stopped there. From a traffic point of view there is practically nothing to choose between Padalam and Kolatur North, where the train does stop. Padalam, however is a good watering station.

47. The Stationmaster of Peralam was found holding up the counterweight of the interlocked starting signal, being unable, owing to the interlocking, to obtain the signal by regular means. He had not been furnished with a copy of the special rules and therefore did not know he was doing wrong; but I think the incident points to the necessity for the issue of a circular warning all concerned against the practice.

48. There are stringent rules on the subject of the cleansing of horse-boxes, but at Tinnevelly and Pakala I found some horse-boxes in a very dirty condition.

49. The guard of No. 72 Train, on the 14th July, was found deliberately booking false time at Chandragiri. In view of the importance, particularly on this section where some difficulty has occurred owing to late running, of ascertaining how time is lost and why it is not made up, serious notice should be taken of this case.

50. At Cuddalore New Town, I also found all concerned booking false time by 13 minutes in the case of No. 50 Goods of the 17th July.

51. Unless the late running of trains on the Dharmavaram Branch can be otherwise remedied, the solution will be to start the trains from Pakala and Dharmavaram at about 6 o'clock.

52. *Rolling-stock, Workshops, &c.*—The first of the new break-down trains (that at Villupuram) was inspected and seemed to be very complete.

53. At Negapatam the Locomotive Superintendent presented his usual budget of requirements, most of which were modest and seemed necessary.

54. *Axle failures.*—During the preceding twelve months the following failures have taken place :—11 Engine axles, 5 Wagon axles, 9 Wagon journals.

The engine axles were those under the new O. class engines. No derailments took place, the fractures being discovered in time. Nearly all the wagon axles were of the old $3'' \times 6\frac{5}{16}''$ journal type. The following precautions have been taken to prevent, as far as possible, any serious disaster :—

(1) No wagons, except those fitted with axles having journals $7'' \times 3\frac{1}{4}''$, are run on mixed trains.
(2) The gross load of the four-wheeled wagon stock fitted with axles having journals $6\frac{5}{16}'' \times 3''$ has been reduced from 12 to 10 tons.
(3) Every effort is being made to replace the weaker type of axles by new ones of the stronger type.

55. *Quarry sidings.*—The *Pulliyarpati* quarry siding was inspected with a view to passing it for passenger traffic. The following points seem to require attention. A single 4-ft. culvert requires increased waterway to the extent of 3 spans of 8 feet; at present there is a substantial temporary bridge. A considerable length of surface line requires ballast walling. There are no platforms or other conveniences either at Tanjore or Pulliyarpati. With these exceptions the siding complies with all requirements and, in my opinion, can be safely opened for the only class of passenger traffic, *i.e.*, ballast coolies, which it is intended to serve.

56. *Mount Capper quarry siding.*—There are several temporary bridges of an extremely kutcha description. The sleepers are very old, and, except at the joints, are 3 feet apart (8 to the 24 ft. rail). There are no platforms or conveniences. I do not consider this siding fit for passenger traffic although it might be safe enough for ballast trains, with coolies, run at very slow speeds.

57. *Catch sidings.*—Cases of run-away wagons have recently occurred at Vaiyampatti and Chandragiri. It is now practically agreed that on the South Indian Railway slip sidings taking off the loop are required at several stations. I would suggest that the work be carried out, say, at the rate of two each half-year.

58. *Land.*—Much trouble is experienced owing to ryots encroaching on the railway land outside the fences (*vide* paragraph 11). The Chief Engineer proposes to engage a Revenue Survey party to authoritatively demarcate the boundaries. This, I think, a good suggestion.

MADRAS,
1st August 1898.

C. T. R. SCOVELL,
Government Inspector of Railways.

Remarks by the Senior Government Inspector of Railways, Madras.

The report on the whole is satisfactory. The Agent should report in due course what steps he proposes to take with a view to remedying the defects brought to notice.

Signals are referred to in paragraphs 9, 27, 38, 39, 40, 41, 42, 45, 47. The defects noticed should be corrected and the scheme of coloured lights systematized.

Sidings are referred to in paragraphs 15, 23, 35, 37, 43, 57. Proposals should be put forward in due course by the Agent.

The matters referred to in paragraphs 18, 21, 46, affect the convenience of the public and should be attended to.

I have no objection to the present restriction of speed on the Peralam-Karikal branch being removed as soon as the Agent and the French Colonial authorities agree to alter the present timing.

OOTACAMUND,
11th August 1898.

FRANCIS J. E. SPRING,
Senior Govt. Inspector of Rys., Madras.

ORDER—No. 1097 Ry., dated 29th August 1898.

Communicated to the Agent, South Indian Railway, for information and necessary action, and to the Local and Municipal Department with reference to paragraph 7 of the report.

2. A copy of these Proceedings will be forwarded for the information of the Government of India.

[Here enter No. 1098 Ry., dated 29th August 1898.]

(True Extract.)

FRANCIS J. E. SPRING,
Joint Secretary.

To the Agent, South Indian Railway.
" Consulting Engineer for Railways.
" Local and Municipal Department.

Exd. T. K. Narayana Aiyangar.

RAILWAY.

Government {1899} of Madras.

PUBLIC WORKS.

683 Rz

Read. } 1899. *Enclosures*
Regd. } *Spare copies*

G.O., No. 504 Ry., 29th April 1899.

APRIL.

Remodelling of Tanjore Junction Station, South Indian Railway

Ordering that an estimate, amounting to Rs. 4,01,353, for — be forwarded for sanction of the Government of India.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers:—

Extract from letter from—The Agent, South Indian Railway.
To—The Board of Directors.
Dated—16th March 1898, No. 577.

Re-arrangement of Tanjore Junction station.

By the Managing Director's letter, No. 159 of 8th November 1895, a sum of Rs. 1,20,000 was approved of for expenditure on this work. The question of the re-arrangement of the station was not however then thoroughly considered; the re-construction of this station has now been re-considered, with the result that the proposals on which the figure of Rs. 1,20,000 was based are not adequate to meet the traffic requirements. Plans have been prepared and estimates drawn up on the basis of the decisions arrived at, and it is found that the estimated expenditure on alterations and additions amounts to Rs. 3,72,248 chargeable in the proportions of Rs. 3,02,783 to Capital and Rs. 69,465 to Revenue. The only works that will remain of the present arrangements are the goods shed and adjoining buildings, the well, pump and shed, the sub-way and the staff quarters buildings. All other works disappear, and, with the exception of the main line, the position of sidings is altered. The principal works are: a new island platform on which will be constructed the station offices, waiting accommodation, refreshment-rooms, latrines, new engine shed suitable for ten engines, local ticket office, third-class waiting-shed with sleeping rooms upstairs for first and second class passengers, an overbridge to the platform, a new tank to hold 36,000 gallons and a large addition to the sidings. The estimate includes provision for the staff quarters that will be required to meet the alteration of engine running lengths, and the engine shed and tank have both been enlarged to suit the same purpose. The Board's approval to the expenditure is solicited.

From—The Offg. Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Trichinopoly, 24th August 1898, No. 789.

With reference to correspondence ending with your endorsement No. 1809, dated 20th June 1898, regarding land required for the re-arrangement of Tanjore Junction, I have the honour to forward, for information, an extract from my letter, No. 593, dated 6th July 1898, to the Managing Director, in which I applied for the sanction of the Board of Directors to an estimate, amounting to Rs. 4,01,353, for the re-arrangements of this junction, and as probably you would like to see the estimate and drawings as soon as possible, I send you copies of estimate, note, and drawings, sent to the Board.

Enclosure.

Extract from letter from—The Agent, South Indian Railway.
To—The Managing Director, South Indian Railway Company.
Dated—Trichinopoly, 6th July 1898, No. 593.

Re-arrangement of Tanjore Junction.

Adverting to the sanction communicated in your letter, No. 210 of 6th May 1898, to a provision of Rs. 3,72,248 being made in the Capital Budget for 1898-99 for the re-arrangement of this station, I forward in the packet a detailed estimate for the proposed work, together with 21 drawings showing details thereof, and shall be glad to receive the sanction of the Board of Directors to the expenditure of Rs. 4,01,353, which it is now found is necessary to carry out the work. I also send an explanatory note regarding the works to be carried out, and an abstract of the estimate giving the quantities and rates.

Provision has been made in the estimate for the accommodation required at Tanjore Junction in connection with the location of the running staff and revision of the running lengths referred to in your letter, No. 201 of 17th December 1897.

The increase over the amount given in the accompaniment to my letter No. 577 is mainly due to the cost of interlocking arrangements which, at the suggestion of the Consulting Engineer for Railways, have been embodied in the estimate.

Extract from letter from—The Board of Directors, South Indian Railway Company.
To—The Agent, South Indian Railway.
Dated—London, 21st October 1898, No. 217.

Re-arrangement of Tanjore Junction.

The Board approve of the estimate forwarded with your No. 593, amounting to Rs. 4,01,353, and, subject to the sanction of Government, authorise you to proceed with the works. It is noted that the excess of Rs. 29,105 over the estimate agreed to by Board's letter, No. 210 of 6th May 1898, is mainly due to the addition of interlocking arrangements now included on the suggestion of the Consulting Engineer for Railways, Madras. A report upon the proposals, dated 5th October 1898, has been obtained from the Company's Consulting Engineer, and a copy thereof is enclosed for your information. Sir George Bruce considers that the re-arrangement of the lines of rail and the general design of the yards and buildings have been skilfully and judiciously planned; and, having regard to the great increase which it is found necessary to provide for in the Locomotive Department and the station buildings generally, he is of opinion that the amount of the estimate is not excessive or more than would be required to make this junction station thoroughly effective.

From—The Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Trichinopoly, 31st December 1898, No. 1172.

In forwarding herewith in duplicate the estimate for the re-arrangement of Tanjore Junction station, duly revised in the light of the Notes by the Examiner, Railway Accounts, Madras, received with your letter, No. 2725 of the 4th October 1898, I have the honour to also forward an extract from the Managing Director's letter, No. 217, dated 21st October 1898, communicating the approval of the Board of Directors to the proposed expenditure, and request the favour of the early sanction of Government being accorded to the re-arrangement being carried out.

I also forward a copy of the letter from Sir George Bruce (the Company's Consulting Engineer), dated 5th October 1898, referred to in the Managing Director's letter, and an explanatory note describing the various works to be carried out. Another set of the drawings to accompany the estimate will be forwarded to you on the 2nd January 1899.

SOUTH INDIAN RAILWAY Co., Ld.

Engineering Department.

Abstract of Estimate, No. 2012/66/98, *Plan No.* 25/98.

Proposed re-arrangement of Tanjore Junction Station.

Description of work.	Cash to be expended in India.	Value of stores.	Total value of work to be done.	Chargeable to Capital.		Chargeable to Revenue.	
				Cash.	Stores.	Cash.	Stores.
Capital Budget 1898-99 *to* 1900-1901. *Sanction will lapse at the close of the quarter ending* 31*st March* 1901.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
II. Land—							
Additional land required for station purposes ..	13,290	..	13,290	13,290	..	..	..
III. Formation—							
(*a*) Earthwork	8,303	..	8,303	8,303	..	..	..
V. Fencing, &c.—							
(*a*) Fencing	2,541	1,343	3,884	— *1,177*	1,343	3,718	..
VII. Ballast and Permanent-way—							
(*a*) Ballast	3,980	2,886	6,866	993	2,886	2,987	..
(*b*) Permanent-way	3,304	62,056	65,360	1,301	30,674	2,003	31,382
VIII. Stations and Buildings—							
(*a*) Stations and Offices—							
Booking office and waiting-shed	15,112	32,793	47,905	15,112	32,793	..	..
Station house and covered way	25,672	43,678	69,350	13,897	35,658	11,775	8,020
Corrugated iron latrine on north side	1,072	1,505	2,577	410	1,492	662	13
Do. do. south side	471	997	1,468	— *14*	997	485	..
Latrine for Europeans	149	584	733	149	584	..	..
Extension of goods-shed	3,616	8,644	1,2260	508	7,473	3,108	1,171
Overbridge for passengers	3,220	11,218	14,438	3,220	11,218	..	..
Extension of sub-way	943	769	1,712	349	707	594	62
Demolishing and rebuilding the Permanent-way Inspector's office and stores	784	1,277	2,061	— *593*	1,233	1,377	44
Passengers' platform	1,246	698	1,944	875	698	371	..
Transhipping platform	613	1,155	1,768	613	1,155	..	..
Passengers, goods approaches and fencing, &c. ..	812	695	1,507	748	199	64	496
(*c*) Staff quarters—							
Bungalow for Loco. Foreman	1,965	3,297	5,262	1,965	3,297	..	..
Out-houses for do.	532	489	1,021	532	489	..	..
Latrine for do.	127	182	309	127	182	..	..
Latrine for servants for Loco. Foreman	56	31	87	56	31	..	..
One double block for European and Eurasian drivers	2,504	4,150	6,654	2,504	4,150	..	..
Out-houses for do. do. ..	457	573	1,030	457	573	..	..
Latrine for do. do. ..	127	182	309	127	182	..	..
Latrine for servants for do. ..	95	51	146	95	51	..	..
Another double block for European and Eurasian drivers with out-houses and latrine, &c., complete.	3,183	4,956	8,139	3,183	4,956	..	..
Another double block for running drivers and guards same as above	3,183	4,956	8,139	3,183	4,956	..	..
One double block for Native drivers and rolling-stock inspector	1,118	1,761	2,879	1,118	1,761	..	..
Latrine for Native drivers and stock inspector ..	93	53	146	93	53	..	..
Fencing to staff quarters and approach road ..	625	1,479	2,104	616	1,479	9	..
(*d*) Station Machinery—							
Tank house	2,864	4,786	7,650	2,092	4,768	772	18
One ashpit, one water column, drip well drain, &c.	1,568	2,161	3,729	903	539	665	1,622
Coal stage	147	711	858	..	..	147	711
Extension of engine shed	8,404	19,240	27,644	5,383	17,222	3,021	2,018
Ashpits in engine shed	2,873	2,913	5,786	2,873	2,913	..	..
Wash out cock and piping in engine shed	92	134	226	55	17	37	117
Discharge drain and manhole from engine shed ..	229	155	384	229	155	..	..
Engine lift	927	4,228	5,155	927	4,228	..	..
Discharge drain for engine lift	195	135	330	195	135	..	..
Removing and rebuilding 42 ft. diar. engine turn-table (available at Chittoor)	1,158	— *1,543*	— *385*	..	— *2,150*	1,158	607
Man hole and drain for do.	36	21	57	..	..	36	21
Removing and rebuilding carriage turn-tables No. 2.	408	132	540	..	..	408	132
Wagon weigh-bridge and house	417	3,356	3,773	417	3,356	..	..
Points and crossings	1,276	20,726	22,002	488	8,993	788	11,733
Signals	3,955	24,682	28,637	3,807	24,469	148	213
Removing the existing weighing machine and refixing the same in booking office and waiting-shed ..	19	60	79	10	58	9	2
IX. Plant—							
(*e*) Station and office furniture	..	3,237	3,237	..	3,237	..	..
Total ..	1,23,761	2,77,592	4,01,353	89,419	2,19,210	34,342	58,382

Funds required on Capital account during 1898-99, viz., cash Rs. 2,000 and stores Rs. 8,000, will be met from the unallotted grant for unsanctioned works Capital Budget Estimate of same year, and the balance, cash Rs. 87,419 and stores Rs. 2,11,210, will be provided for in the Capital Budget Estimates for 1899-1900 and subsequent official years. Funds on Revenue Account, viz., Rs. 500, will be met from heads II, III and IV, Abstract A, Revenue Budget Estimate for 1898-99 and the balance will be provided for in Revenue Budgets of subsequent years.

By Board's letter, No. 210 of 6th May 1898, sanction was given to the inclusion of this work in the budget for 1898-99. Sanction of the Board to this estimate was communicated to the Agent in Managing Director's letter, No. 217 of 21st October 1898.

From—Sir GEORGE B. BRUCE, Consulting Engineer, to the South Indian Railway Company.
To—H. W. NOTMAN, Esq., Managing Director, South Indian Railway Company.
Dated—3, Victoria Street, S.W., 5th October 1898.

Re-arrangement of Tanjore Junction.

I have examined the plans and estimates of the proposed re-arrangement forwarded with yours of July, 26th last.

The Tanjore station was originally only a passing station on the line between Trichinopoly and Negapatam which was opened in 1861. The station arrangements were thus of a very simple character. It became a junction station in 1877, when the line from Tanjore north to Madras was constructed. Even then it appears that only such additions were made to the station from time to time as the necessities of increasing traffic rendered absolutely necessary. It is not therefore a matter of surprise that, in the judgment of the authorities in India, the re-casting of the whole station should have now become a necessity.

The re-arrangement of the lines of rails and the general design of the yard and buildings appear to me to have been skilfully and judiciously planned, and having regard to the great increase which it is found necessary to provide for in the Locomotive Department and the station buildings generally, the amount of the estimate does not seem to me excessive or more than would be required to make this junction station thoroughly effective.

I will, as you suggest, retain the drawings which accompanied your letter under reply, and I return herewith the printed estimate and statements marked "C" and "D."

Note to accompany the plans and estimate for the re-arrangement of Tanjore station.

Preliminary Remarks.—When the Negapatam-Trichinopoly section of the then Great Southern of India Railway was first opened for traffic in the year 1861, the station arrangements consisted of one passenger platform, two through sidings, booking office, goods-shed, salt godown, carriage loading dock, two sixteen-foot turntables, urinals, tank house and Permanent-way Inspector's stores.

2. The station was worked with this accommodation up to the year 1877, when the construction of the so-called "Northern extension" was started and an island platform, sub-way, engine shed, turntable and about 1,700 lineal yards of sidings were added.

3. Since that date additions of buildings and sidings have been made from time to time as the want for them was felt, but owing to the piecemeal manner in which they have been introduced, the general result as regards convenience of working the increased traffic is not satisfactory and a complete re-arrangement of the station has been felt for some years past to be an absolute necessity.

4. A design was prepared a short time ago on the principle of ignoring entirely the existing buildings and the two natural boundaries of the present yard in the form of a public road at the east end and a deep nullah at the west, as it was not thought possible to work them in satisfactorily with the proposed re-arrangements; but the amount of the estimate was considered prohibitive to such a scheme and a revised design was undertaken and is now submitted for sanction.

5. The present scheme has been prepared in consultation from time to time with the Deputing Consulting Engineer and has been discussed at several officer's meetings; it is therefore believed to meet the views of all those who are concerned in the working of it.

6. The following description of what is to be done under each head of account will explain, in conjunction with the plans, how the existing buildings are to be utilized.

The following statement showing in three columns the original, subsequent and proposed additional accommodation side by side will assist in explaining the growth of the station.

Statement showing buildings.

Provided originally.	Added subsequently.	Now proposed.
Stationmaster's house ..	....	Original stationmaster's house will remain as it stands.
Station house	....	The existing station house will be removed entirely, and the accommodation provided on the island platform.
One platform	....	The original platform is to be removed to make room for sidings.
Passenger shed	....	Do. do. do.
Latrine	....	Do. do. do.
Salt godown	....	Salt godown to remain intact.
Covered goods shed	....	Do. do.

Statement showing buildings—cont.

Provided originally.	Added subsequently.	Now proposed.
Inspector's office and stores ..	....	Inspectors' office and stores to be removed, to make room for sidings and will be erected elsewhere.
		Do. do. do.
Carriage dock	....	Do. do. do.
2-16 ft. turntables	....	Island platform to be increased by 524 per cent.
....	Island platform	Sub-way to be extended.
....	Sub-way	Tank to be removed and a fresh cast iron tank on masonry foundations to be built.
....	Tank on rails..	Engine turntable to be removed and re-erected.
....	Engine turntable	Engine shed to be enlarged by 311 per cent.
....	Engine shed	Open goods-shed to remain in tact.
....	Open goods shed	Do. do.
....	Apothecary's quarters	Do. do.
....	Assistant Traffic Manager's office.	Do. do.
....	One block for Locomotive staff ..	Do. do.
....	P.W. Inspector's bungalow ..	Refreshment-room will be demolished and be provided for in the main building in the island platform.
....	Refreshment room (a semi-permanent structure).	Latrine to be demolished.
....	Latrine on original platform ..	Latrine to be demolished, and be provided for in the island platform.
....	Latrine on island platform ..	A Locomotive Foreman's bungalow, three double block of European and Eurasian quarters.
....	....	One block for native quarters.
....	....	Weigh-bridge.
....	....	Transhipping platform.
....	....	Platform for Pulliarpatti branch.
....	....	Overbridge.
....	....	Local Booking office with staff quarters over it.

Land.—The additional land is required on the south side of the station for a platform for the Pulliarpatti branch and for additional sidings; the triangle between the Pulliarpatti siding and the main line to the south-west of the existing station is required for the coal and laterite sidings and for the additional staff quarters.

Formation.—Earthwork.—The earthwork which consists chiefly of cutting is necessitated in the neighbourhood of the engine-shed and sidings to the west of it, the ground beyond the present compound wall being at a higher level than the rails in the station yard.

Fencing.—As some of the additional sidings and new buildings extend beyond the present boundary wall, the latter has to be demolished and re-built; the wire fencing is required for enclosing additional land acquired for staff quarters.

Ballast and Permanent-way.—The gross length of sidings when the line was first opened for traffic in 1861 was 1,760 lineal yards; at the present date the length is 9,680 lineal yards; the present estimate provides for increasing the sidings up to 12,017 lineal yards.

The alterations are so extensive that, with the exception of the main line through the station and a comparatively short length of road near the goods-shed, the whole of the tracks in the yard have to be moved.

In the plan, the main line only is shown to remain in its existing position, and as the sidings near the goods-shed are to be re-laid with 50 lb. rails, they are shown as new.

Provision has been made to lay a through siding adjacent to each of the three platform lines, all arrangements for goods shunting being carried out with a shunting neck, so that in the formation of goods trains, the main line will always be kept clear.

Stations and Buildings.—Stations and offices.—The station being an important junction, an island platform with all the offices and accommodation required for through passenger traffic thereon is imperative. The existing island platform is only 20 feet wide and is quite inadequate for the work of transhipping passengers from branch to main line trains and *vice versâ*; it will form part of the new platform. The original platform on the north side of the station with the station-house, refreshment-room and latrines thereon could not be worked into the new scheme and will therefore be entirely removed; the new island platform will be 1,300 feet long by 74 feet wide and the block of building thereon, measuring 362 feet by 23, provides accommodation for first, second and third class waiting-rooms, refreshment-rooms, stationmaster's office, telegraph office, train inspector, ticket clerks, lamp-rooms, &c., on the ground floor; on the upper floor extending over an area of 118 feet by 23 feet, there will be a large refreshment-room for third-class passengers and cook-room for the corresponding refreshment-rooms on the ground floor. Above the second storey, there will be a cabin to contain 39 levers for working the signals throughout the yard and the scissors crossings opposite the centre of the platform and on both sides of it.

Latrines will be provided at both ends of the platform at some little distance from the station and office for Native passengers, and closets will also be provided on the platform for Europeans; retiring-rooms for ladies are attached to the waiting-rooms in the main building.

The platform on either side of the station and offices will be covered by a cantilever roof extending up to the adjacent tracks.

An overbridge will connect the island platform with the local booking office.

The sub-way, which is to be extended, will afford an exit for passengers going to the town. Allusion is made above to the removal of the old ticket office, refreshment-room and latrines on the original platform on the north side of the station; for the two latter, accommodation will be provided on the island platform and the old ticket office will be replaced by an entirely new building consisting on the ground floor of one large room, in the centre of which there is an enclosure from which tickets are issued to third-class passengers on one side and to first and second on the other; there will also be accommodation for weighing and registering luggages. There will be an upper floor to this building which provides a sitting-room, three bed-rooms and bath-rooms for the use of the staff and public.

A drain already exists throughout the greater length of the yard, this is to be extended and will provide all the extra drainage required.

The present permanent-way inspector's office and stores occupies space required for sidings, it will therefore be rebuilt to the north of its present site.

Goods-shed.—One closed goods-shed, a salt godown and two open sheds exist, these will be utilized as they stand and provision is made for extending the closed shed by adding to it an area of 4,480 square feet.

Owing to the supply of gravel required for metalling most of the roads in the Tanjore district being drawn from the Pulliarpatti ballast depot which is 4 miles away from Tanjore, special provision in the way of sidings for this traffic will be made. At present a good deal of goods work is carried out on the south side of the station; by the proposed arrangement, most of it will be confined to the specially appointed goods sidings.

An entirely new transhipping platform required for making up through loads is provided.

Approaches to the Goods-shed.—Owing to the extension of goods accommodation being provided westward of the existing buildings, some expenditure is required on the formation of new roads and for fencing off the goods portion of the yard from the passengers' approach.

Staff Quarters.—Accommodation exists for the stationmaster, Assistant Traffic Manager's office, apothecary, permanent-way inspector and one block of buildings for the Locomotive Department; it is considered necessary to build three additional blocks for the European and Eurasian drivers, and one block for the Native staff of the Locomotive Department. These buildings are to be constructed on newly acquired land at the west end of the station.

Station Machinery.—Two existing 16-foot turn-tables are to be moved a little to the north-west of the present position.

A weigh-bridge (on a convenient loop siding), the want of which has been much felt for some years past, is to be built.

A few years ago the tank accommodation for watering engines was found to be insufficient and in view of the probable further extension of the station the extra provision then made was in the form of six wrought iron tanks erected on a rail staging, this will now be removed, the permanent accommodation will be provided in the form of a large cast iron tank on a masonry base.

One water column only is provided in the present estimate, it is probable that more will be required.

The existing engine-shed is to be enlarged by an additional area of 9,071 square feet, one side wall and part of one end wall of present building being utilized.

The existing engine turn-table being in the way of the new sidings, is to be removed to the west end of the engine-shed, and in close proximity to it a new coal stage is to be constructed.

An engine lift and ashpit under it is to be built at the west end of the shed.

Points and Crossings.— The extension of sidings involves an addition of 25 sets of points, but it is anticipated that by the introduction of interlocking signals and points, the number of pointsmen employed will not be increased and may probably be diminished.

Signals.— The estimate provides for the introduction of Dutton's system of signals interlocked with points, by which the approaches to each platform and the corresponding through sidings will be rendered as safe as practicable. The signals will be worked from a cabin erected over the stationmaster's room on the island platform and will be so arranged that they will be, by a system of locking, completely under his control.

Plant.— The expenditure under this head is small and does not appear to call for remarks.

From—The Consulting Engineer for Railways.
To—The Agent, South Indian Railway.
Dated—Madras, 8th February 1899, No. 429.

I have the honour to acknowledge the receipt, with your letter No. 1172, dated 31st December 1898, of an estimate and design for an entire recasting of the Tanjore station arrangements at a cost of over four lakhs. I notice that your Board have approved of the scheme. It appears to me to be a well thought out scheme, and the design and estimates appear to have been very carefully got up, and I have little doubt but that if carried out it will greatly facilitate working at Tanjore junction.

2. Still four lakhs practically means about Rs. 1,000 per mensem in interest, and I hesitate to recommend Government, who own the line leased to your Company, to incur this expenditure unless I can bring forward some arguments to show that the expenditure will be in one way or another directly or indirectly remunerative. Can you furnish me with any such arguments?

3. Another matter worthy of consideration is that the Madras loop line, or suburban scheme, appears to me to be far more urgently needed in the interests of public convenience than is the remodelling of Tanjore junction. There may perhaps be funds available for both this and the Tanjore scheme; on the other hand there may not; and I am disposed to think that you would be wise, in the interest of your shareholders as well as of Government, to press for the loop scheme first and to try for the other later.

4. I shall be glad to hear what your views are on these points after you have carefully considered them.

From—The Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Trichinopoly, 9th March 1899, No. 218.

With reference to your letter No. 429, dated 8th February 1899, regarding the proposed expenditure on the enlargement and re-arrangement of Tanjore junction, I have the honour to point out that of the total estimate of Rs. 4,01,353, Rs. 95,000 is for expenditure in connection with the re-arrangement of the locomotive running lengths, the scheme for which has received your approval. The balance of Rupees 3,06,353 is mainly made up of the following items:—

Sidings, Rs. 95,500.—As already pointed out in a previous half-yearly inspection report, the existing arrangement of sidings makes the yard a cramped one, and the proposed re-arrangement, though perhaps some reduction might be possible, is necessary for facility of working and in the interests of public safety. It must also be borne in mind that the rails in the existing sidings are practically worn out.

Interlocking of Signals, Rs. 28,640.—This expenditure is necessary for safety of working.

Booking office, Rs. 47,900, *Station-house, Rs.* 69,350.—The existing station-house was built some 37 years ago and requires renewal, it is moreover far too small for the present traffic, Tanjore being a festival station and it is considered desirable that the proposed accommodation should be provided.

Native latrines, Rs. 4,050.—Many adverse remarks having been made regarding the type of our station latrines, advantage has been taken in designing those to be provided for at Tanjore to comply with sanitary requirements.

Extension of goods-shed, Rs. 12,260.—This is necessary to accommodate the traffic now dealt with at the station.

Overbridge, Rs. 14,440.—Required in the interests of public safety.

Platforms, Rs. 3,710.—The existing platforms do not afford the necessary accommodation at festival times when they are overcrowded to a dangerous extent.

From—The Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Trichinopoly, 28th March 1899, No. 268.

In continuation of my letter No. 218, dated 9th March 1899, and with reference to our recent conversation, I have the honour to offer the following remarks in further justification of the expenditure proposed in connection with the re-arrangement of Tanjore station. Eliminating the cost of that portion of the work included in the estimate which relates to the scheme for economically revising the engine running lengths, the expenditure to be dealt with is roughly three lakhs of rupees. Of this amount, Rs. 95,000 is proposed to be spent on *renewing old permanent-way and on new sidings required for facilitating shunting and for trapping, shunting, and goods lines.* About Rs. 42,000 must, under any circumstances, be expended on the replacement of worn out permanent-way, so that the cost of making the yard safe and suitable for economical working is, say, Rs. 53,000. It is difficult to state definitely that this expenditure will be remunerative, but there is no doubt that even if it saves one serious accident the outlay will be amply justified. The cost of *interlocking* the new yard is Rs. 28,640, but I presume in the case of this expenditure you do not require me to offer any remarks as no interlocking can ever be directly remunerative to any large degree. The *booking office* is estimated to cost Rs. 47,900. This amount can be reduced if the sleeping accommodation on the upper storey is not provided. I would point out that these rooms have been given at the suggestion of the Government Inspector—*vide* paragraph 9 of the half-yearly inspection report for the half-year ended 31st December 1895. In my opinion they are more of a luxury than a necessity, but they may tend to popularize the line by making it more attractive and so prove indirectly remunerative. The cost of the new *station-house* is estimated at Rs. 69,350. Even if this work is not approved a good deal of money must be spent in re-roofing the existing station-house and rebuilding the present temporary refreshment-room. The existing station building, as I before mentioned, is much too small for requirements, and there are no proper conveniences, either for the public or for the handling of traffic. The expenditure on additional accommodation can, however, hardly be expected to prove remunerative. The somewhat heavy proportionate outlay of Rs. 4,050 on *native latrines* can only be justified on the grounds of sanitation and of convenience to passengers. If you so wish a cheaper type of latrine could be provided; but from the numerous complaints made against our present structures, I do not recommend economy in the matter. The extension of the *goods shed* will cost Rs. 12,260, and I am informed by the Traffic Manager that his staff is much handicapped by the insufficient extent of the present building which is not large enough to house the traffic that now offers. The *overbridge* is an expensive work estimated at Rs. 14,440, which could, I understand, be reduced in cost if the sleeping accommodation for passengers be given up. It is, of course, an unremunerative work, except as regards the possible prevention by its provision, of claims on account of injury to passengers crossing the lines. The *platforms* in the new arrangements will cost Rs. 3,710, and are, I think, necessary whether they are remunerative or not. The present island platform is very narrow and it is fortunate that no accidents have so far occurred by people being forced over the edges during occasions of festival.

In the foregoing paragraph I have touched on all the principal works embodied in the estimate and I trust the explanations I have given may prove sufficient to enable you to dispose of the question.

Note by the Consulting Engineer for Railways, Madras.

This is a very important project, and a large estimate, viz., the improvement and enlargement of Tanjore station of the South Indian Railway at a cost of Rs. 4,01,353. A proposal involving interest charges at the rate of Rs. 1,000 per mensem as a permanency must be treated with much circumspection.

2. The proposal has been in contemplation during the last three or four years. In November 1895, the Agent received his Board of Directors' consent to spend Rupees 1,20,000 on the work; but when plans and estimates had been got out it appeared that the cost would be Rs. 3,72,248. Meanwhile, in November 1896 the Agent asked that the requisite area of land might be acquired. The land as a matter of fact has since been acquired.

3. In their letter No. 210 of the 6th May 1898, the Board sanctioned an expenditure of Rs. 3,72,248. But with his letter No. 593, dated 6th July 1898, the Agent asked for sanction to the latest proposed expenditure, viz., Rs. 4,01,353, explaining that the increase over the sum already approved by the Board was for interlocking.

4. In their letter to their Agent No. 217, dated the 21st October 1898, the Board sanctioned the estimate of Rs. 4,01,353, and communicated the opinion of the Company's Consulting Engineer, Sir George Bruce, that "the re-arrangement of the lines of railway and the general design of the yards and buildings have been skilfully and judiciously planned; and, having regard to the great increase which it is found necessary to provide for in the Locomotive Department and the station buildings generally, the amount of the estimate is not excessive or more than would be required to make the junction station thoroughly effective."

5. I may add that this office has all along, from time to time, had its say in regard to the proposals, and that I am personally satisfied that the design is good and that the estimate is not extravagant.

6. Rs. 95,000, or nearly one-fourth of the estimate, has been rendered necessary by the decision to introduce a better system of engine running lengths throughout the South Indian Railway. The existing system of engine running grew up as the line and its branches grew up, in a somewhat haphazard way, and the new system is intended to effect heavy economies, throwing many engines out of work, and rendering the train service throughout the system more efficient all round. It has been gone into very thoroughly, and is to be gradually brought into use as circumstances permit.

7. The remainder of the expenditure has become necessary owing to the steady and continuous improvement in the weight of traffic passing through the junction, which has rendered inadequate the existing buildings, platforms, lines and sidings.

8. The Government Examiner reports that the proposed allocation of Rs. 3,08,629 to Capital and Rs. 92,724 to Revenue is correct.

9. I recommend therefore that the Government of India be asked to sanction the estimate and to allow the work to proceed forthwith.

6th April 1899.

(Signed) Francis J. E. Spring,
Consulting Engineer for Railways.

Order—No. 504 Ry., dated 29th April 1899.

The Government of India will be addressed.

[Here enter No. 505 Ry., dated 29th April 1899.]

(True Extract.)

Francis J. E. Spring,
Joint Secretary.

To the Agent, South Indian Railway.
" Consulting Engineer for Railways.
" Examiner, Guaranteed Railway Accounts.

Exd. Shaik Karim.

PUBLIC WORKS DEPARTMENT.

Railway.

Letter—from

Francis J. E. Spring, Esq., C.I.E.,
Joint Secretary to the Government of Madras,
Public Works Department,
Railway Branch,

To

The Secretary to the Government of India,
Public Works Department.

Sir,

I am directed to invite a perusal of this Government's Proceedings, No. 504 Ry., dated the 29th April 1899, on the subject of a proposed expenditure of about 4 lakhs on the remodelling of Tanjore station of the South Indian Railway. The note contained in the Proceedings by this Government's Consulting Engineer for Railways explains the position, so it seems unnecessary to enter into separate explanations here. There has been no previous correspondence with the Government of India on the subject.

2. I am instructed to forward a copy of the estimate as well as of the set of plans, and to ask that sanction may be accorded to the work being undertaken at a total cost of Rs. 4,01,353, of which Rs. 3,08,629 will be debitable to Capital and Rs. 92,724 to Revenue.

I have the honour to be,
Sir,
Your most obedient servant,

Francis J. E. Spring,
Joint Secretary.

Ootacamund,
29th April 1899.

Documents accompanying.
G.O., referred to with estimate and set of plans.

Exd. A. F. Eccleston.

the Station offices, waiting accommodation, refreshment rooms, latrines, new Engine Shed suitable for 10 engines, local ticket office, 3rd Class waiting Shed with sleeping rooms upstairs for 1st and 2nd class passengers, an over bridge to the platform, a new tank to hold 36000 gallons and a large addition to the Sidings. The estimate includes provision for the Staff quarters that will be required to meet the alteration of Engine Running lengths, and the engine shed and tank have both been enlarged to suit the same purpose. The Board's approval to the expenditure is Solicited.

—.

South Indian Railway.

3 s-P

Extract from the Agent's Letter No. 593, dated Trichinopoly, the 6th July. 1898, to the Managing Director.

RE—ARRANGEMENT OF TANJORE JUNCTION.

Adverting to the sanction communicated in your letter No. 210 of 6th May, 1898, to a provision of Rs. 3,72,248 being made in the Capital Budget for 1898-99 for the re-arrangement of this station I forward in the packet a detailed estimate for the proposed work, together with twenty one drawings shewing details thereof, and shall be glad to receive the sanction of the Board of Directors to the expenditure of Rs. 4,01,353 which it is now found is necessary to carry out the work.

I also send an explanatory note regarding the works to be carried out, and an Abstract of the Estimate giving the quantities and rates.

Provision has been made in the Estimate for the accommodation required at Tanjore Junction in connection with the location of the Running Staff and revision of the Running Lengths referred to in your letter No. 201 of 17th December, 1897.

The increase over the amount given in the accompaniment to my letter No. 577 is mainly due to the cost of Interlocking arrangements which, at the suggestion of the Consulting Engineer for Railways, have been embodied in the Estimate.

omit

Enclosures

Estimate for the re-arrangement of Tanjore Junction with the undermentioned accompaniments.

Explanatory Note.

Abstract.

Drawings:—

No. 25/98 Re-arrangements of sidings, etc. ✓
" 26/98 Booking Office and Waiting Shed. ✓
" 27/98 Station House on the Island Platform. ✓
" 237/96 Latrine for Native passengers on the Island Platform. ✓

AGENT'S OFFICE,
TRICHINOPOLY.

24th Augt 1898

Accompaniment to the Agent's letter
No. ..... of ..... 189 .

True Extract.

W. de Mesquita
for Agent.

South Indian Railway.

Extract from the Agent's Letter No. , dated Trichinopoly, the 189 , to the Managing Director.

4 s.p

Q

omit

" 28/98 European Latrine. ✓
" 33/98 Permanent Way Inspectors Office and Stores. } one sheet.
" 29/98 Extension of Goods shed. ✓
" 31/98 Overbridge. ✓
" 30/98 Extension of the Subway. ✓
" 32/98 Quarters for Locomotive Foreman. ✓
" 34/98 Double Block of Quarters for Europeans. ✓
5/ " 35/98 Double Block of Quarters for Native Driver, and Rolling Stock Inspector. ✓
" 36/98 Tank-house. ✓
" 37/98 Ashpit and Water Column. ✓
" 39/98 Coal stage. ✓
" 38/98 Engine shed. ✓
" 40/98 Foundation for 42 feet Engine Turn-table. ✓
" 41/98 Foundation for 16 feet Carriage Turn-table. ✓
" 42/98 Wagon weigh Bridge and House. ✓
" 43/98 Type drawing of a two arm signal. ✓
" 237/98 Signal Cabin and Rail staging for Point rods. ✓

AGENT'S OFFICE,
TRICHINOPOLY.

24th Augt 1898

True Extract.

W. de Mesquita
Offg Asst Agent.

Accompaniment to the Agent's letter
No. of 189 .

3977 of 98

789 24-8-98

A



Form No. 32.

E&A
Regn. No. 4435
29 AUG. 1898
Figures
RAILWAY ACCOUNTS, MADRAS.

L
32
300—30-6-98.

OFFICE OF THE CONSULTING ENGINEER FOR RAILWAYS,

Madras, 29th August 189*8*.

No 2421.

OFFICE NOTE.

Letter from the Agent, *South Indian* Railway, No *789*,
dated *24th August* 189*8*, forwarded to the Examiner of Railway Accounts. *for favour of remarks.*

for E. R.

EXAMINER'S REPLY.

E R

No attempt has been made in the present rough copy of the estimate to settle the allocation of the cost between Capital & Revenue; and until this has been done little check can be exercised by this Office. A great part of the estimate will be chargeable to Revenue.

The Agent in applying for sanction of his Board to the estimate does not appear to have appended thereto any explanation on this important point of the allocation.

Examined
CR 2/9/98

Form No. 24.

SERIAL No.

No. 2508

Madras 6 Septr 1898

From

THE SENIOR GOVERNMENT INSPECTOR OF RAILWAYS,

MADRAS,

Reminders.

To

THE AGENT ~~AND MANAGER~~, M. RY.

" " S. I. RY.

" " H. H. THE N. G. S. RY.

" " AND CHIEF ENGR. N. RY.

" " S. M. RY.

" ENGR.-IN-CHIEF, B. M. RY.

" MANAGER, E. C. RY.

" SECRETARY TO THE GOVT. OF INDIA.

Reply No. 854

dated 9/9/98

SIR,

With ref to your letter No 789 dated 26 Augt 98 I have to submit your attention to the fact that no allocation between Revenue & Capital has been made in the ~~present~~ Estimates as submitted ~~Nor~~ and the same omission appears to have been committed in adopting for the Sanction of your Board to the Estimates.

6/9/98

No. 854

South Indian Railway Co., Ld.,

AGENT'S OFFICE,

TRICHINOPOLY, 9th September 1898.

SERIAL 35 6

RECEIVED 10 SEP 1898 CONSULTING ENGINEER FOR RAILWAYS MADRAS.

From Offg:
The AGENT,
SOUTH INDIAN RAILWAY,

To
The CONSULTING ENGINEER FOR RAILWAYS,
MADRAS.

4231
10-9-98

Sir,

In reply to your letter No. 2508 dated 6th September 1898, I have the honor to point out that the printed Estimate for the re-arrangement of Tanjore Junction sent with my letter No. 789 of 24th August 1898 does show the proportions chargeable to Capital and Revenue, the totals being Rs 3,33,491. to Capital and Rs 67,862 to Revenue.

I have the honor to be,
Sir,
Your Most Obedient Servant,

W. L. Meanie
for Offg. Agent.

Noted

Form No. 33.

SER... No. 36 300—30-6-98.

OFFICE OF THE CONSULTING ENGINEER FOR RAILWAYS,

Madras, 10th September 1898.

EXAMINER, RAILWAY ACCOUNTS, MADRAS. Regr. No. 471 12 SEP. 1898 Enclosures

No 2539

OFFICE NOTE.

Letter from the Agent, South Indian Railway, No 854,

dated 9th September 1898, forwarded to the Examiner of Railway Accounts for favor of check as to allocation and Capt provision

for E. R.

No 2725 4.10.98.

To A.
I have the h to forward a copy of C. R.'s note on the estimate submitted with your No 789 dt. 24.8.98. herewith returned & request that the estimate may be resubmitted in terms of C. R.'s note

3.10.98.

Corrected. Vide Page 5.

30.9.98

Despatched on 4/10/98

EXAMINER'S REPLY.

E R

The allocation of the estimate shows a charge of Rs 14,081 to Capital for replacing 3178 yards of Permanent way with 60 lb rails by a similar length of Permanent way with 50 lb rails. This is not correct as no charge can be admitted against Capital for replacing a 50 lb rails by 50 lb rails

but of the total cost of Rs 69627 for 5515 yards of Permanent way, the cost of 2337 yards which is the length of additional Permanent way should be allocated to Capital and the remaining 3178 yards Rs 49182 should be allocated to Renewals, the latter account covering cost for return of the old 50 lb rails

From
THE AGENT,
South Indian Railway,
Trichinopoly.

To
THE CONSULTING ENGINEER FOR RAILWAYS,
Madras.

Dated
Received 189

No.
ENCLOSURES.

Similarly under Points & Crossings, instead of changing the whole number of Points & Crossings to Capital in the first instance, and then taking a very low estimated figure as the proper cost of points & crossings to be adopted between Capital & Revenue, the cost of additional points & crossings only should be charged to Capital. Thus the estimate shows 25 sets of 50 lb Points & Crossings provided, while 16 sets are removed. The cost of the 9 additional sets at Rs 690 each or Rs 6210 should be allocated to Capital while the cost of the 16 sets or Rs 11040 should be allocated to Revenue, the latter account crediting credit for value of the old material. Similarly for Diamond Crossings &c the estimate may be assessed for revision of the allocation

done page 45

page 46.

Edwards
CR 28/9/98

1

URGENT.

No. 1172

South Indian Railway Co., Ld.

AGENT'S OFFICE,

Trichinopoly, 31st December 1898.

SERIAL 40

6P

From

THE AGENT,
SOUTH INDIAN RAILWAY,

To

THE CONSULTING ENGINEER
FOR RAILWAYS,
MADRAS.

Sir,

In forwarding herewith in duplicate the Estimate for the re-arrangement of Tanjore Junction Station, duly revised in the light of the Notes by the Examiner, Railway Accounts, Madras, received with your letter No. 2725 of the 4th October 1898, I have the honor to also forward an extract from the Managing Director's letter No. 217 dated 21st October 1898 communicating the approval of the Board of Directors to the proposed expenditure, and request the favor of the early sanction of Government being accorded to the re-arrangement being carried out.

I also forward a copy of the letter from Sir George Bruce (the Company's Consulting Engineer) dated 5th October 1898 referred to in the Managing Director's letter, and an explanatory Note describing the various works to be carried out. Another set of the Drawings to accompany the Estimate will be forwarded to you on the 2nd January 1899

I have the honor to be,
Sir,
Your most obedient Servant,

Encls 5 by Railway parcel post

for Agent

From

The Agent,

South Indian Railway,

Trichinopoly.

To

The Consulting Engineer for

Railways,

Madras.

Dated

Received 189

No.

Enclosure.

Copy B

South Indian Railway
Engineer's Office
3, Victoria Street, S.W.
5th October 1898.

H. W. Notman Esqre 10 S.8

My dear Sir

Re-arrangement of Tanjore Junction

I have examined the plans and estimates of this proposed re-arrangement forwarded with yours of July 26th last.

The Tanjore station was originally only a passing station on the line between Trichinopoly and Negapatam which was opened in 1861. The station arrangements were thus of a very simple character. It became a junction station in 1877 when the line from Tanjore north to Madras was constructed. Even then it appears that only such additions were made to the station from time to time as the necessities of increasing traffic rendered absolutely necessary. It is not therefore a matter of surprise that in the judgement of the Authorities on India the re-casting of the whole station should have now become a necessity.

The re-arrangement of the lines of rails and the general design of the yard and buildings appear to me to have been skilfully and judiciously planned, and having regard to the great increase which it is found necessary to provide for in the Locomotive Department and the Station Buildings generally, the amount of the estimate does not seem to me excessive or more than would be required to make this junction station thoroughly

thoroughly effective.

I will, as you suggest, retain the drawings which accompanied your letter under reply and I return herewith the printed estimate and statements marked "C" and "D".

Yours faithfully
(54) George B. Bruce
11 S.P

55, Gracechurch Street,
E.C.

(True Copy of a Copy)

Agents Office
Trichinopoly
28th Nov. 1878

W. Le Mesurier
for Agent

[60]

4 3 9

1172 31-12-98

C

South Indian Railway Co. Ltd.

Note to Accompany the Plans and Estimate for the rearrangement of Tanjore Station

12 S.P

1. Preliminary Remarks.

When the Negapatam Trichinopoly Section of the then Great Southern of India Railway was first opened for Traffic in the year 1861, the Station arrangements consisted of one passenger platform, two through sidings, booking office, goods Shed, Salt godown, carriage loading dock, 2 Sixteen foot turntables, urinals, tank house & P. W. Inspector's Store

2. The Station was worked with this accommodation up to the year 1877. when the construction of the so called "Northern Extension" was started and an island platform, Sub way, Engine Shed, turntable and about 1700 lineal yards of Sidings were added.

3. Since that date additions of buildings and Sidings have been made from time to time as the want for them was felt but owing to the piecemeal manner in which they have been introduced the general result as regards convenience

Commencement of working the increased traffic is not satisfactory and a complete rearrangement of the Station has been felt for some years past to be an absolute necessity.

13 S.P

4. A design was prepared a short time ago on the principle of ignoring entirely the existing buildings: and the two natural boundaries of the present yard in the form of a public road at the east end and a deep nullah at the west, as it was not thought possible to work them in satisfactorily with the proposed rearrangements: but the amount of the Estimate was considered prohibitive to such a scheme and a revised design was undertaken and is now submitted for Sanction.

5. The present Scheme has been prepared in consultation from time to time with the Deputy Consulting Engineers and has been discussed at General Officers' meetings, it is therefore believed to meet the views of all those who are concerned in the working of it.

6. The following description of what is to be done under each head of account will explain in conjunction with the plans, how the existing buildings

buildings are to be utilized.

The following Statement showing in 3 Columns the original, subsequent and proposed additional accommodation side by side will assist in explaining the growth of the Station.

14 S.P

Statement showing Buildings

Provided originally	Added subsequent to opening of line	Now proposed
Station master's house.		Original Station master's house will remain as it stands.
Station house		The existing Station house will be removed entirely, the accommodation provided on the island platform.
one platform		The original platform is to be removed to make room for Sidings.
Passenger Shed		—— Do —— Do —— Do —
Latrine		— Do — Do —— Do
salt godown		Salt godown to remain in tact
Covered goods Shed		—— Do —— Do —— Do —
Inspector's office & Stores	Do Do	Inspectors office & Stores to be removed, to make room for Sidings and will be erected elsewhere.
Carriage dock		—— Do —— Do —— Do —
2.16 foot Turntable.		— Do —— Do —— Do —
	Island Platform	Island platform to be increased by 524 per-cent.
	Subway	Subway to be extended.
	Tank on rails.	Tank to be removed and a fresh cast iron tank on Masonry foundations to be built
	Engine turntable	Engine turntable to be removed and re-erected

Provided originally	Added subsequent to opening of line	Now proposed
	Engine shed	Engine shed to be enlarged by 311 per cent. 15 8-0
	Open goods shed	Open goods shed to remain intact
	Apothecary's quarters	——— Do ——— Do ——— Do ———
	S. T. M's Office	——— Do ——— Do ——— Do ———
	one block bungalow for Loco: staff	——— Do ——— Do ——— Do ———
	S. W. Inspector's bungalow	——— Do ——— Do ——— Do ———
	Refreshment room (a semi permanent structure)	Refreshment room will be demolished & be provided for in the main building in the island platform.
	Latrine on original platform.	Latrine to be demolished
	Latrine in island platform	——— Do ——— Do ———
		and be provided for in the island platform.
		A Loco Foreman's bungalow
		3 Double block of European and Eurasian quarters.
		One block for Native quarters
		Weigh bridge
		Transhipping platform
		Platform for Pullivarpatti branch.
		Over bridge.
		Local Booking Office with staff quarters over it.

16 S.P

Land

The additional land is required on the South side of the Station for a platform for the Pullicarpatti Branch and for additional Sidings, the triangle between the Pullicarpatti Siding and the main line to the South west of the existing Station is required for the Coal and Cattle Sidings & for the additional Staff quarters.

Formation

Earthwork. The earthwork which consists chiefly of cutting is necessitated in the neighbourhood of the Engine Shed and Sidings to the west of it. The ground beyond the present Compound wall being at a higher level than the rails in the Station yard.

Fencing

As some of the additional Sidings and new buildings extend beyond the present boundary wall the latter has to be demolished and rebuilt, the nine fencing is required for enclosing additional land acquired for Staff quarters.

Ballast and Permanent Way.

The gross length of Sidings when the line was first opened for traffic in 1861 was 1760 lineal yards

of transhipping passengers from branch to main line trains and viceversa, it will form part of the new platform. The Original platform on the north side of the Station with the Station house, Refreshment room and latrines thereon could not be worked into the new Scheme and will therefore be entirely removed. the new island platform will be 1300 feet long by 74 feet wide and the block of building thereon measuring 362 feet by 23' provides Accommodation for 1st, 2nd & 3rd class waiting Rooms, Refreshment rooms, Station Master's office, Telegraph office, train inspector, ticket clerks, lamp rooms &c on the ground floor, on the upper flow extending over an area of 118 feet by 23' there will be a large refreshment room for 3rd class passengers & Cook room for the corresponding Refreshment rooms on the ground flow. Above the 2nd Storey, there will be a Cabin to contain 39 levers for working the Signals throughout the yard and the Scissors crossings opposite the centre of the platform and on both sides of it.

Latrines will be provided at both ends of the platform at some little distance from the Station and Offices for Native passengers and closets

will

will also be provided on the platform for Europeans; retiring rooms for ladies are attached to the waiting rooms in the main buildings.

The platform on either side of the Station and offices will be covered by a cantilever roof extending up to the adjacent tracks.

An overbridge will connect the island platform with the local booking office.

The Subway which is to be extended will afford an exit for passengers going to the town.

Allusion is made above to the removal of the old ticket office, refreshment room & latrines on the original platform on the north side of the Station; for the two latter accommodation will be provided on the island platform and the old ticket office will be replaced by an entirely new building consisting on the ground floor of one large room, in the centre of which there is an enclosure from which tickets are issued to 3rd class passengers on one side and to 1st and 2nd on the other. There will also be accommodation for weighing and registering luggage. There will be an upper floor to this building which provides a Sitting room, 2 bed rooms and

and bath rooms for the use of the Staff and public.

A drain already exists throughout the greater length of the yard, this is to be extended and will provide all the extra drainage required.

The present Permanent way Inspector's office and Stores occupies space required for Sidings it will therefore be rebuilt to the north of its present site.

Goods Shed

One closed goods shed, a Salt godown and two open sheds exist, these will be utilized as they stand and provision is made for extending the closed shed by adding to it an area of 4480 - Square feet.

Owing to the Supply of gravel required for metalling most of the roads in the Tanjore District being drawn from the Pullivarpatti ballast depôt which is 4 miles away from Tanjore, Special provision in the way of Sidings for this traffic will be made. At present a good deal of goods work is carried out on the South Side of the Station, by the proposed arrangement most of it will be confined to the

Specially

218-P

Specially appointed goods sidings
An entirely new transhipping platform required for making up through loads is provided.

Approaches to the Goods Shed.

Owing to the extension of goods accommodation being provided westward of the existing buildings, some expenditure is required on the formation of new roads and for fencing off the goods portion of the yard from the passengers approach.

Staff Quarters

Accommodation exists for the Station Master, Assistant Traffic Manager's Office, Apothecary, Permanent Way Inspector and one block of buildings for the Loco: Department, it is considered necessary to build 3 additional blocks for the European & Eurasian Drivers, and one block for the Native Staff of the Loco: Department.
These buildings are to be constructed on newly acquired land at the west end of the Station.

Station Machinery

Two existing 16 foot turntables are to be moved a little to the north west of the present

225.P

present position.

A neighbridge (on a commuted loop siding) the want of which has been much felt for some years past is to be built.

A few years ago the tank accommodation for watering engines was found to be insufficient and in view of the probable further extension of the Station the extra provision then made was in the form of 6 wrought iron tanks erected on a rail staging, this will now be removed the permanent accommodation will be provided in the form of a large cast iron tank on a masonry base.

One water Column only is provided in the present estimate, it is probable that more will be required.

The existing engine Shed is to be enlarged by an additional area of 9071 Square feet, one side wall and part of one end wall of present building, being utilized.

The existing engine turn-table being in the way of the new sidings, is to be removed to the west end of the engine Shed and in close proximity to it, a new coal Stage is to be Constructed.

2 3977/98
789 24. 8 98
A

3 3 99
1172 31. 12 98
A

For

South Indian Railway.

Extract from the Managing Director's Letter No. 217, dated London, the 21st October 1898, to the Agent.

24 S.P

A D

RE-ARRANGEMENT OF TANJORE JUNCTION.

The Board approve of the estimate forwarded with your No. 593, amounting to Rs. 4,01,353, and, subject to the sanction of Government, authorise you to proceed with the works. It is noted that the excess of Rs. 29,105 over the estimate agreed to by Board's letter No. 210 of 6th May, 1898, is mainly due to the addition of interlocking arrangements, now included on the suggestion of the Consulting Engineer for Railways, Madras. A report upon the proposals—dated 5th October, 1898—has been obtained from the Company's Consulting Engineer, and a copy thereof is enclosed for your information. Sir George Bruce considers that the re-arrangement of the lines of rails, and the general design of the yards and buildings, have been skilfully and judiciously planned, and, having regard to the great increase which it is found necessary to provide for in the Locomotive Department, and the Station Buildings generally, he is of opinion that the amount of the estimate is not excessive or more than would be required to make this Junction Station thoroughly effective.

AGENT'S OFFICE,
TRICHINOPOLY.
28th Nov. 1898

(True Extract.)

M Lennanies
for Agent.

Accompaniment to the Agent's letter
No. ..... of ..... 189 .

[500—1-12-98.]

Form No. 33.

OFFICE OF THE CONSULTING ENGINEER FOR RAILWAYS,

Madras, 2nd January 1899.

EXAMINER OF RAILWAY ACCOUNTS, MADRAS. Regd. No. 3 - JAN 1899

No. 15

SERIAL No. 41

OFFICE NOTE.

Letter from the Agent, South Indian Railway, No. 1172, dated 31st December 1898, forwarded to the Examiner of Railway Accounts for issue of remarks.

for E. R.
2/1/99.

EXAMINER'S REPLY.

E. R.

The estimate is now correct as to allocation and requires the sanction of the Govt of India

Funds have been certified to by C. R. Trichy

5/1/99

Eswallen
C. R.
4.1.99

Encl.

[500—1-12-98.]

Form No. $\frac{1}{B}$.

SERIAL
43

No. 429

Madras, 8 February 1899.

From

THE CONSULTING ENGINEER FOR RAILWAYS,

MADRAS,

Reminders.

To

25P

THE AGENT, S. I. RY.

Reply No.

dated

SIR,

I have the honour to acknowledge the receipt, with your letter No. 1172 dated 31st Dec. 98, of an Estimate and design for an entire recasing of the Tanjore station arrangement at a cost of over from Lakhs. I notice that your Board have approved of the scheme. It appears to me to be a well thought out scheme, and the design and estimate appear to have been very carefully got up. And I have little doubt but that if carried out it will greatly facilitate working at Tanjore junction. Still four Lakhs practically means about Rs 1000 per annum in interest, and I hesitate to recommend Government who are the hire board to you bringing to incur this expenditure unless I can bring forward some argument to show that the expenditure will be in one way or another remunerative, directly or indirectly. Can you furnish me with any such argument?

2. Another matter worthy of consideration is that the Madura loop line a suburban scheme appears to me to be far more urgently needed in the interest of Public convenience than is the remodelling of Tanjore yard. There many Lakhs of rupees are asked for

both this & the Tanjore scheme. As to the latter they may not, and I am disposed to think that you could be wise, in the interest of your Shareholders as well as of Govt. to press for the Loop scheme first and to try for the other later.

I shall be glad to know what your views are on these points after you have carefully considered them.

Yours &
FHS
8/2/99

Despatched on 8/2/99

No. 218

South Indian Railway Co., Ltd. 26 P.

AGENT'S OFFICE,

TRICHINOPOLY, 9th March 1899

C. No. 1263 Rec'd 10 MAR 1899

CONSULTING ENGINEER FOR RAILWAYS RECEIVED 10 MAR 1899 MADRAS.

From

THE AGENT.
SOUTH INDIAN RAILWAY,

To

THE CONSULTING ENGINEER
FOR RAILWAYS,
MADRAS.

Sir,

With reference to your letter No. 429 dated 8th February 1899 regarding the proposed expenditure on the enlargement and re-arrangement of Tanjore Junction, I have the honor to point out that of the total estimate of Rs 4,01,353, Rs 95,000 is for expenditure in connection with the re-arrangement of the Locomotive Running Lengths, the scheme for which has received your approval. The balance of Rs 3,06,353 is mainly made up of the following items:-

Sidings - Rs 95,500 - As already pointed out in a previous half yearly Inspection Report the existing arrangement of Sidings makes the yard a cramped one, and the proposed re-arrangement, though perhaps some reduction might be possible, is necessary for facility of working and in the interests of public safety. It must also be borne in mind that the Rails in the existing Sidings are practically

270

practically worn out.

Interlocking of Signals } Rs 28,640.

This expenditure is necessary for safety of working.

Booking office Rs 47,900-
Station House - 69,350.

117050

The existing Station House was built some 37 years ago and requires renewal, it is moreover far too small for the present traffic, Tanjore being a festival station and it is considered desirable that the proposed accommodation should be provided.

Native Latrines - Rs 4,050-

Many adverse remarks having been made regarding the type of our Station Latrines advantage has been taken in designing those to be provided for at Tanjore to comply with Sanitary requirements.

Extension of Goods Shed - Rs 12,260 }

This is necessary to accommodate the traffic now dealt with at the station.

Overbridge - Rs 14,440 -

Required in the interests of public safety.

Platforms - Rs 3,710 -

The existing platforms do not afford the necessary accommodation at festival times when they are overcrowded to a dangerous extent.

I have the honour to be
Sir
Your most obedient Servant

W. Le Mesurier
Lieut
Asst

No. 268. South Indian Railway Co., Ld.

AGENT'S OFFICE,

TRICHINOPOLY, 28th March 1899.

CONSULTING ENGINEER FOR RAILWAYS
RECEIVED
29 MAR. 1899
MADRAS

1647
29-3-99

From

THE AGENT.

SOUTH INDIAN RAILWAY,

To

THE CONSULTING ENGINEER

FOR RAILWAYS,

MADRAS.

Sir,

In continuation of my letter No. 218 dated 9th March 1899, and with reference to our recent conversation, I have the honor to offer the following remarks in further justification of the expenditure proposed in connection with the re-arrangement of Tanjore Station. Eliminating the cost of that portion of the work included in the estimate which relates to the Scheme for economically revising the engine running lengths, the expenditure to be dealt with is roughly three Lakhs of rupees. Of this amount 95,000 Rs. is proposed to be spent on renewing old permanent way and on new sidings required for facilitating Shunting and for trapping Shunting and Goods lines. About 42,000 Rs must, under any circumstances be expended on the replacement of worn out permanent way, so that the cost of making the yard safe and suitable for economical working is, say, Rs 53,000. It is difficult to state definitely that this expenditure will be remunerative, but there is no doubt that even if it saves one serious accident the outlay will be amply justified. The cost of interlocking the new yard is 28,640 Rs, but I presume in the case of this expenditure you do not require me to offer any remarks as no interlocking can ever be directly remunerative to any large degree. The booking-office is estimated to cost Rs 4,900. This amount can be reduced if the Sleeping accommodation on the upper Storey is not provided. I would point out that these rooms have been given at the Suggestion of the Government Inspector, vide para 9 of the Half yearly

From
The Agent,
South Indian Railway,
Trichinopoly.

To
The Consulting Engineer for
Railways,
Madras.

Dated
Received 189 No.

Enclosure.

Yearly Inspection Report for the half-year ended 31st December 1895.

In my opinion they are more of a luxury than a necessity, but they may tend to popularize the line by making it more attractive and so prove indirectly remunerative. The cost of the new Station house is estimated at 69,350 Rs. Even if this work is not approved a good deal of money must be spent in re-roofing the existing Station house and rebuilding the present temporary refreshment rooms. The existing Station building, as I before mentioned, is much too small for requirements and there are no proper conveniences either for the public or for the handling of traffic. The expenditure on additional accommodation can, however, hardly be expected to prove remunerative. The somewhat heavy proportionate outlay of Rs 4,050 on Native Latrines can only be justified on the grounds of Sanitation and of convenience to passengers. If you so wish a cheaper type of latrine could be provided, but from the numerous complaints made against our present structures, I do not recommend Economy in the matter. The extension of the Goods Shed will cost Rs 12,260, and I am informed by the Traffic Manager that his Staff is much handicapped by the insufficient extent of the present building which is not large enough to house the traffic that now offers. The overbridge is an expensive work estimated at 14,440 which could, I understand, be reduced in cost if the sleeping accommodation for passengers be given up. It is, of course, an unremunerative work except as regards the possible prevention by its provision, of claims on account of injury to passengers crossing the lines. The platforms in the new arrangements will cost Rs 3,710, and are, I think, necessary whether they are remunerative or not. The present island platform is very narrow and it is fortunate that no accidents have so far occurred by people being forced over the edges during occasions of festival.

In the foregoing paragraph I have touched on all the principal works embodied in the estimate and I trust the explanations I have given may prove sufficient to enable you to dispose of the question.

I have the honor to be,
Sir,
Your Most Obedient Servant,
H Le Messurier
for Agent.

Met

Form No. 14.

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

C. No.

NOTE FOR E. F.

Enlargement & Rearrangement of Tanjore Junction.

Your letter — S. Nº. 43 — above proposes the postponement of the Rearrangement Scheme, and instead, the immediate taking up of the Madras Loop Scheme. In reply the Agent opines the above proposal: and enters into an explanation of the make-up of the cost of the Tanjore Scheme. He states that

(a) 95000 Rs is for expenditure in connexion with the rearrangement of the Locomotive Running Lengths, which he states you have already approved: plus

(b) 306535 Rs — which he states is "mainly made up of certain items which he proceeds to specify. The items given total up to only 276630 Rs — leaving a balance of 30703 Rs unaccounted".

On receipt of your decision on the initial question of sanctioning or not sanctioning the Tanjore Scheme, I can, if considered necessary, go further into the estimate

D.

Draft letter to India forwarding S.I.Rj print letter, para 1 of my upfg, and this second letter. Also replying to any previous forwarding or correspondence with India about (a) this scheme & (b) the general question governing both schemes, and generally supporting the Agent's proposal which has the Board's approval.

7/4

17/2/27

11/3/27

From

THE AGENT,

SOUTH INDIAN RAILWAY,

Trichinopoly.

To

THE CONSULTING ENGINEER FOR RAILWAYS,

Madras.

Dated

Received

189

No.

ENCLOSURE.

Form No. 14.

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

28P

C. No.

NOTE By the Con. Engr. for Br. Standard.

This is a very important project, and a large estimate, viz. the improvement and enlargement of Tanjore Station of the S.I.R. at a cost of Rs. 4,01,353. The proposal involving interest charges at the rate of Rs. 1000 per mensem a circumspection must be treated with most circumspection.

2. The proposal has been in contemplation during the last three or four years; in Nov. 98, the Agent (noted) that the requisite area of land might be required. The land on a matter of fact has been acquired.

3. In this letter No. 210. of the 6th May 98 the Board sanction an expenditure of Rs 3.72,248. But with his letter No. 993 dated 6th July 98. the Agent asked for sanction to the latest proposed expenditure viz Rs 4,01,353. explaining that the increase over the sum already approved by the Board was for interlocking.

4. In this letter & this Agent No. 217. 21st Oct. 98. the Board sanction the estimate, Rs 4,01,353, and communicate the opinion of the Engineer Consulting Engineer, Sir Geo. Bruce, that "the arrangement of the lines of railway and the general design of the yards and buildings have been skilfully prepared, and having regard to the great interests which it is found necessary to provide for in the Locomotive Department, & the Station Buildings generally

receive his Board of Directors' consent to spend Rs 1,20,000 on the works. But when plans and estimates had been got out it appeared that the cost would be Rs 3,72,248. Meanwhile, in Nov 98 the Agent asked

the Amount of the Estimate is not exceeding a more than would be required to make this junction [station] thoroughly effective".

5. I may add that this office has all along from time to time had its say in regard to the proposals, and that I am generally satisfied that the design is good and that the estimate is not extravagant.

6. Rs 95,000, or nearly one fourth of the estimate, has been rendered necessary by the decision to introduce a better system of engine running throughout the S.I.R. The existing system [of engine running] gives up as the line and its branches grew up, in a somewhat haphazard way, and the new system is intended to effect heavy economies, thereby many engines and of work, and pending the train service throughout the system was effected all round. It has been found very thoroughly, and it is gradually brought into use as circumstances permit. The remainder of the expenditure has been rendered necessary by the strengthening of the station buildings, platforms, lines and bridges.

7. The Govt. Engineer reports that the proposed allocation of Rs 3,08,600 to Capital and Rs 92,700 to Revenue is correct.

I recommend therefore that the Govt of India be moved to sanction the estimate and to allow the Railway to proceed forthwith.

F.J.R.

22/3/99

Order.

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

Form No. 1-A

Papers to be read in Proceedings:—

Print

1. Extract from Agent's letter to Board's No. 577 a/16.3.98.
2. Letter from the Agent S. I. Ry No. 789 a/24.8.98 with its Encl.
3. Extract from Board's letter to the Agent S. I. Ry No. 2178 a/21.12.98
4. Letter from the Agent S. I. Ry No. 1172 a/31.12.98 with abstract Estimate & Encls: marked B C D.
5. Letter to the Agent S. I. Ry No. 429 a/8.2.99
6. Letter from the Agent S. I. Ry No. 218 a/9.3.99
7. Note by the Consg. Engr: for Rys a/22.3.99.

298

ORDER.

The Government of India will be addressed.

H.E. No. Ry a/ March/99

/True Extract/

Francis J. Spring
Jt. Secretary.

R. Form No. 12.

No.

Government of Madras.

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

30 P

To

The Secy. to the Govt. of India,

P. W. Department.

Print

_____ 189 .

Sir,

I am directed to invite a reference to
this Govt. Proceedings No. dated the
on the subject of a proposed expenditure of Lakhs & Rupees
on the remodelling of Tanjore Station of the S. I. R. As
Note entered in the Proceedings of this Govt. the Engr. for Ry.
explains the position, it seems unnecessary to enter into separate
explanations here. There has been no previous correspondence with the
Govt. of India on the subject.
2. I am instructed to forward a copy of the Estimate
as well as of the Plan and Section and to state that
Sanction may be accorded to the work being undertaken at
a total cost of Rs. 4.01.358 of which Rs. 3.08.649 will
be debitable to Capital and Rs. 92709 to Revenue.

I have &

Secy.

3 d/ Proc Rec 11-4-99

Urgent

RAILWAY.

Government {1899} of Madras.

PUBLIC WORKS.

Prof. 1.5

To H.E. the Governor

Ack 21.4.99 (2) Secy: to Govt: Arundel, C.S.I

(3) Secy: to Govt: Winterbotham

Ans. 21-4-99

Recd.	1899.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 504 Ry., 29th April 1899.

APRIL.

Remodelling of Tanjore Junction Station
South Indian Railway.

Forwarding for sanction an estimate amounting to Rs 4,01,853 for —

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers:—

Extract from letter from—The Agent, South Indian Railway.
To—The Board of Directors.
Dated—16th March 1898, No. 577.

Re-arrangement of Tanjore Junction station.

By the Managing Director's letter, No. 159 of 8th November 1895, a sum of Rs. 1,20,000 was approved of for expenditure on this work. The question of the re-arrangement of the station was not however then thoroughly considered; the re-construction of this station has now been re-considered, with the result that the proposals on which the figure of Rs. 1,20,000 was based are not adequate to meet the traffic requirements. Plans have been prepared and estimates drawn up on the basis of the decisions arrived at, and it is found that the estimated expenditure on alterations and additions amounts to Rs. 3,72,248 chargeable in the proportions of Rs. 3,02,783 to Capital and Rs. 69,465 to Revenue. The only works that will remain of the present arrangements are the goods shed and adjoining buildings, the well, pump and shed, the sub-way and the staff quarters buildings. All other works disappear, and, with the exception of the main line, the position of sidings is altered. The principal works are: a new island platform on which will be constructed the station offices, waiting accommodation, refreshment-rooms, latrines, new engine shed suitable for ten engines, local ticket office, third-class waiting-shed with sleeping rooms upstairs for first and second class passengers, an overbridge to the platform, a new tank to hold 36,000 gallons and a large addition to the sidings. The estimate includes provision for the staff quarters that will be required to meet the alteration of engine running lengths, and the engine shed and tank have both been enlarged to suit the same purpose. The Board's approval to the expenditure is solicited.

From—The Offg. Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Trichinopoly, 24th August 1898, No. 789.

With reference to correspondence ending with your endorsement No. 1809, dated 20th June 1898, regarding land required for the re-arrangement of Tanjore Junction, I have the honour to forward, for information, an extract from my letter, No. 593, dated 6th July 1898, to the Managing Director, in which I applied for the sanction of the Board of Directors to an estimate, amounting to Rs. 4,01,353, for the re-arrangements of this junction, and as probably you would like to see the estimate and drawings as soon as possible, I send you copies of estimate, note, and drawings, sent to the Board.

Enclosure.

Extract from letter from—The Agent, South Indian Railway.
To—The Managing Director, South Indian Railway Company.
Dated—Trichinopoly, 6th July 1898, No. 593.

Re-arrangement of Tanjore Junction.

Adverting to the sanction communicated in your letter, No. 210 of 6th May 1898, to a provision of Rs. 3,72,248 being made in the Capital Budget for 1898–99 for the re-arrangement of this station, I forward in the packet a detailed estimate for the proposed work, together with 21 drawings showing details thereof, and shall be glad to receive the sanction of the Board of Directors to the expenditure of Rs. 4,01,353, which it is now found is necessary to carry out the work. I also send an explanatory note regarding the works to be carried out, and an abstract of the estimate giving the quantities and rates.

Provision has been made in the estimate for the accommodation required at Tanjore Junction in connection with the location of the running staff and revision of the running lengths referred to in your letter, No. 201 of 17th December 1897.

The increase over the amount given in the accompaniment to my letter No. 577 is mainly due to the cost of interlocking arrangements which, at the suggestion of the Consulting Engineer for Railways, have been embodied in the estimate.

Extract from letter from—The Board of Directors, South Indian Railway Company.
To—The Agent, South Indian Railway.
Dated—London, 21st October 1898, No. 217.

Re-arrangement of Tanjore Junction.

The Board approve of the estimate forwarded with your No. 593, amounting to Rs. 4,01,353, and, subject to the sanction of Government, authorise you to proceed with the works. It is noted that the excess of Rs. 29,105 over the estimate agreed to by Board's letter, No. 210 of 6th May 1898, is mainly due to the addition of interlocking arrangements now included on the suggestion of the Consulting Engineer for Railways, Madras. A report upon the proposals, dated 5th October 1898, has been obtained from the Company's Consulting Engineer, and a copy thereof is enclosed for your information. Sir George Bruce considers that the re-arrangement of the lines of rail and the general design of the yards and buildings have been skilfully and judiciously planned; and, having regard to the great increase which it is found necessary to provide for in the Locomotive Department and the station buildings generally, he is of opinion that the amount of the estimate is not excessive or more than would be required to make this junction station thoroughly effective.

From—The Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Trichinopoly, 31st December 1898, No. 1172.

In forwarding herewith in duplicate the estimate for the re-arrangement of Tanjore Junction station, duly revised in the light of the Notes by the Examiner, Railway Accounts, Madras, received with your letter, No. 2725 of the 4th October 1898, I have the honour to also forward an extract from the Managing Director's letter, No. 217, dated 21st October 1898, communicating the approval of the Board of Directors to the proposed expenditure, and request the favour of the early sanction of Government being accorded to the re-arrangement being carried out.

I also forward a copy of the letter from Sir George Bruce (the Company's Consulting Engineer), dated 5th October 1898, referred to in the Managing Director's letter, and an explanatory note describing the various works to be carried out. Another set of the drawings to accompany the estimate will be forwarded to you on the 2nd January 1899.

SOUTH INDIAN RAILWAY Co., Ld.

Engineering Department.

Abstract of Estimate, No. 2012/66/98, *Plan No.* 25/98.

Proposed re-arrangement of Tanjore Junction Station.

Description of work.	Cash to be expended in India.	Value of stores.	Total value of work to be done.	Chargeable to Capital.		Chargeable to Revenue.	
				Cash.	Stores.	Cash.	Stores.
Capital Budget 1898-99 *to* 1900-1901. *Sanction will lapse at the close of the quarter ending* 31*st March* 1901.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
II. Land—							
Additional land required for station purposes ..	13,290	..	13,290	13,290	..	..	..
III. Formation—							
(*a*) Earthwork	8,303	..	8,303	8,303	..	..	..
V. Fencing, &c.—							
(*a*) Fencing	2,541	1,343	3,884	*— 1,177*	1,343	3,718	..
VII. Ballast and Permanent-way—							
(*a*) Ballast	3,980	2,886	6,866	993	2,886	2,987	..
(*b*) Permanent-way	3,304	62,056	65,360	1,301	30,674	2,003	31,382
VIII. Stations and Buildings—							
(*a*) Stations and Offices—							
Booking office and waiting-shed	15,112	32,793	47,905	15,112	32,793	..	..
Station house and covered way	25,672	43,678	69,350	13,897	35,658	11,775	8,020
Corrugated iron latrine on north side	1,072	1,505	2,577	410	1,492	662	13
Do. do. south side	471	997	1,468	*— 14*	997	485	..
Latrine for Europeans	149	584	733	149	584	..	..
Extension of goods-shed	3,616	8,644	1,2260	508	7,473	3,108	1,171
Overbridge for passengers	3,220	11,218	14,438	3,220	11,218	..	..
Extension of sub-way	943	769	1,712	349	707	594	62
Demolishing and rebuilding the Permanent-way Inspector's office and stores	784	1,277	2,061	*— 593*	1,233	1,377	44
Passengers' platform	1,246	698	1,944	875	698	371	..
Transhipping platform	613	1,155	1,768	613	1,155	..	..
Passengers, goods approaches and fencing, &c. ..	812	695	1,507	748	199	64	496
(*c*) Staff quarters—							
Bungalow for Loco. Foreman	1,965	3,297	5,262	1,965	3,297	..	..
Out-houses for do.	532	489	1,021	532	489	..	..
Latrine for do.	127	182	309	127	182	..	..
Latrine for servants for Loco. Foreman	56	31	87	56	31	..	..
One double block for European and Eurasian drivers	2,504	4,150	6,654	2,504	4,150	..	..
Out-houses for do. do. ..	457	573	1,030	457	573	..	..
Latrine for do. do. ..	127	182	309	127	182	..	..
Latrine for servants for do. ..	95	51	146	95	51	..	..
Another double block for European and Eurasian drivers with out-houses and latrine, &c., complete.	3,183	4,956	8,139	3,183	4,956	..	..
Another double block for running drivers and guards same as above	3,183	4,956	8,139	3,183	4,956	..	..
One double block for Native drivers and rolling-stock inspector	1,118	1,761	2,879	1,118	1,761	..	..
Latrine for Native drivers and stock inspector ..	93	53	146	93	53	..	..
Fencing to staff quarters and approach road ..	625	1,479	2,104	616	1,479	9	..
(*d*) Station Machinery—							
Tank house	2,864	4,786	7,650	2,092	4,768	772	18
One ashpit, one water column, drip well drain, &c.	1,568	2,161	3,729	903	539	665	1,622
Coal stage	147	711	858	..	..	147	711
Extension of engine shed	8,404	19,240	27,644	5,383	17,222	3,021	2,018
Ashpits in engine shed	2,873	2,913	5,786	2,873	2,913	..	..
Wash out cock and piping in engine shed	92	134	226	55	17	37	117
Discharge drain and manhole from engine shed ..	229	155	384	229	155	..	..
Engine lift	927	4,228	5,155	927	4,228	..	..
Discharge drain for engine lift	195	135	330	195	135	..	..
Removing and rebuilding 42 ft. diar. engine turn-table (available at Chittoor)	1,158	*— 1,543*	*— 385*	..	*— 2,150*	1,158	607
Man hole and drain for do.	36	21	57	..	..	36	21
Removing and rebuilding carriage turn-tables No. 2.	408	132	540	..	..	408	132
Wagon weigh-bridge and house	417	3,356	3,773	417	3,356	..	..
Points and crossings	1,276	20,726	22,002	488	8,993	788	11,733
Signals	3,955	24,682	28,637	3,807	24,469	148	213
Removing the existing weighing machine and refixing the same in booking office and waiting-shed ..	19	60	79	10	58	9	2
IX. Plant—							
(*e*) Station and office furniture	..	3,237	3,237	..	3,237	..	..
Total ..	1,23,761	2,77,592	4,01,353	89,419	2,19,210	34,342	58,382

Funds required on Capital account during 1898-99, viz., cash Rs. 2,000 and stores Rs. 8,000, will be met from the unallotted grant for unsanctioned works Capital Budget Estimate of same year, and the balance, cash Rs. 87,419 and stores Rs. 2,11,210, will be provided for in the Capital Budget Estimates for 1899-1900 and subsequent official years. Funds on Revenue Account, viz., Rs. 500, will be met from heads II, III and IV, Abstract A, Revenue Budget Estimate for 1898-99 and the balance will be provided for in Revenue Budgets of subsequent years.

By Board's letter, No. 210 of 6th May 1898, sanction was given to the inclusion of this work in the budget for 1898-99. Sanction of the Board to this estimate was communicated to the Agent in Managing Director's letter, No. 217 of 21st October 1898.

From—Sir GEORGE B. BRUCE, Consulting Engineer, to the South Indian Railway Company.
To—H. W. NOTMAN, Esq., Managing Director, South Indian Railway Company.
Dated—3, Victoria Street, S.W., 5th October 1898.

Re-arrangement of Tanjore Junction.

I have examined the plans and estimates of the proposed re-arrangement forwarded with yours of July, 26th last.

The Tanjore station was originally only a passing station on the line between Trichinopoly and Negapatam which was opened in 1861. The station arrangements were thus of a very simple character. It became a junction station in 1877, when the line from Tanjore north to Madras was constructed. Even then it appears that only such additions were made to the station from time to time as the necessities of increasing traffic rendered absolutely necessary. It is not therefore a matter of surprise that, in the judgment of the authorities in India, the re-casting of the whole station should have now become a necessity.

The re-arrangement of the lines of rails and the general design of the yard and buildings appear to me to have been skilfully and judiciously planned, and having regard to the great increase which it is found necessary to provide for in the Locomotive Department and the station buildings generally, the amount of the estimate does not seem to me excessive or more than would be required to make this junction station thoroughly effective.

I will, as you suggest, retain the drawings which accompanied your letter under reply, and I return herewith the printed estimate and statements marked "C" and "D."

Note to accompany the plans and estimate for the re-arrangement of Tanjore station.

Preliminary Remarks.—When the Negapatam-Trichinopoly section of the then Great Southern of India Railway was first opened for traffic in the year 1861, the station arrangements consisted of one passenger platform, two through sidings, booking office, goods-shed, salt godown, carriage loading dock, two sixteen-foot turntables, urinals, tank house and Permanent-way Inspector's stores.

2. The station was worked with this accommodation up to the year 1877, when the construction of the so-called "Northern extension" was started and an island platform, sub-way, engine shed, turntable and about 1,700 lineal yards of sidings were added.

3. Since that date additions of buildings and sidings have been made from time to time as the want for them was felt, but owing to the piecemeal manner in which they have been introduced, the general result as regards convenience of working the increased traffic is not satisfactory and a complete re-arrangement of the station has been felt for some years past to be an absolute necessity.

4. A design was prepared a short time ago on the principle of ignoring entirely the existing buildings and the two natural boundaries of the present yard in the form of a public road at the east end and a deep nullah at the west, as it was not thought possible to work them in satisfactorily with the proposed re-arrangements; but the amount of the estimate was considered prohibitive to such a scheme and a revised design was undertaken and is now submitted for sanction.

5. The present scheme has been prepared in consultation from time to time with the Deputing Consulting Engineer and has been discussed at several officer's meetings; it is therefore believed to meet the views of all those who are concerned in the working of it.

6. The following description of what is to be done under each head of account will explain, in conjunction with the plans, how the existing buildings are to be utilized.

The following statement showing in three columns the original, subsequent and proposed additional accommodation side by side will assist in explaining the growth of the station.

Statement showing buildings.

Provided originally.	Added subsequently.	Now proposed.
Stationmaster's house ..	....	Original stationmaster's house will remain as it stands.
Station house	....	The existing station house will be removed entirely, and the accommodation provided on the island platform.
One platform	....	The original platform is to be removed to make room for sidings.
Passenger shed	....	Do. do. do.
Latrine	....	Do. do. do.
Salt godown	....	Salt godown to remain intact.
Covered goods shed	....	Do. do.

Statement showing buildings—cont.

Provided originally.	Added subsequently.	Now proposed.
Inspector's office and stores ..	....	Inspectors' office and stores to be removed, to make room for sidings and will be erected elsewhere.
Carriage dock	.. .	Do. do. do.
2–16 ft. turntables .. .	....	Do. do. do.
....	Island platform	Island platform to be increased by 524 per cent.
....	Sub-way	Sub-way to be extended.
....	Tank on rails	Tank to be removed and a fresh cast iron tank on masonry foundations to be built.
....	Engine turntable	Engine turntable to be removed and re-erected.
....	Engine shed	Engine shed to be enlarged by 311 per cent.
....	Open goods shed	Open goods-shed to remain in tact.
....	Apothecary's quarters	Do. do.
....	Assistant Traffic Manager's office.	Do. do.
....	One block for Locomotive staff ..	Do. do.
....	P.W. Inspector's bungalow ..	Do. do.
....	Refreshment room (a semi-permanent structure).	Refreshment-room will be demolished and be provided for in the main building in the island platform.
....	Latrine on original platform ..	Latrine to be demolished.
....	Latrine on island platform ..	Latrine to be demolished, and be provided for in the island platform.
....	....	A Locomotive Foreman's bungalow, three double block of European and Eurasian quarters.
....	....	One block for native quarters.
....	....	Weigh-bridge.
....	....	Transhipping platform.
....	.. .	Platform for Pulliarpatti branch.
....	....	Overbridge.
....	....	Local Booking office with staff quarters over it.

Land.—The additional land is required on the south side of the station for a platform for the Pulliarpatti branch and for additional sidings; the triangle between the Pulliarpatti siding and the main line to the south-west of the existing station is required for the coal and laterite sidings and for the additional staff quarters.

Formation.—Earthwork.—The earthwork which consists chiefly of cutting is necessitated in the neighbourhood of the engine-shed and sidings to the west of it, the ground beyond the present compound wall being at a higher level than the rails in the station yard.

Fencing.—As some of the additional sidings and new buildings extend beyond the present boundary wall, the latter has to be demolished and re-built; the wire fencing is required for enclosing additional land acquired for staff quarters.

Ballast and Permanent-way.—The gross length of sidings when the line was first opened for traffic in 1861 was 1,760 lineal yards; at the present date the length is 9,680 lineal yards; the present estimate provides for increasing the sidings up to 12,017 lineal yards.

The alterations are so extensive that, with the exception of the main line through the station and a comparatively short length of road near the goods-shed, the whole of the tracks in the yard have to be moved.

In the plan, the main line only is shown to remain in its existing position, and as the sidings near the goods-shed are to be re-laid with 50 lb. rails, they are shown as new.

Provision has been made to lay a through siding adjacent to each of the three platform lines, all arrangements for goods shunting being carried out with a shunting neck, so that in the formation of goods trains, the main line will always be kept clear.

Stations and Buildings.—Stations and offices.—The station being an important junction, an island platform with all the offices and accommodation required for through passenger traffic thereon is imperative. The existing island platform is only 20 feet wide and is quite inadequate for the work of transhipping passengers from branch to main line trains and *vice versâ*; it will form part of the new platform. The original platform on the north side of the station with the station-house, refreshment-room and latrines thereon could not be worked into the new scheme and will therefore be entirely removed; the new island platform will be 1,300 feet long by 74 feet wide and the block of building thereon, measuring 362 feet by 23, provides accommodation for first, second and third class waiting-rooms, refreshment-rooms, stationmaster's office, telegraph office, train inspector, ticket clerks, lamp-rooms, &c., on the ground floor; on the upper floor extending over an area of 118 feet by 23 feet, there will be a large refreshment-room for third-class passengers and cook-room for the corresponding refreshment-rooms on the ground floor. Above the second storey, there will be a cabin to contain 39 levers for working the signals throughout the yard and the scissors crossings opposite the centre of the platform and on both sides of it.

Latrines will be provided at both ends of the platform at some little distance from the station and office for Native passengers, and closets will also be provided on the platform for Europeans; retiring-rooms for ladies are attached to the waiting-rooms in the main building.

The platform on either side of the station and offices will be covered by a cantilever roof extending up to the adjacent tracks.

An overbridge will connect the island platform with the local booking office.

The sub-way, which is to be extended, will afford an exit for passengers going to the town. Allusion is made above to the removal of the old ticket office, refreshment-room and latrines on the original platform on the north side of the station; for the two latter, accommodation will be provided on the island platform and the old ticket office will be replaced by an entirely new building consisting on the ground floor of one large room, in the centre of which there is an enclosure from which tickets are issued to third-class passengers on one side and to first and second on the other; there will also be accommodation for weighing and registering luggages. There will be an upper floor to this building which provides a sitting-room, three bed-rooms and bath-rooms for the use of the staff and public.

A drain already exists throughout the greater length of the yard, this is to be extended and will provide all the extra drainage required.

The present permanent-way inspector's office and stores occupies space required for sidings, it will therefore be rebuilt to the north of its present site.

Goods-shed.—One closed goods-shed, a salt godown and two open sheds exist, these will be utilized as they stand and provision is made for extending the closed shed by adding to it an area of 4,480 square feet.

Owing to the supply of gravel required for metalling most of the roads in the Tanjore district being drawn from the Pulliarpatti ballast depot which is 4 miles away from Tanjore, special provision in the way of sidings for this traffic will be made. At present a good deal of goods work is carried out on the south side of the station; by the proposed arrangement, most of it will be confined to the specially appointed goods sidings.

An entirely new transhipping platform required for making up through loads is provided.

Approaches to the Goods-shed.—Owing to the extension of goods accommodation being provided westward of the existing buildings, some expenditure is required on the formation of new roads and for fencing off the goods portion of the yard from the passengers' approach.

Staff Quarters.—Accommodation exists for the stationmaster, Assistant Traffic Manager's office, apothecary, permanent-way inspector and one block of buildings for the Locomotive Department; it is considered necessary to build three additional blocks for the European and Eurasian drivers, and one block for the Native staff of the Locomotive Department. These buildings are to be constructed on newly acquired land at the west end of the station.

Station Machinery.—Two existing 16-foot turn-tables are to be moved a little to the north-west of the present position.

A weigh-bridge (on a convenient loop siding), the want of which has been much felt for some years past, is to be built.

A few years ago the tank accommodation for watering engines was found to be insufficient and in view of the probable further extension of the station the extra provision then made was in the form of six wrought iron tanks erected on a rail staging, this will now be removed, the permanent accommodation will be provided in the form of a large cast iron tank on a masonry base.

One water column only is provided in the present estimate, it is probable that more will be required.

The existing engine-shed is to be enlarged by an additional area of 9,071 square feet, one side wall and part of one end wall of present building being utilized.

The existing engine turn-table being in the way of the new sidings, is to be removed to the west end of the engine-shed, and in close proximity to it a new coal stage is to be constructed.

An engine lift and ashpit under it is to be built at the west end of the shed.

Points and Crossings.—The extension of sidings involves an addition of 25 sets of points, but it is anticipated that by the introduction of interlocking signals and points, the number of pointsmen employed will not be increased and may probably be diminished.

Signals.—The estimate provides for the introduction of Dutton's system of signals interlocked with points, by which the approaches to each platform and the corresponding through sidings will be rendered as safe as practicable. The signals will be worked from a cabin erected over the stationmaster's room on the island platform and will be so arranged that they will be, by a system of locking, completely under his control.

Plant.—The expenditure under this head is small and does not appear to call for remarks.

From—The Consulting Engineer for Railways.
To—The Agent, South Indian Railway.
Dated—Madras, 8th February 1899, No. 429.

I have the honour to acknowledge the receipt, with your letter No. 1172, dated 31st December 1898, of an estimate and design for an entire recasting of the Tanjore station arrangements at a cost of over four lakhs. I notice that your Board have approved of the scheme. It appears to me to be a well thought out scheme, and the design and estimates appear to have been very carefully got up, and I have little doubt but that if carried out it will greatly facilitate working at Tanjore junction.

2. Still four lakhs practically means about Rs. 1,000 per mensem in interest, and I hesitate to recommend Government, who own the line leased to your Company, to incur this expenditure unless I can bring forward some arguments to show that the expenditure will be in one way or another directly or indirectly remunerative. Can you furnish me with any such arguments?

3. Another matter worthy of consideration is that the Madras loop line, or suburban scheme, appears to me to be far more urgently needed in the interests of public convenience than is the remodelling of Tanjore junction. There may perhaps be funds available for both this and the Tanjore scheme; on the other hand there may not; and I am disposed to think that you would be wise, in the interest of your shareholders as well as of Government, to press for the loop scheme first and to try for the other later.

4. I shall be glad to hear what your views are on these points after you have carefully considered them.

From—The Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Trichinopoly, 9th March 1899, No. 218.

With reference to your letter No. 429, dated 8th February 1899, regarding the proposed expenditure on the enlargement and re-arrangement of Tanjore junction, I have the honour to point out that of the total estimate of Rs. 4,01,353, Rs. 95,000 is for expenditure in connection with the re-arrangement of the locomotive running lengths, the scheme for which has received your approval. The balance of Rupees 3,06,353 is mainly made up of the following items:—

Sidings, Rs. 95,500.—As already pointed out in a previous half-yearly inspection report, the existing arrangement of sidings makes the yard a cramped one, and the proposed re-arrangement, though perhaps some reduction might be possible, is necessary for facility of working and in the interests of public safety. It must also be borne in mind that the rails in the existing sidings are practically worn out.

Interlocking of Signals, Rs. 28,640.—This expenditure is necessary for safety of working.

Booking office, Rs. 47,900, *Station-house, Rs.* 69,350.—The existing station-house was built some 37 years ago and requires renewal, it is moreover far too small for the present traffic, Tanjore being a festival station and it is considered desirable that the proposed accommodation should be provided.

Native latrines, Rs. 4,050.—Many adverse remarks having been made regarding the type of our station latrines, advantage has been taken in designing those to be provided for at Tanjore to comply with sanitary requirements.

Extension of goods-shed, Rs. 12,260.—This is necessary to accommodate the traffic now dealt with at the station.

Overbridge, Rs. 14,440.—Required in the interests of public safety.

Platforms, Rs. 3,710.—The existing platforms do not afford the necessary accommodation at festival times when they are overcrowded to a dangerous extent.

From—The Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Trichinopoly, 28th March 1899, No. 268.

In continuation of my letter No. 218, dated 9th March 1899, and with reference to our recent conversation, I have the honour to offer the following remarks in further justification of the expenditure proposed in connection with the re-arrangement of Tanjore station. Eliminating the cost of that portion of the work included in the estimate which relates to the scheme for economically revising the engine running lengths, the expenditure to be dealt with is roughly three lakhs of rupees. Of this amount, Rs. 95,000 is proposed to be spent on *renewing old permanent-way and on new sidings required for facilitating shunting and for trapping, shunting, and goods lines.* About Rs. 42,000 must, under any circumstances, be expended on the replacement of worn out permanent-way, so that the cost of making the yard safe and suitable for economical working is, say, Rs. 53,000. It is difficult to state definitely that this expenditure will be remunerative, but there is no doubt that even if it saves one serious accident the outlay will be amply justified. The cost of *interlocking* the new yard is Rs. 28,640, but I presume in the case of this expenditure you do not require me to offer any remarks as no interlocking can ever be directly remunerative to any large degree. The *booking office* is estimated to cost Rs. 47,900. This amount can be reduced if the sleeping accommodation on the upper storey is not provided. I would point out that these rooms have been given at the suggestion of the Government Inspector—*vide* paragraph 9 of the half-yearly inspection report for the half-year ended 31st December 1895. In my opinion they are more of a luxury than a necessity, but they may tend to popularize the line by making it more attractive and so prove indirectly remunerative. The cost of the new *station-house* is estimated at Rs. 69,350. Even if this work is not approved a good deal of money must be spent in re-roofing the existing station-house and rebuilding the present temporary refreshment-room. The existing station building, as I before mentioned, is much too small for requirements, and there are no proper conveniences, either for the public or for the handling of traffic. The expenditure on additional accommodation can, however, hardly be expected to prove remunerative. The somewhat heavy proportionate outlay of Rs. 4,050 on *native latrines* can only be justified on the grounds of sanitation and of convenience to passengers. If you so wish a cheaper type of latrine could be provided; but from the numerous complaints made against our present structures, I do not recommend economy in the matter. The extension of the *goods shed* will cost Rs. 12,260, and I am informed by the Traffic Manager that his staff is much handicapped by the insufficient extent of the present building which is not large enough to house the traffic that now offers. The *overbridge* is an expensive work estimated at Rs. 14,440, which could, I understand, be reduced in cost if the sleeping accommodation for passengers be given up. It is, of course, an unremunerative work, except as regards the possible prevention by its provision, of claims on account of injury to passengers crossing the lines. The *platforms* in the new arrangements will cost Rs. 3,710, and are, I think, necessary whether they are remunerative or not. The present island platform is very narrow and it is fortunate that no accidents have so far occurred by people being forced over the edges during occasions of festival.

In the foregoing paragraph I have touched on all the principal works embodied in the estimate and I trust the explanations I have given may prove sufficient to enable you to dispose of the question.

Note by the Consulting Engineer for Railways, Madras.

This is a very important project, and a large estimate, viz., the improvement and enlargement of Tanjore station of the South Indian Railway at a cost of Rs. 4,01,353. A proposal involving interest charges at the rate of Rs. 1,000 per mensem as a permanency must be treated with much circumspection.

2. The proposal has been in contemplation during the last three or four years. In November 1895, the Agent received his Board of Directors' consent to spend Rupees 1,20,000 on the work; but when plans and estimates had been got out it appeared that the cost would be Rs. 3,72,248. Meanwhile, in November 1896 the Agent asked that the requisite area of land might be acquired. The land as a matter of fact has since been acquired.

3. In their letter No. 210 of the 6th May 1898, the Board sanctioned an expenditure of Rs. 3,72,248. But with his letter No. 593, dated 6th July 1898, the Agent asked for sanction to the latest proposed expenditure, viz., Rs. 4,01,353, explaining that the increase over the sum already approved by the Board was for interlocking.

4. In their letter to their Agent No. 217, dated the 21st October 1898, the Board sanctioned the estimate of Rs. 4,01,353, and communicated the opinion of the Company's Consulting Engineer, Sir George Bruce, that "the re-arrangement of the lines of railway and the general design of the yards and buildings have been skilfully and judiciously planned; and, having regard to the great increase which it is found necessary to provide for in the Locomotive Department and the station buildings generally, the amount of the estimate is not excessive or more than would be required to make the junction station thoroughly effective."

5. I may add that this office has all along, from time to time, had its say in regard to the proposals, and that I am personally satisfied that the design is good and that the estimate is not extravagant.

6. Rs. 95,000, or nearly one-fourth of the estimate, has been rendered necessary by the decision to introduce a better system of engine running lengths throughout the South Indian Railway. The existing system of engine running grew up as the line and its branches grew up, in a somewhat haphazard way, and the new system is intended to effect heavy economies, throwing many engines out of work, and rendering the train service throughout the system more efficient all round. It has been gone into very thoroughly, and is to be gradually brought into use as circumstances permit.

7. The remainder of the expenditure has become necessary owing to the steady and continuous improvement in the weight of traffic passing through the junction, which has rendered inadequate the existing buildings, platforms, lines and sidings.

8. The Government Examiner reports that the proposed allocation of Rs. 3,08,629 to Capital and Rs. 92,724 to Revenue is correct.

9. I recommend therefore that the Government of India be asked to sanction the estimate and to allow the work to proceed forthwith.

(Signed) FRANCIS J. E. SPRING,
Consulting Engineer for Railways.

6th April 1899.

ORDER—No. 504 Ry., dated 29th April 1899.

The Government of India will be addressed.

[Here enter No. 505 Ry., dated 29th April 1899.]

(True Extract.)

FRANCIS J. E. SPRING,
Joint Secretary.

To the Agent S. I. Ry.
2 Copies sent for Rs.
4 Exd. Gld. R. Acct.

Exd. Shaik Karim.

Despatched on 19/5/99.

PUBLIC WORKS DEPARTMENT.

Railway.

LETTER—from

FRANCIS J. E. SPRING, ESQ., C.I.E.,
Joint Secretary to the Government of Madras,
Public Works Department,
Railway Branch,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
PUBLIC WORKS DEPARTMENT.

SIR,

I am directed to invite a perusal of this Government's Proceedings, No. 504 Ry. dated the 29th April 1899, on the subject of a proposed expenditure of about 4 lakhs on the remodelling of Tanjore station of the South Indian Railway. The note contained in the Proceedings by this Government's Consulting Engineer for Railways explains the position, so it seems unnecessary to enter into separate explanations here. There has been no previous correspondence with the Government of India on the subject.

2. I am instructed to forward a copy of the estimate as well as of the set of plans, and to ask that sanction may be accorded to the work being undertaken at a total cost of Rs. 4,01,353, of which Rs. 3,08,629 will be debitable to Capital and Rs. 92,724 to Revenue.

I have the honour to be,
Sir,
Your most obedient servant,

for Joint Secretary.

FORT ST. GEORGE,
29th April 1899.

Documents accompanying.
G.O., referred to with estimate and set of plans.

Exd. A. F. Eccleston.

Despatched on 2/5/99.

RAILWAY.

Government {1899} of Madras.

PUBLIC WORKS.

Recd. } 1899. *Enclosures*

Regd. *Spare copies*

Letter, No. 505 Ry., 29th April 1899.

APRIL.

No. 1079 R.C.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

Railway Construction.

All communications should be addressed to the Secretary.

JOINT SECRETARY TO GOVT. OF MADRAS RYS. RECEIVED 16 JUN. 1899

28

To

The Joint Secretary to the Government of Madras,

Public Works Department, Railway Branch.

Simla, the 8th June 1899.

Sir,

I am directed to acknowledge the receipt of your letter No.505 Ry., dated the 29th April 1899 and in reply to communicate the sanction of the Government of India to the estimate therewith forwarded amounting to Rs.4,01,353/- of the cost of remodelling the Tanjore Station, of the South Indian Railway.

2. This sanction is chargeable in the proportion of Rs.3,08,629/- to Capital and Rs.92,724/- to Revenue and has been registered as No.3 South Indian Railway of 1899.

3. The plans received with your letter under acknowledgment are returned herewith.

I have the honour to be,

Sir,

Your most obedient servant.

E. Cuthbert

for Under Secretary.

Documents accompanying.

Plans referred to (Drawing Branch No.5645).

A.C.B.

Public Works (1899) Department.

(Print)

G.O. No. 504-5 Ry dy 25.4.99 Read
Letter from the Govt of India
No. 1079 RC dy 8.6.99.

S.W.Ry

CURRENT No. 790

Quote 790

MJP

From The Govt of India

Order - No. 683 Ry dated 20/6/99
Communicated to
the Agent South Indian
Railway.

No. 1079 R-C

Ref. This sanction has
been registered at No. 5. Ry
of 1899-1900.

Dated 8th June 1899

Received 16th do

Registered do

Enclosures

Spare copies

Ed
for S
19.6.99.

SUBJECT.

Remodelling the Tanjore
Station, S.I.Ry.

To Agent S.I.Ry. dy 20/6/99
CR
ER

Sanctioning an estimate
amounting to Rs. 4,01,353
of the cost of ———.

Despatched on 27/6/99

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

4 P