

Public Works (1894) Department.

RAILWAY BRANCH.

G.O., No. 177-8; R

DATED 21st March

[Despatch Abstract.]

Inspection Report.

The — of the East Coast Railway for the half-year ending 31st December 1893 communicated to the officers concerned and a copy of the (Pres. J. J. J.) to the Govt of India.

Forwarding copy of Pres. embodying the — of the East Coast Railway, for the half-year ending 31st December 1893

Indexed.

[illegible]

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

Exd. C. A. Muniauwmy.
Spare Copies

RAILWAY.

Govt. of {1894} Madras.

PUBLIC WORKS.

Dated March, 21st.

Recd.

Encl.

G.O., 21st Mar. 1894, Nos. 177,
178 R.

MARCH.

Inspection Report

Forwarding copy of Proceedings embodying the — of the East Coast Railway for the half-year ended 31st December 1893.

EAST COAST RAILWAY—5' 6" GAUGE.

266 miles including branches to Cocanada and Vizagapatam.

Inspection report by Mr. F. R. Upcott, Government Inspector of Railways, Madras, for the half-year ending 31st December 1893.

The inspection was made on 20th, 21st, and 22nd February 1894 with the Manager and heads of departments.

The general condition of the line is improving; as regards the road, the section from Gúdávári to Vizianagram is not in such good order as that between Bezwada and the Gúdávári, having been open only six months and during the monsoon.

Banks and cuttings.—Earthwork is going on over the whole length to bring the banks up to standard. A double bank between Waltair and the junction is in progress. The bank at mile 74 requires additional width at top. The old bank does not seem to have been stepped for the new earth thrown up. After next monsoon, turf or grass should be laid down on the higher bank slopes and pitched channels for rain to flow down the slopes; these latter should of course be put in before the monsoon.

Bridges and Culverts.—These appear to be sufficient to pass the flood water of the district, and I understand in no place has the need for additional waterways become evident. The ballast walls and pitched floorings are being attended to. A great number of the smaller girder bridges are high, and the line at the abutments should be raised and packed to avoid the present jumps or the rolling stock springs will get broken.

From mile 158 to 216 proper squared bridge timbers are being put on with hook bolts; for some reason this was not done during construction, the ordinary road sleepers having been used. The painting of the girders is also being done after much delay. The Kistna bridge girders have been painted and the abutment towers are approaching completion. Meanwhile foot-passengers have a temporary wooden stair to get to the footways over the upper booms; some small details, to which I called attention on my last inspection, viz., hand railings over the gaps between girders, pinning down the loose ends of curbs outside the rails, &c., have been attended to. The road approaches to this bridge are not yet finished and therefore carts are not allowed to cross. It is probable that if at any time there is any considerable cart traffic, a ferry train of high sided wagons, open from end to end, will be preferable to passing carts over the bridge on their own wheels. The rail traffic across the bridge is at present only metre gauge and is protected by stop gates and staff man.

Ballast.—There is a large stock of stone ballast collected along the line, but at present only portions of the line are ballasted with sand and stone; as the earth bank becomes consolidated, the remaining ballast will be put on. In cases where the steel sleepers have been originally laid in the earth, care should be taken to clean out the sleepers underneath when lifting through new ballast.

Rails and sleepers.—These are all new; the rails are 30' × 75 lb. per yard flat-footed. Sleepers are steel except at places where soil is salt, and at these wooden sleepers with spikes are used; the fish plates have 5 holes, the advantage of the central hole has not yet been noticed; the joints are rough along the line from Waltair to Vizianagram and the road not lined up well.

At Cocanada branch, mile 0-1, there is a bad kink in the line. The line is at present unfenced.

The level crossings are not in good order; at many places the guard rails are not yet put in.

Stations.—These are not yet all fully located; in some cases the foundations of the permanent buildings have been put in. At Bezwada the original waiting shed has been built in and additional rooms provided, the 3rd-class new waiting shed being erected separately at the back of the station. Already this station is much congested with goods and passengers. The Southern Mahratta Railway now works across the

Kistna bridge into this station. I would here call the attention of the management to the need for selecting a site for a transshipping station on the right bank of the Kistna river. This would carry out the views of the Government of India expressed in letter No. 1019 R.C. of 10th September 1892. At the large village, mile 45, a trial station might be opened. A long siding to Anakápallo town has been opened, as the original station does not serve the town mart.

A goods siding to the Cocanuda canal is required for through shipment and this is about to be laid in. A goods siding is being laid in at the back of Vizagapatam station.

The Vizianagram station is nearly finished. The swamp line from Waltair station to the boat harbour, Vizagapatam, is in progress and a timber bridge 300' long is being built to allow the tidal scour across the bar; but with regard to the future requirements of land for the merchants at the back of Ross Hill, it may be necessary to close this opening and build a bridge half mile off higher up. A larger ponding area having a more direct current for scouring the bar, would have to be provided to compensate for the land reclaimed at the back of Ross Hill and alongside the line from the Vizagapatam station.

Such of the stations as are built are neat and roomy and provided with the Bombay pattern latrine of corrugated iron.

Lampposts are nearly all ready.

The points and crossings were in good working order.

Signals.—Alamanda and Simbachalam require distant signals. All other stations are provided, but the signals do not work well in many instances. The permanent-way inspectors should be reminded of their duty in this respect. The provision of signals at Kistna bridge level crossing and at the Waltair junction have been carried out as formerly desired; the latter arrangement is only temporary until the double line is laid in. At Kovvur the distant signals were kept pinned down on the day of inspection.

Watering arrangements.—Steam pumps are required at many of the watering stations to replace the present unsatisfactory hand pump, as all these have been taken over by the Locomotive Department, early improvement may be looked for.

Locomotive shops and sheds.—The final settlement of the site for the Waltair shops is under report by the Consulting Engineer to the Government of India for Railways; if suitable ground near the present place cannot be found, the country near the Waltair junction might be examined.

Godavari ferry.—No wagon ferry is yet established, but it is hoped after next monsoon this may be done.

At present there are two steamers plying, the "Dorothy" for passengers and the "John Mullins" with country boats, for goods, hired from the Municipality and Irrigation Department, respectively, but a relief steamer appears necessary; the present landing places are at Rajahmundry, which is permanent on the left bank and a place 5 miles below on right bank which has to be shifted as the river is high or low.

The ferry arrangements are good; there is no delay, passengers going direct on board both ways at once, and when low level lines are laid in for the shifting of goods from wagon to boat and *vice versa*, the cost of transshipping will fall.

Rolling stock.—The list of stock is as under:—

Compound engines 23 + 1 in 1894.

J. class 1

Tank engines 5

First-class carriages 4

Composites 2

Second class 3

Third class 26

Do. and postal vans; 2 of these are fitted with female lavatories.

Covered goods 321 + 50 in 1894, 5 of which carry horses.

Low-sided wagons 300

Brake vans 16 + 4 in 1894.

Accident cranes 10-tons, 2.

It may here be mentioned that the weight on the driving axle of the compound engines is over 16 tons, an infringement of the standard weight.

The engine failures are numerous owing to both engines and road being new and to defective watering arrangements; the good effect of compounding is not yet apparent as the engines do not haul their maximum loads.

The attention of the management is drawn to the necessity of provision of third-class females' accommodation.

Traffic.—This is encouraging; the passenger traffic is very good and a second day train is, I think, necessary between Bezvada and Gódvári. I saw many passengers left behind for want of room; the weekly receipts per mile are already about 80 rupees for all traffic. The increase of goods traffic seems to depend on a wagon ferry being established at the Gódvári.

(Signed) F. R. UPCOTT,
Senior Govt. Insp. of Rys., Madras.

EAST COAST RAILWAY—5' 6" GAUGE.

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Inspection report by Mr. F. R. Upcott, Government Inspector of Railways, Madras, for the half-year ending 31st December 1893.

The inspection was made on 20th, 21st, and 22nd February 1894 with the Manager and heads of departments.

The general condition of the line is improving; as regards the road, the section from Gódvári to Vizianagram is not in such good order as that between Bezvada and the Gódvári, having been open only six months and during the monsoon.

Banks and cuttings.—Earthwork is going on over the whole length to bring the banks up to standard. A double bank between Waltair and the junction is in progress. The bank at mile 74 requires additional width at top. The old bank does not seem to have been stepped for the new earth thrown up. After next monsoon, turf or grass should be laid down on the higher bank slopes and pitched channels for rain to flow down the slopes; these latter should of course be put in before the monsoon.

Bridges and Culverts.—These appear to be sufficient to pass the flood water of the district, and I understand in no place has the need for additional waterways become evident. The ballast walls and pitched floorings are being attended to. A great number of the smaller girder bridges are high, and the line at the abutments should be raised and packed to avoid the present jumps or the rolling stock springs will get broken.

From mile 158 to 216 proper squared bridge timbers are being put on with hook bolts; for some reason this was not done during construction, the ordinary road sleepers having been used. The painting of the girders is also being done after much delay. The Kistna bridge girders have been painted and the abutment towers are approaching completion. Meanwhile foot-passengers have a temporary wooden stair to get to the footways over the upper booms; some small details, to which I called attention on my last inspection, viz., hand railings over the gaps between girders, pinning down the loose ends of curbs outside the rails, &c., have been attended to. The road approaches to this bridge are not yet finished and therefore carts are not allowed to cross. It is probable that if at any time there is any considerable cart traffic, a ferry train of high sided wagons, open from end to end, will be preferable to passing carts over the bridge on their own wheels. The rail traffic across the bridge is at present only metre gauge and is protected by stop gates and staff man.

Ballast.—There is a large stock of stone ballast collected along the line, but at present only portions of the line are ballasted with sand and stone; as the earth bank becomes consolidated, the remaining ballast will be put on. In cases where the steel sleepers have been originally laid in the earth, care should be taken to clean out the sleepers underneath when lifting through new ballast.

Rails and sleepers.—These are all new; the rails are 30' $\times$ 75 lb. per yard flat-footed. Sleepers are steel except at places where soil is salt, and at these wooden sleepers with spikes are used; the fish plates have 5 holes, the advantage of the central hole has not yet been noticed; the joints are rough along the line from Waltair to Vizianagram and the road not lined up well.

At Cocanada branch, mile 0-1, there is a bad kink in the line. The line is at present unfenced.

The level crossings are not in good order; at many places the guard rails are not yet put in.

Stations.—These are not yet all fully located; in some cases the foundations of the permanent buildings have been put in. At Bezvada the original waiting shed has been built in and additional rooms provided, the 3rd-class new waiting shed being erected separately at the back of the station. Already this station is much congested with goods and passengers. The Southern Mahratta Railway now works across the

Kistna bridge into this station. I would here call the attention of the management to the need for selecting a site for a transshipping station on the right bank of the Kistna river. This would carry out the views of the Government of India expressed in letter No. 1019 R.C. of 10th September 1892. At the large village, mile 45, a trial station might be opened. A long siding to Anakapalle town has been opened, as the original station does not serve the town mart.

A goods siding to the Cocanada canal is required for through shipment and this is about to be laid in. A goods siding is being laid in at the back of Vizagapatam station.

The Vizianagram station is nearly finished. The swamp line from Waltair station to the boat harbour, Vizagapatam, is in progress and a timber bridge 300' long is being built to allow the tidal scour across the bar; but with regard to the future requirements of land for the merchants at the back of Ross Hill, it may be necessary to close this opening and build a bridge half mile off higher up. A larger ponding area having a more direct current for scouring the bar, would have to be provided to compensate for the land reclaimed at the back of Ross Hill and alongside the line from the Vizagapatam station.

Such of the stations as are built are neat and roomy and provided with the Bombay pattern latrine of corrugated iron.

Lampposts are nearly all ready.

The points and crossings were in good working order.

Signals.—Alamanda and Simbachalam require distant signals. All other stations are provided, but the signals do not work well in many instances. The permanent-way inspectors should be reminded of their duty in this respect. The provision of signals at Kistna bridge level crossing and at the Waltair junction have been carried out as formerly desired; the latter arrangement is only temporary until the double line is laid in. At Kovvur the distant signals were kept pinned down on the day of inspection.

Watering arrangements.—Steam pumps are required at many of the watering stations to replace the present unsatisfactory hand pump, as all these have been taken over by the Locomotive Department, early improvement may be looked for.

Locomotive shops and sheds.—The final settlement of the site for the Waltair shops is under report by the Consulting Engineer to the Government of India for Railways; if suitable ground near the present place cannot be found, the country near the Waltair junction might be examined.

Godavari ferry.—No wagon ferry is yet established, but it is hoped after next monsoon this may be done.

At present there are two steamers plying, the "Dorothy" for passengers and the "John Mullins" with country boats, for goods, hired from the Municipality and Irrigation Department, respectively, but a relief steamer appears necessary; the present landing places are at Rajahmundry, which is permanent on the left bank and a place 5 miles below on right bank which has to be shifted as the river is high or low.

The ferry arrangements are good; there is no delay, passengers going direct on board both ways at once, and when low level lines are laid in for the shifting of goods from wagon to boat and *vice versa*, the cost of transshipping will fall.

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Senior Govt. Insp. of Rys., Madras.

21st MARCH 1894, No. 177 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper:—

Report of inspection of the East Coast Railway for the half-year ended 31st December 1893.

No. 11.

Endorsement by the Consulting Engineer for Railways, dated Madras, 21st March 1894.

Submitted for the information of Government and for the submission to the Government of India of 35 copies of the report with the orders passed thereon.

ORDER—dated 21st March 1894, No. 177 R., Public Works.

The report of the inspection of the East Coast Railway (open section) will be communicated to the Manager, East Coast Railway, for information and necessary action. Also to the Consulting Engineer for Railways, Bombay, for such action as he may consider necessary.

Also to the Marine Department for information.

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

[Here enter No. 178 R., dated 21st March 1894.]

(True Extract.)

(Signed) F. R. UPCOTT,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Consulting Engineer for Railways, Bombay.

„ Manager, East Coast Railway,
through the Consulting Engineer for Railways.

„ Marine Department.
„ Chief Engineer for Irrigation.
„ Chief Engineer, Public Works Department.

ENDORSEMENT—dated 21st March 1894, No. 178 R., Public Works.

Forwarded.

(By Order.)

(Signed) F. R. UPCOTT,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

Erd. C. A. Muniswamy.
Spare Copies

RAILWAY.

Govt. of {1894} Madras.

PUBLIC WORKS.

Dated March, 21st.

Recd.

Encl.

G.O., 21st Mar. 1894, Nos. 177,
178 R.

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1.2.1/2. 177-78 R

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(Signed) F. R. UPCOTT,
Senior Govt. Inspr. of Rys., Madras.

F. R

Form No. 2.

PUBLIC WORKS DEPARTMENT.

OFFICE OF CONSULTING ENGINEER FOR RAILWAYS,
Madras, 21. December 1894

A

Handwritten

Report of Inspection
of the East Coast Ry
for the half year ended
31st Dec 1893

No. //

SUBMITTED for the information of Government
and for the submission
to the Govt. of India of
35 copies of the report
with the orders passed
thereon.

7/2/94

for E.R.

Order No. 177 R 2 21 March 1894.

The report of the Inspection
of the E. C. Ry (open section)
will be communicated
to the Manager, E. C. Ry.
for information & necessary
action.

Also to the Cons. Eng. for
Rep. Bombay, for such
action as he may consider
necessary.

Also to the Marine Dept
for information

2. Copies of these proceedings
will be forwarded for the
information of the Govt. of
India

M. No 178 R 721 March 1894 A
Forwarded

For R

No. 177-78 R 21 March 1894

To
The Cons. Eng. for Rep. Bombay
The Marine. S. C. R.
The Cons.

Marine Dept
Chief Engineer for Dept.
Do P. W. D.