

Public Works (1899) Department.

RAILWAY BRANCH.

G.O., No. 361-62 Ry

DATED 30 March/99

120

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60000 at back

[Despatch Abstract.]

Report of Inspection of the Ry

Ordered that the Ry Inspectors — for the half-year ended the 31/12/98, with remarks thereon by the Senior Ry Inspector of Ry, be forwarded to the Govt. of India for issue of the necessary orders to the Manager.

Forwarding, Copy of proceedings of the Ry Inspectors — for the half-year ended the 31/12/98, with remarks thereon by the Senior Ry Inspector of Ry.

Government {1899} of Madras.
PUBLIC WORKS.

} 1859.

'Spare copies

G.O., Nos. 361, 362 Ry., 30th March 1899.

MARCH.

Forwarding, for issue of necessary orders to the Manager, copy of proceedings embodying the Government Inspector's — for the half-year ended the 31st December 1898, with remarks thereon by the Senior Government Inspector of Railways.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper:—

EAST COAST RAILWAY.

STANDARD GAUGE, 5' 6".

TOTAL MILEAGE OPEN FOR TRAFFIC, INCLUDING BRANCHES, 548 MILES.

Inspection Report for the half-year ending 31st December 1898.

The inspection was made from Barang to Bezwada, the terminus of the railway, between the 26th and 30th January 1899, in company with the Engineer-in-Chief for the whole distance, and the Traffic Superintendent of the line as far as Rajahmundry.

General.—The road throughout is in fairly good running order. The section from Barang to Khurda Road Junction was travelled over by the inspection train at a speed of 40 miles per hour. The lateral swing of the car was most violent, and it was difficult to keep one's seat in a chair. This was attributed to a defect in the hanging of the car-body. The maintenance of the line in the neighbourhood of Chatrapur appears to me to be superior to any up to this part of the line. The road on the Cocanada Branch is still far from being in a satisfactory condition. Gôdâvari, South.—The line in the neighbourhood (42/7) of this station is less well aligned than elsewhere. Ellore.—Track maintenance in this station is very badly done.

2. *Banks.*—These are in good condition generally. In several places where the present edge of the bank is below formation it is being raised thereto, but I did not notice any attempt being made to have such work rammed. No attempts to protect the banks by growth of shrubs and grass were observed.

3. *Cuttings.*—No uniform policy seems to be adopted towards these works. The prevailing impression which the cuttings, particularly those in soft earth, make on a stranger to the line is distinctly one of neglect.

4. *Ballast.*—The ballasting of the line at the Barang end is progressing; the size of the ballast there appears to be unduly small. In the neighbourhood of Tapang, I drew Engineer-in-Chief's attention to the ballast in track lying close up against the rails on both sides. Kasimkota.—The road about here appears to have too much ballast above the sleepers, and too little underneath them. Narsapatnam Road.—Here the ballasting requires a great deal of working at to bring it into anything like condition. Biccavol.—The track ballast hereabouts requires weeding. Speaking generally, the treatment of the section of the ballast seems to require more attention—

(a) The standard dimensions do not appear to be strictly observed, e.g., the horizontal width outside rails over sleeper ends was observed to be short, and both sides are frequently of different widths.

(b) The ballast is in all cases carried up to the web of the rails both inside and outside. The fundamental objection to this bad practice is that neither the keyman nor the Inspector can then possibly have any knowledge of the condition of the fastenings. In places where Lyle's system of carrying signal wire along the rail is in use special attention should be paid to this point.

(c) I saw nowhere any piece of ballasted track which could be called standard, fully complying with the Government standard profile.

(d) To ensure uniformity in profile, ballast templates are absolutely necessary. I saw none on the work, but heard that they existed.

(e) In the case of metal sleepers, speaking generally, a channel has not been maintained in the middle of the track; nor where existing is it deep enough.

(f) There is no arrangement for the drainage of the ballast, either outside stations or in station yards. I noticed an habitual misuse of ballast in station yards where the spaces between the tracks is filled in with ballast. The proper practice is to fill in with earth and to lay down drains laterally.

5. *Sleepers.*—At Vizagapatam harbour I was shown 1,000 jarrah sleepers ($9\frac{1}{2}' \times 10" \times 5"$) out of 4,000 which are to be laid down experimentally in some place where all other kinds of wooden sleepers may have badly failed. I was told that a $9\frac{1}{2}'$ jarrah sleeper weighs the same as a 10' pyngadu one, and that they cost, landed at Vizagapatam, Rs. 5-4-0 each, which is stated to be the same price as that of the Burmese pyngadu.

6. *Switches.*—In appearance these are exceedingly neat and pretty, but they contain several grave defects which I had not expected to find so general.

(a) I examined a number of switches and in no case was the width of the guard-rail channel opposite nose of crossing of the correct gauge, but always in excess of the maximum, usually about $\frac{1}{8}"$. If these crossings were as carefully maintained as they should be, and the importance of the use of gauges appreciated, the state of things described would be impossible.

(b) In every case examined, the switch-rail heel-bolt was found excessively loose; in some instances that of the next rail was so also. It is hardly necessary to point out that it is a highly dangerous state of things where the heel of the tongue rail moves outwards on the switch being thrown over, thus causing the heel of the tongue rail to strike the advancing flange of a wheel. I pointed out to the Engineer-in-Chief how the switch heel became hammered down as a consequence of this action.

(c) There has, as a general rule, been no attempt whatever to lay in the curves of the switches accurately. They have simply been put in by eye, and very badly at that. It is far from obvious why this important point has been so neglected. A table of ordinates, 5 feet apart, is easily calculated once for all, and might well be given on the type-drawing for each kind of switch.

(d) At Khurda Road Junction it was noticed that metal bearing plates were used in switches, and elsewhere also under the rails in ashpits. Bearing plates would seem to be misapplied in such circumstances.

(e) At Cocanada Harbour I examined flange-channels of crossings and found them $2\frac{1}{8}"$ and $2\frac{1}{4}"$ in width. The Platelayer Inspector who was present, stated that he had no flange-channel gauge. I represented, that it was impossible for him to inspect all the crossings in his charge rapidly and efficiently without one.

7. *Signals.*—The practice of carrying the wire along the side of the rail is almost everywhere in use on this line. It seems to me an objectionable one.*

* Of course it is objectionable if owing to slovenliness ballast is heaped on the wire, not otherwise.

F.J.E.S.

The signals on this Railway have a dingy appearance and require repainting. The red semaphore arms would certainly, in many instances, be more visible were this done. Alamanda.—

Signal vanes would be improved by repainting. Kottalavalasa.—The signal vanes in the station are quite dull and require repainting. Waltair station.—The former arrangement of distant signals has been altered; the signal immediately outside this station has been removed from the bank and now stands remote to one side of the curve, thus rendering it more visible along the approach tangent from the junction. Both distant signals here have been brought nearer by some 1,000 feet, having been found quite unworkable at their former distances. Yellamanchili.—It appeared to me that the distant signal worked stiffly after the passage of the train; and that here and in other stations there is always a delay, sometimes considerable (two train lengths), on the part of the stationmaster in returning the signal to danger after the passage of the train. Kottapalle.—A very slow return of D.S. arm to position. I noticed that the signal wire which is carried along the rail was quite covered up by the ballast. Biccavol.—Near here, and at several other level crossings, I noticed gatemen exhibiting a white flag on the passage of a train. By this time uniformity of practice under this head might be expected.

8. *Level Crossings.*—Although the line is unfenced throughout nevertheless fifty or sixty feet of fencing on either side of the gate is advantageous, as it prevents straggling during the crossing, and for other reasons. This has not been done throughout the line. External guard rails appear to be very generally substituted by wooden sleepers or planks. The metalling of both ramps of the crossings would appear to be desirable. Grass huts attached to the gate-houses have, in some instances, been allowed to grow up, obscuring the engine-driver's view of the gate-house and that of the gatemen of the approaching train. *Kasimbota.*—Considerable attention appears to be paid to efficiency and neat appearance of level crossings on this section.

9. *Mile Stones.*—These are very insignificant in appearance, and are simply stuck into the edge of bank.* They are preferably placed outside of the edge of bank in an earthen platform, and the earth surfaces protected. The stones are thus rendered visible for considerable distances; at present they are invisible at 10 chains.

10. *Telegraph Posts.*—The figures representing the mileage require repainting. At present, besides being dull, they are also almost illegible, owing to their being ill-shaped and too thin in the stem for their height. The posts are numbered only alternately, instead of consecutively. If this be done from motives of economy, it seems ill-judged, as the annoyance and waste of time and temper due to finding oneself opposite an unnumbered post when seeking its number is not set off by a saving of 10—15 rupees per mile.

11. *Gate-houses, Bridges and Culverts.*—These are still unnumbered. Between *Khurda* and *Chatrapur*, I noticed the singular manner in which the cross sleepers on a girder culvert had been cut down, apparently with the object of lowering the rails thereon. *Barang.*—Gate-houses not yet erected.

12. *Stations.*—At the larger stations platform ornamentation is very unsystematic; and in most cases it has been overlooked that utility and convenience should be the governing considerations in the disposal of the platform area. Horticultural operations should be rigidly confined to a strip of 10 feet width or so contiguous to the platform paling; and ornamental pots, shrubs, and rockery work when indulged in should be confined to an additional strip of a few feet and not allowed to encumber the neighbourhood of the entrance passages. In this connexion the stations of *Vizianagram* and *Berhampur* call for particular notice. *Bhubaneswar.*—The present position of the station does not suit the pilgrim traffic; and an improved location has not yet been fixed upon. *Khurda Road Junction.*—Some buildings belonging to the Traffic staff and visible from the line are disfigured by dirty ragged pattal huts and extensions. *Delang.*—This station is, I think, within 200 feet of the parallel-running main road from which it is separated by a ditch, across which is the natural line of access, and this should have been the site of the station approach road. So far as I could see, there is no approach road to this station. The station building is not on the same side as the main road, but on the jungle side of the line. This station is stated to take Rs. 50 per week. *Puri.*—Wooden fencing round station platform is still incomplete, and appears to me to be of quite too weak a type to resist the pressure of crowds. *Kalupura Ghat.*—The names of offices in the station building are not yet put up. *Nellimarala.*—The condition of the approach road to this station appears neglected. On pointing this out I was informed that there was no wheel-traffic. *Vizianagram.*—I noticed that the approach road was on one side unfenced. *Narsapatnam Road.*—Here the attention is mainly arrested by some very dirty and ragged chappars in front of the station menials' quarters. Such encroachments cannot be too summarily disposed of. The present condition of the station platform here is open to criticism. It should be made level and the floor of the station building connected with it by steps, as at *Tuni*. *Pithapuram.*—I found the station cash-chest here let into the wall—which is by no means the universal state of things on this railway. The station-platform name-board appears to be too small. *Samalkot Junction.*—The entrance passage into station platform requires a gate. At present there is none.

13. *Drinking accommodation.*—The passenger watering arrangements at stations are still quite primitive—the insanitary three-ghara filter still holding its own. At some stations modern filters, holding possibly a gallon, were found. In some

instances there was found a platform tap water-supply, but so remotely situated and so concealed as to be comparatively useless to half a train-load of thirsty passengers. In most cases the button or knob controlling the flow had been lost or stolen.

I examined a platform tap at *Khurda Road Junction*. I found the water off, although there was a passenger train standing in the station at the time. At *Puri* the water-supply is at present furnished from two or three small wells across the approach road, fronting the station-building; it appears inadequate to the requirements of a pilgrim station. *Berhampur.*—There are here no platform water taps for the use of passengers: a bihishti supplies the water required. *Ellore.*—The filter and the drinking-water accommodation at this station must be pronounced inadequate; the platform hydrant or tap is placed in a most unsuitable situation.

14. *Waiting and Refreshment rooms.*—Generally well placed as regards passengers' convenience, and neat and inviting in internal arrangements. The comfort and convenience of passengers would be greatly enhanced by the introduction of wire-gauze fore-doors for waiting rooms and refreshment rooms, at least at the larger stations. I found that the practice of maintaining complaint or suggestion books was by no means general; and that, where obtaining, small school exercise books were employed; most of those examined dated from the first day of the present year. The Traffic Superintendent has promised to remedy the present imperfect arrangements and to establish suitable books. At *Berhampur* the waiting room accommodation is stated to be insufficient. At *Palasa* the first-class waiting room is a wattle and daub structure with a mud or lime-plastered floor. I examined the bath room and noticed a strong smell of urine: a waterproof floor seems indicated. *Garividi.*—There is a waiting room here in hand, mainly for the convenience of Europeans connected with the mines adjacent. *Samalkot Junction.*—The waiting room here is not indicated by a name board.

15. *Weighing Machines.*—The Stationmaster at *Cocanada Harbour* was unable to inform me when the last inspection of the weighing machine had taken place, stating that he kept no diary. Weighing machines are in all stations movable and stand on the floor; in many instances the machine is even raised 6 or 8 inches above the floor on a platform, thus necessitating useless labour in handling goods when weighing, and endangering the limbs of the staff.

16. *Latrines.*—These are invariably situated at the ends of the platforms. They are of Horbury type, or imitations thereof; they have not been very carefully put together; they are very shabby-looking, and mostly unpainted. The main defects observed are these: (a) the sides or walls extend down to the surface of the ground; (b) there is no artificial floor, the natural surface of the ground serving as such. In this connection I observed, in some instances, ordure deposited outside of the inner cells of the latrine. Whatever the character of the screen may be, it seems desirable that the floors of the latrines should be cement-plastered and properly drained. This is not done. At *Berhampur* the latrine accommodation is reported to be insufficient; the present accommodation provides two seats each for male and female. *Narsapatnam Road.*—I examined the latrine here, it has the usual objectionable earthen floor. From my examination I concluded that this latrine is so rarely used as to be useless. *Ellore.*—I examined one of the platform latrines; it was uncleansed, and the interior had evidently been unused for a long time, the exterior and neighbourhood serving instead.

17. *Lighting.*—This is a matter in which little or no attention has been paid to the comfort and convenience of travellers not native. The carriage illumination is miserable, and its duration quite uncertain. The lamps in the inspection carriage proved conclusively that the art of wick-trimming was not understood, or was at least insufficiently attended to. I found the platform lamp-posts, as a rule, some 17 feet from the edge of the platform. I would recommend their being removed back to the boundary between platform and garden, and that the maintenance of a clear uninterrupted width of platform of 25 feet be maintained, at least at the larger and more important stations. *Berhampur.*—A lamp room has been built here since the last inspection. *Samalkot Junction.*—This station has no lamp room. The entrance and exit passage on to platform requires a hanging lamp for illumination at nights. *Ellore.*—There appears to be no special lamp room nor oil-reservoir. The oil drum serving as a magazine which I examined may have contained 36 gallons.

18. *Locomotive Conveniences—Chattrapur.*—Watering arrangements are completed here with exception of the water-columns. The water is to be obtained from a constant spring which has been found in the cutting adjacent. *Kottalavalasa.*—A new water-tank staging is being erected here. *Samalkot Junction.*—The former pine-wood tank staging, now rotten, is being replaced by a metal one. *Ashpits—Puri.*—The same defect is visible here as elsewhere on the main line, viz., the stones under the wood-work are far too small. They appeared to me to have moved. *Turntable.*—Same remark applies; coping stones under the rails are dislocated. *Watering arrangements.*—The pumps and valves might beneficially be protected. *Vizianagram.*—The wall of the large well here seems to be dangerously low.

19. *Projected Feeder Lines—Berhampur.*—There is a branch line from this station to Russelkonda under consideration, and the location is in hand: the gauge does not appear to have been fixed upon yet. *Naupada.*—The Parlakimedi Raja's tramway is to begin here. There is a large quantity of his sleepers and rails stacked here.

20. *Miscellaneous notes.*—The bungalow of the District Traffic Superintendent on the hill at *Khurda Road Junction* is about two-thirds built. *Sakhi Gopal.*—Platform wall, which had sunk, is now being raised to platform level. *Medtehpur.*—Erection of station building in progress; roofing and flooring done. Staff quarters completed; doors remain to hang. *Puri.*—Goods shed and station-building in progress; the latter is roofed and floored, all but one room. *Ganjam.*—Earthwork in a goods siding here is in progress. *Urlam.*—Formerly a flag-station has, as business has begun to offer lately, been converted into a roadside station. The earthwork in siding is now in hand. *Chicacole Road.*—Gangmen's huts in course of construction. *Chipurupalle.*—I was told that there was some 300 tons of manganese ore stacked here on date. *Cholavaram.*—A new station building has been erected and opened here consisting of a single room. Ticket window to open on to the platform and is still incomplete; platform fencing incomplete. *Vizianagram.*—A block of linemen's huts is in progress of construction. 235/3. A road overbridge in progress of construction: the arch remains to turn. *Kottalavalasa.*—Linemen's huts are in course of erection. *Wallair—Main station.*—A crossover is proposed from third to second line of rails. At the (Vizagapatam) wharf a floating landing stage is under construction in continuation of the present landing stage; it is also proposed to reclaim more ground from the tide for the purpose of providing stacking ground for the manganese business which is here assuming large dimensions. *Locomotive Workshops.*—It was Saturday afternoon when I visited the shops and the Locomotive Superintendent was away. I was informed that the building of rolling stock, for the Rajah of Parlakimedi was the main work in hand. *Kasimkota.*—There is said to be a public demand for a flag-station in the cutting adjacent. *Yellamanchili.*—New gang huts completed here. *Narsapatnam Road.*—A platform for unloading the horses of the Civil officers is under consideration here. *Tuni.*—Here a loop siding of some 500 feet has been put in opposite the goods shed. *Pithapuram.*—The waiting hall here has been enlarged by two bays. *Miles 124½—128.*—The bank is to be raised here 3 feet; the diversion for the same is in active progress. *Samalkot Junction.*—A new ganghut has been built here; the platform has also been extended from 600 to 900 feet, thus serving two trains. *Biccavol.*—A distant signal has been erected 1,200 feet from home signal, since last inspection. *Godavari South.*—The platform here has been extended 150 feet and is now 750 feet along. *Ellore.*—Two blocks of signallers', clerks' and menials' quarters have been built here recently. 32/4. A new ganghut has been built here. 13/12. *Ganaveram.*—A new gang hut is in progress. *Bezwada.*—Recent constructions here are:—a water tank holding 12,800 gallons, menials' quarters for 24, and 3 sets of clerks' and signallers', also 2 blocks of guards' quarters, and houses for 1 assistant stationmaster, 1 carriage examiner, and 1 permanent-way inspector. *Kistna block-house Station.*—Drivers' quarters have been erected here.

21. *The Bezwada-Nellore Section.*—A cursory inspection only from Bezwada to Nellore on the 31st January was made with the object of ascertaining whether there were any points relative to traffic or locomotive matters which the officers of the Railway desired to bring to notice. The line had previously, and quite recently, been inspected from the engineering standpoint, and consequently no further inspection of this kind was considered necessary. The Traffic Superintendent, Mr. Price, was

present during the greater part of the inspection; as was also, at times, one or more of the Sub-divisional Engineers. The Traffic Superintendent stated that at present the most urgent matter which he desired to bring to notice was the necessity, in his opinion, of separating the through traffic from the local: in other words, that of the two daily trains in one direction, one should be a faster train than at present, and the other a slower or pick-up train which should deal with the local business: only on this basis could the punctuality of trains be maintained. No official of the Locomotive Department was present during the inspection.

MADRAS,
10th February, 1899.

A. BEWLEY,
Government Inspector of Railways.

Remarks by the Senior Government Inspector of Railways, Madras.

1. Since the above report was written the Ennur-Gudur section has been opened for all traffic. There is therefore a through service from Madras to Barang. I learn that north of Barang also the line has been passed for all traffic for daylight running by an Inspector of the Calcutta Circle. I went over the whole line myself from Madras to Kola, within 35 miles of Calcutta, and back, between the 23rd February and the 6th March. The running throughout is smooth and the road between Madras and Barang is quite fit for the maxima speeds in use. The newer parts will not be fit for the present speeds once the rains commence unless a great deal more ballast is spread between now and then.

2. Faults in connection with the state of the ballast and of points of crossings might be set right if the Engineer staff could only be got to see the importance of tidiness and uniformity in matters which if habitually treated in a slovenly manner may at any time endanger public safety. Other faults, bad lighting for example, will doubtless come right in due course by the adoption of gas or electricity, a reform which in the interest as well of economy as of efficiency cannot be much longer deferred.

3. The flag station which has recently been established at the south end of Ellore town appeared to me to be doing a great deal of business. But it has not only got no platform but the bank has not even been widened, and its state is dangerous. It most certainly ought to be given at least a rail level platform. I take this opportunity of commenting on the futility of such a matter as this being referred to in his report by a Government Inspector who has no sort of control over the line which he is inspecting. I have already on more than one occasion dealt with the dangerous state of the Kovur platform of this Railway, but not the slightest notice appears to be taken of my remarks. The Inspector under the Railway Act could of course peremptorily close a station considered dangerous, and this may have to be done if the Railway management persist in ignoring his recommendations.

4. If the Tadepalli transhipment platforms are to be used at all, the sooner they are brought into use the better. The Southern Mahratta Railway Company continue to tranship at Bezwada with the two broad gauge lines. The East Coast Railway would be well advised to give them notice that, now that Tadapilly is ready, transhipment at Bezwada must close from a given date, and that the Southern Mahratta Railway business at that place must be confined to local booking. I was told that a good scheme is ready for the local booking referred to, but that it cannot be carried out until transhipment at Bezwada is stopped.

5. I feel fairly confident that if the cost of the working of Sitanagram instead of Bezwada, as the Locomotive station, be looked into it will be found that, if capitalized, the extra recurring expenditure would commercially justify a capital outlay of eight or ten lakhs in concentrating everything at Bezwada. The Director of Railway Construction has pronounced against doing this, and I have nothing to do with the administration of the East Coast Railway; but in the interests of railway administration generally I urge that Government ought not now to commit itself to a policy which our successors ten years hence are likely to undo, at much expense and with much criticism of our lack of foresight.

6. There is a certain suggestive persistence in the complaints which reach Government about such matters affecting the comfort of the public as latrine accommodation on railways; and no wonder when it is considered how largely the convenience of millions of native travellers is affected by the character of this particular class of accommodation. I do not think that the East Coast Railway is worse off in this respect than other lines. The chief grievance appears to be the use, on the older lines of Southern India, of the term "European gentlemen" on platform latrines. Considering the almost universal provision of closets in 1st and 2nd class carriages and the limited use therefore of the platform structures, the word "European" might I think be omitted on those lines which use it, and it ought not to be introduced on the newer lines. So far as I could judge native refreshment for all classes appeared to be well managed on the East Coast Railway.

7. Naturally, the train service of a line so recently opened from time to time in short sections is not yet perfect, though the public who write to the papers appear to expect the train service of a new railway to spring instantly into the condition of that of the oldest lines. Nevertheless the recently approved train service might perfectly well be, and ought certainly to be, immediately improved by a later start from Royapuram (Madras) so as to allow of the despatch of the newspapers and of the local business mail of the day. From end to end of the line there is a great deal of unnecessary loitering at stations, and a notable absence of smart alertness. This will all doubtless come right in due course; large numbers of natives cannot be all of a sudden converted into quick thinking men of action; but one might have expected more smartness on the parts of the line which have been opened for five or six years.

8. There appears to be no system of ringing bells for the departure of trains, or for calling out the names of stations; each station attends or not to such details at its own sweet will. The names of stations where painted on the lamps are usually illegible. The staff appear to take it for granted that so long as a thing is done *anyway*, it will serve, instead of being always on the alert for the best "jim" to be found on *any* railway, and adopting that throughout the system. Nobody can read a name painted on the glass of a lantern, with a blaze of light (when there is a blaze!) directly behind it. Either the glass around the name should be ground, or the name should be backed with varnished paper to cover the glare of the light. Perhaps the best and cheapest way is to print the name on paper, and attach the slip of paper by means of varnish to the inside of the lantern.

9. There are serious defects at both ends of the present open system, Madras to Barang, which can be and which ought immediately to be remedied. 1st the Madras-Ennur 10 mile section is still being separately worked by the Madras Railway Company, the East Coast engine stopping at Ennur and the train being hauled in to Royapuram by a Madras Railway engine. This curious arrangement is I understand due to some idea on the part of the East Coast Railway that the Madras Railway Company will somehow or other make money out of them for the use of Royapuram terminus. As if it mattered one rupee's worth while both railways are virtually under one ownership! I tried to set this right before it was drifted into, but the Government of India preferred to leave it to the two managers. Mr. Moss, I understand, is willing to agree to anything in reason so as to terminate the present indefensible arrangement, but apparently the East Coast Railway are afraid of being "done", so won't meet him. The same engine accommodation that is now at Ennur can perfectly easily be provided at Rayapuram. But naturally, as things stand at present, it is not for the Madras Railway Company to move in the matter. The second anomaly is that trains from Madras to Barang stop at the latter place at nightfall, and the wretched passengers, practically all of whom are for Cuttack, have to find their way across country 6 or 8 miles at night. I understand that the Bengal-Nagpur Railway is quite agreeable to any arrangement for letting the East Coast Railway trains run in by daylight to Cuttack. The latter only need to curtail some of their wearisome station halts at other parts of the two-day journey, and so contrive to get into Cuttack, over the river diversions, by daylight. However, it is little use referring to this, because people take such a time to make up their minds that nothing is likely to be settled before the rains of June next render the Barang-Cuttack section again impassable, and all will be right with the completion of the bridgework near Cuttack by the end of this year.

10. The Godavari bridge is getting on very well, now that Mr. Walton has got his pneumatic sinking arrangements at work. Only two wells in the deep part of the river remain to be founded. The rest are all either sunk or partly sunk, including two pneumatic wells already in full progress. So far as I can see the 31st December 1900 ought easily to see the whole bridge completed. It is just possible that *with luck*, and provided that a large number of girders are sent out before November next, trains may be running across the Godavari before the floods of June 1900. If this does not come off, it will not be the fault of the working arrangements which are thoroughly good, in spite of certain defects of general design for which Mr. Walton is not responsible.

11. Now that the completion of the through line from Madras to Calcutta is rapidly approaching, I strongly recommend that every effort be made to thoroughly and uniformly ballast the whole line from end to end, in order that the public may be given the many advantages of a smart, quick and punctual train service. It would be well if an ample capital grant were at once made available for this purpose, and if a regular service of well-arranged ballast trains were started everywhere, while traffic is dull and trains are slow. But the present slovenly methods ought to be peremptorily stopped, and the matter should be treated with the seriousness due to its importance instead of, as apparently is the case now, every petty native inspector being allowed to adopt any ballast section which he may happen to fancy.

MADRAS,
6th March 1899.

FRANCIS J. E. SPRING,
Senior Government Inspector.

ORDER—No. 361 Ry., dated 30th March 1899.

The report will be forwarded to the Government of India for the issue of such orders to the Manager as may seem to them to be necessary. The Government of India's special attention is invited to the several suggestions contained in the Senior Government Inspector's remarks.

[Here enter No. 362 Ry., dated 30th March 1899.]

(True Extract.)

FRANCIS J. E. SPRING,
Joint Secretary.

To the Consulting Engineer for Railways.

ENDORSEMENT—No. 362 Ry., dated 30th March 1899.

Forwarded.

(By order.)

FRANCIS J. E. SPRING,
Joint Secretary.

Exd. W. D'Moss.

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8. *Level Crossings*.—Although the line is unfenced throughout nevertheless fifty or sixty feet of fencing on either side of the gate is advantageous, as it prevents straggling during the crossing, and for other reasons. This has not been done throughout the line. External guard rails appear to be very generally substituted by wooden sleepers or planks. The metalling of both ramps of the crossings would appear to be desirable. Grass huts attached to the gate-houses have, in some instances, been allowed to grow up, obscuring the engine-driver's view of the gate-house and that of the gatemen of the approaching train. *Kasimkota*.—Considerable attention appears to be paid to efficiency and neat appearance of level crossings on this section.

9. *Mile Stones*.—These are very insignificant in appearance, and are simply stuck into the edge of bank.* They are preferably placed outside of the edge of bank in an earthen platform, and the earth surfaces protected. The stones are thus rendered visible for considerable distances; at present they are invisible at 10 chains.

10. *Telegraph Posts*.—The figures representing the mileage require repainting. At present, besides being dull, they are also almost illegible, owing to their being ill-shaped and too thin in the stem for their height. The posts are numbered only alternately, instead of consecutively. If this be done from motives of economy, it seems ill-judged, as the annoyance and waste of time and temper due to finding oneself opposite an unnumbered post when seeking its number is not set off by a saving of 10–15 rupees per mile.

11. *Gate-houses, Bridges and Culverts*.—These are still unnumbered. Between *Khurda* and *Chatrapur*, I noticed the singular manner in which the cross sleepers on a girder culvert had been cut down, apparently with the object of lowering the rails thereon. *Barang*.—Gate-houses not yet erected.

12. *Stations*.—At the larger stations platform ornamentation is very unsystematic; and in most cases it has been overlooked that utility and convenience should be the governing considerations in the disposal of the platform area. Horticultural operations should be rigidly confined to a strip of 10 feet width or so contiguous to the platform paling; and ornamental pots, shrubs, and rockery work when indulged in should be confined to an additional strip of a few feet and not allowed to encumber the neighbourhood of the entrance passages. In this connexion the stations of *Vizianagram* and *Berhampur* call for particular notice. *Bhubaneswar*.—The present position of the station does not suit the pilgrim traffic; and an improved location has not yet been fixed upon. *Khurda Road Junction*.—Some buildings belonging to the Traffic staff and visible from the line are disfigured by dirty ragged pattal huts and extensions. *Delang*.—This station is, I think, within 200 feet of the parallel-running main road from which it is separated by a ditch, across which is the natural line of access, and this should have been the site of the station approach road. So far as I could see, there is no approach road to this station. The station building is not on the same side as the main road, but on the jungle side of the line. This station is stated to take Rs. 50 per week. *Puri*.—Wooden fencing round station platform is still incomplete, and appears to me to be of quite too weak a type to resist the pressure of crowds. *Kalupura Ghat*.—The names of offices in the station building are not yet put up. *Nellimarala*.—The condition of the approach road to this station appears neglected. On pointing this out I was informed that there was no wheel-traffic. *Vizianagram*.—I noticed that the approach road was on one side unfenced. *Narsapatnam Road*.—Here the attention is mainly arrested by some very dirty and ragged chappars in front of the station menials' quarters. Such encroachments cannot be too summarily disposed of. The present condition of the station platform here is open to criticism. It should be made level and the floor of the station building connected with it by steps, as at *Tuni*. *Pithapuram*.—I found the station cash-chest here let into the wall—which is by no means the universal state of things on this railway. The station-platform name-board appears to be too small. *Samalkot Junction*.—The entrance passage into station platform requires a gate. At present there is none.

13. *Drinking accommodation*.—The passenger watering arrangements at stations are still quite primitive—the insanitary three-ghara filter still holding its own. At some stations modern filters, holding possibly a gallon, were found. In some

instances there was found a platform tap water-supply, but so remotely situated and so concealed as to be comparatively useless to half a train-load of thirsty passengers. In most cases the button or knob controlling the flow had been lost or stolen.

I examined a platform tap at *Khurda Road Junction*. I found the water off, although there was a passenger train standing in the station at the time. At *Puri* the water-supply is at present furnished from two or three small wells across the approach road, fronting the station-building; it appears inadequate to the requirements of a pilgrim station. *Berhampur*.—There are here no platform water taps for the use of passengers: a bihishti supplies the water required. *Ellore*.—The filter and the drinking-water accommodation at this station must be pronounced inadequate; the platform hydrant or tap is placed in a most unsuitable situation.

14. *Waiting and Refreshment rooms*.—Generally well placed as regards passengers' convenience, and neat and inviting in internal arrangements. The comfort and convenience of passengers would be greatly enhanced by the introduction of wire-gauze fore-doors for waiting rooms and refreshment rooms, at least at the larger stations. I found that the practice of maintaining complaint or suggestion books was by no means general; and that, where obtaining, small school exercise books were employed; most of those examined dated from the first day of the present year. The Traffic Superintendent has promised to remedy the present imperfect arrangements and to establish suitable books. At *Berhampur* the waiting room accommodation is stated to be insufficient. At *Palasa* the first-class waiting room is a wattle and daub structure with a mud or lime-plastered floor. I examined the bath room and noticed a strong smell of urine: a water-proof floor seems indicated. *Garividi*.—There is a waiting room here in hand, mainly for the convenience of Europeans connected with the mines adjacent. *Samalkot Junction*.—The waiting room here is not indicated by a name board.

15. *Weighing Machines*.—The Stationmaster at *Cocanada Harbour* was unable to inform me when the last inspection of the weighing machine had taken place, stating that he kept no diary. Weighing machines are in all stations movable and stand on the floor; in many instances the machine is even raised 6 or 8 inches above the floor on a platform, thus necessitating useless labour in handling goods when weighing, and endangering the limbs of the staff.

16. *Latrines*.—These are invariably situated at the ends of the platforms. They are of Horbury type, or imitations thereof; they have not been very carefully put together; they are very shabby-looking, and mostly unpainted. The main defects observed are these: (a) the sides or walls extend down to the surface of the ground; (b) there is no artificial floor, the natural surface of the ground serving as such. In this connection I observed, in some instances, ordure deposited outside of the inner cells of the latrine. Whatever the character of the screen may be, it seems desirable that the floors of the latrines should be cement-plastered and properly drained. This is not done. At *Berhampur* the latrine accommodation is reported to be insufficient; the present accommodation provides two seats each for male and female. *Narsapatnam Road*.—I examined the latrine here, it has the usual objectionable earthen floor. From my examination I concluded that this latrine is so rarely used as to be useless. *Ellore*.—I examined one of the platform latrines; it was uncleansed, and the interior had evidently been unused for a long time, the exterior and neighbourhood serving instead.

17. *Lighting*.—This is a matter in which little or no attention has been paid to the comfort and convenience of travellers not native. The carriage illumination is miserable, and its duration quite uncertain. The lamps in the inspection carriage proved conclusively that the art of wick-trimming was not understood, or was at least insufficiently attended to. I found the platform lamp-posts, as a rule, some 17 feet from the edge of the platform. I would recommend their being removed back to the boundary between platform and garden, and that the maintenance of a clear uninterrupted width of platform of 25 feet be maintained, at least at the larger and more important stations. *Berhampur*.—A lamp room has been built here since the last inspection. *Samalkot Junction*.—This station has no lamp room. The entrance and exit passage on to platform requires a hanging lamp for illumination at nights. *Ellore*.—There appears to be no special lamp room nor oil-reservoir. The oil drum serving as a magazine which I examined may have contained 36 gallons.

18. *Locomotive Conveniences—Chalrapur.*—Watering arrangements are completed here with exception of the water-columns. The water is to be obtained from a constant spring which has been found in the cutting adjacent. *Kottalavalasa.*—A new water-tank staging is being erected here. *Samalkot Junction.*—The former pine-wood tank staging, now rotten, is being replaced by a metal one. *Ashpits—Puri.*—The same defect is visible here as elsewhere on the main line, viz., the stones under the wood-work are far too small. They appeared to me to have moved. *Turntable.*—Same remark applies; coping stones under the rails are dislocated. *Watering arrangements.*—The pumps and valves might beneficially be protected. *Vizianagram.*—The wall of the large well here seems to be dangerously low.

19. *Projected Feeder Lines—Berhampur.*—There is a branch line from this station to Russelkonda under consideration, and the location is in hand: the gauge does not appear to have been fixed upon yet. *Naupada.*—The Parlakimedi Raja's tramway is to begin here. There is a large quantity of his sleepers and rails stacked here.

20. *Miscellaneous notes.*—The bungalow of the District Traffic Superintendent on the hill at *Khurda Road Junction* is about two-thirds built. *Sakhi Gopal.*—Platform wall, which had sunk, is now being raised to platform level. *Medtehpur.*—Erection of station building in progress; roofing and flooring done. Staff quarters completed; doors remain to hang. *Puri.*—Goods shed and station-building in progress; the latter is roofed and floored, all but one room. *Ganjam.*—Earthwork in a goods siding here is in progress. *Urlam.*—Formerly a flag-station has, as business has begun to offer lately, been converted into a roadside station. The earthwork in siding is now in hand. *Chicacole Road.*—Gangmen's huts in course of construction. *Chipurupalle.*—I was told that there was some 300 tons of manganese ore stacked here on date. *Cholavaram.*—A new station building has been erected and opened here consisting of a single room. Ticket window to open on to the platform and is still incomplete; platform fencing incomplete. *Vizianagram.*—A block of linemen's huts is in progress of construction. 235/3. A road overbridge in progress of construction: the arch remains to turn. *Kottalavalasa.*—Linemen's huts are in course of erection. *Waltair—Main station.*—A crossover is proposed from third to second line of rails. At the (Vizagapatam) wharf a floating landing stage is under construction in continuation of the present landing stage; it is also proposed to reclaim more ground from the tide for the purpose of providing stacking ground for the manganese business which is here assuming large dimensions. *Locomotive Workshops.*—It was Saturday afternoon when I visited the shops and the Locomotive Superintendent was away. I was informed that the building of rolling stock, for the Rajah of Parlakimedi was the main work in hand. *Kasimkota.*—There is said to be a public demand for a flag-station in the cutting adjacent. *Yellamanchili.*—New gang huts completed here. *Narsapatnam Road.*—A platform for unloading the horses of the Civil officers is under consideration here. *Tuni.*—Here a loop siding of some 500 feet has been put in opposite the goods shed. *Pithapuram.*—The waiting hall here has been enlarged by two bays. Miles 124½—128.—The bank is to be raised here 3 feet; the diversion for the same is in active progress. *Samalkot Junction.*—A new ganghut has been built here; the platform has also been extended from 600 to 900 feet, thus serving two trains. *Biccavol.*—A distant signal has been erected 1,200 feet from home signal, since last inspection. *Godavari South.*—The platform here has been extended 150 feet and is now 750 feet along. *Ellore.*—Two blocks of signallers', clerks' and menials' quarters have been built here recently. 32/4. A new ganghut has been built here. 13/12. *Ganabaram.*—A new gang hut is in progress. *Bezwada.*—Recent constructions here are:—a water tank holding 12,800 gallons, menials' quarters for 24, and 3 sets of clerks' and signallers', also 2 blocks of guards' quarters, and houses for 1 assistant stationmaster, 1 carriage examiner, and 1 permanent-way inspector. *Kistna block-house Station.*—Drivers' quarters have been erected here.

21. 23. *The Bezwada-Nellore Section.*—A cursory inspection only from Bezwada to Nellore on the 31st January was made with the object of ascertaining whether there were any points relative to traffic or locomotive matters which the officers of the Railway desired to bring to notice. The line had previously, and quite recently, been inspected from the engineering standpoint, and consequently no further inspection of this kind was considered necessary. The Traffic Superintendent, Mr. Price, was

present during the greater part of the inspection; as was also, at times, one or more of the Sub-divisional Engineers. The Traffic Superintendent stated that at present the most urgent matter which he desired to bring to notice was the necessity, in his opinion, of separating the through traffic from the local: in other words, that of the two daily trains in one direction, one should be a faster train than at present, and the other a slower or pick-up train which should deal with the local business: only on this basis could the punctuality of trains be maintained. No official of the Locomotive Department was present during the inspection.

MADRAS,
10th February, 1899.

A. BEWLEY,
Government Inspector of Railways.

Remarks by the Senior Government Inspector of Railways, Madras.

1. Since the above report was written the Ennur-Gudur section has been opened for all traffic. There is therefore a through service from Madras to Barang. I learn that north of Barang also the line has been passed for all traffic for daylight running by an Inspector of the Calcutta Circle. I went over the whole line myself from Madras to Kolaf, within 35 miles of Calcutta, and back, between the 23rd February and the 6th March. The running throughout is smooth and the road between Madras and Barang is quite fit for the maxima speeds in use. The newer parts will not be fit for the present speeds once the rains commence unless a great deal more ballast is spread between now and then.

2. Most of the faults and inconsistencies to be found throughout the East Coast Railway are ascribable to the manner in which in its early days it was dragged into existence by means of restricted and sometimes violently fluctuating grants, and also to poor administration during the early period of its construction career. Administrative errors again must be held responsible for the very serious defects of the Bezwada, Sitanagram and Tadipilly junction arrangements. But there are many faults, chiefly in connection with the state of the ballast and of points of crossings, which might be set right if the Engineer staff could only be got to see the importance of tidiness and uniformity in matters which if habitually treated in a slovenly manner may at any time endanger public safety. Other faults, bad lighting, for example, will doubtless come right in due course by the adoption of gas or electricity, a reform which in the interest as well of economy as of efficiency cannot be much longer deferred.

3. The flag station which has recently been established at the south end of Ellore town appeared to me to be doing a great deal of business. But it has not only got no platform but the bank has not even been widened, and its state is dangerous. It most certainly ought to be given at least a rail level platform. I take this opportunity of commenting on the futility of such a matter on this being referred to in his report of a Government Inspector who has no sort of control over the line which he is inspecting. I have already on more than one occasion dealt with the dangerous state of the Kovur platform of this Railway, but not the slightest notice appears to be taken of my remarks. The Inspector under the Railway Act could of course peremptorily close a station considered dangerous, and this will have to be done if the Railway management persist in ignoring his recommendations.

4. If the Tadapilly transshipment platforms are to be used at all, the sooner they are brought into use the better. The Southern Mahratta Railway Company continue to tranship at Bezwada with the two broad gauge lines. The East Coast Railway would be well advised to give them notice that, now that Tadapilly is ready, transshipment at Bezwada must close from a given date, and that the Southern Mahratta Railway business at that place must be confined to local booking. I was told that a good scheme is ready for the local booking referred to, but that it cannot be carried out until transshipment at Bezwada is stopped.

5. I feel fairly confident that if the cost of the working of Sitanagram instead of Bezwada, as the Locomotive station, be looked into it will be found that, if capitalized, the extra recurring expenditure would commercially justify a capital outlay of eight or ten lakhs in concentrating everything at Bezwada. The Director of Railway

Construction has pronounced against doing this, and I have nothing to do with the administration of the East Coast Railway; but in the interests of railway administration generally I urge that Government ought not now to commit itself to a policy which our successors ten years hence are likely to undo, at much expense and with much criticism of our lack of foresight.

6. There is a certain suggestive persistence in the complaints which reach Government about such matters affecting the comfort of the public as latrine accommodation on railways; and no wonder when it is considered how largely the convenience of millions of native travellers is affected by the character of this particular class of accommodation. I do not think that the East Coast Railway is worse off in this respect than other lines. The chief grievance appears to be the use, on the older lines of Southern India, of the term "European gentlemen" on platform latrines. Considering the almost universal provision of closets in 1st and 2nd class carriages and the limited use therefore of the platform structures, the word "European" might I think be omitted on those lines which use it, and it ought not to be introduced on the newer lines. So far as I could judge native refreshment for all classes appeared to be well managed on the East Coast Railway.

7. Naturally, the train service of a line so recently opened from time to time in short sections is not yet perfect, though the public who write to the papers appear to expect the train service of a new railway to spring instantly into the condition of that of the oldest lines. Nevertheless the recently approved train service might perfectly well be, and ought certainly to be, immediately improved by a later start from Royapuram (Madras) so as to allow of the despatch of the newspapers and of the local business mail of the day. From end to end of the line there is a great deal of unnecessary loitering at stations, and a notable absence of smart alertness. That will all doubtless come in due course; large numbers of natives cannot be all of a sudden converted into quick thinking men of action; but one might have expected more smartness on the parts of the line which have been opened for five or six years.

8. There appears to be no system of ringing bells for the departure of trains, or for calling out the names of stations; each station attends or not to such details at its own sweet will. The names of stations where painted on the lamps are usually illegible. The staff appears to take it for granted that so long as a thing is done *anyway*, it will serve, instead of being always on the alert for the best "jim" to be found on *any* railway, and adopting that throughout the system. Nobody can read a name painted on the glass of a lantern, with a blaze of light (when there is a blaze!) directly behind it. Either the glass around the name should be ground, or the name should be backed with varnished paper to cover the glare of the light. Perhaps the best and cheapest way is to print the name on paper, and attach the slip of paper by means of varnish to the inside of the lantern.

9. There are serious defects at both ends of the present open system, Madras to Barang, which can be and which ought immediately to be remedied. 1st the Madras-Ennur 10 mile section is still being separately worked by the Madras Railway Company, the East Coast engine stopping at Ennur and the train being hauled in to Royapuram by a Madras Railway engine. This curious arrangement is I understand due to some idea on the part of the East Coast Railway that the Madras Railway Company will somehow or other make money out of them for the use of Royapuram terminus. As if it mattered one rupee's worth while both railways are virtually under one ownership! I tried to set this right before it was drifted into, but the Government of India preferred to leave it to the two managers. Mr. Moss, I understand, is willing to agree to anything in reason so as to terminate the present indefensible arrangement, but apparently the East Coast Railway are afraid of being "done", so won't meet him. The same engine accommodation that is now at Ennur can perfectly easily be provided at Rayapuram. But naturally, as things stand at present, it is not for the Madras Railway Company to move in the matter. The second anomaly is that trains from Madras to Barang stop at the latter place at nightfall, and the wretched passengers, practically all of whom are for Cuttack, have to find their way across country 6 or 8 miles at night. I understand that the Bengal-Nagpur Railway is quite agreeable to any arrangement for letting the East Coast Railway trains run in by daylight to Cuttack. They have only got to curtail some of their wearisome

station halts at other parts of the two-day journey, and so contrive to get into Cuttack, over the river diversions, by daylight. However, it is little use referring to this, because people take such a time to make up their minds that nothing is likely to be settled before the rains of June next render the Barang-Cuttack section again impassable, and all will be right with the completion of the bridgework near Cuttack by the end of this year.

10. The Godavari bridge is getting on very well, now that Mr. Walton has got his pneumatic sinking arrangements at work. Only two wells in the deep part of the river remain to be founded. The rest are all either sunk or partly sunk, including two pneumatic wells already in full progress. So far as I can see the 31st December 1900 ought easily to see the whole bridge completed. It is just possible that *with luck*, and provided that a large number of girders are sent out before November next, trains may be running across the Godavari before the floods of June 1900. If this does not come off, it will not be the fault of the working arrangements which are thoroughly good, in spite of certain defects of general design for which Mr. Walton is not responsible.

11. Now that the completion of the through line from Madras to Calcutta is rapidly approaching, I strongly recommend that every effort be made to thoroughly and uniformly ballast the whole line from end to end, in order that the public may be given the many advantages of a smart, quick and punctual train service. It would be well if an ample capital grant were at once made available for this purpose, and if a regular service of well-arranged ballast train were started everywhere, while traffic is dull and trains are slow. But the present slovenly methods ought to be peremptorily stopped, and the matter should be treated with the seriousness due to its importance instead of, as apparently is the case now, every petty native inspector being allowed to adopt any ballast section which he may happen to fancy.

MADRAS,
6th March 1899.

FRANCIS J. E. SPRING,
Senior Government Inspector.

ORDER—No. 361 Ry., dated 30 March 1899.

The report will be forwarded to the Government of India for the issue of such orders to the Manager as may seem to them to be necessary. The Government of India's special attention is invited to the several suggestions contained in the Senior Government Inspector's remarks.

[Here enter No. 362 Ry., dated 30 March 1899.]

(True Extract.)

FRANCIS J. E. SPRING,
Joint Secretary.

ENDORSEMENT—No. 362 Ry., dated 30 March 1899.

Forwarded.

(By order.)

Joint Secretary.

Exd. W. D. Moss

*the Manager of the
the Bengal-Nagpur Railway
a Comptroller for the*

Despatched on 5/4