Chapter 3 – Engineering – Open Line and Construction

The Engineering Department is headed by Member (Engineering) at Railway Board and has two distinct branches viz., Civil Engineering and Survey & Constructions. The Civil Engineering branch is headed by the Chief Engineer at zonal level. This department is responsible for the upkeep of the assets such as land, buildings and tracks with emphasis on passenger safety and reliability of assets. The Construction department is headed by the Chief Administrative Officer (Construction) and is responsible for construction works of new lines, doubling, gauge conversion, buildings and bridges.

The total expenditure of the Civil Engineering Department during the year 2009-10 was ₹16,646 crore. During the year, apart from regular audit of vouchers and tenders etc., 924 offices of Civil Engineering including Construction Organization of the Railway were inspected by Audit. A theme study carried out on new lines taken up on socio-economic grounds ten years ago and remaining incomplete examines the progress of the works since inception and the constraints thereof.

The chapter also focuses on issues of deficiencies in contract management, avoidable/wasteful expenditure incurred on constructions works such as new lines, doubling, gauge conversion, railway electrification etc. In addition, this chapter includes issues of non-adherence/non-implementation of rules contained in the Indian Railway Code for Engineering Department, General Conditions of Contracts and other rules/orders issued by Railway Board.

3.1 Construction of new lines on socio-economic considerations

Amravati – Narkher New Lines Project
(Sanctioned in 1993-94 – not yet completed)

Earthwork on Baramati-Lonand-Phaltan new project

Executive summary

Railways take up projects for construction of new lines at regular intervals on socio economic grounds to provide rail connectivity to backward and remote areas of the country. These socially desirable projects though financially unviable and involving a huge outlay of expenditure had been in a state of incompleteness since many decades. Audit had earlier reviewed the 'Project Management Practices in Gauge Conversion and New Line Projects' and reported on Railways taking up a large number of projects without any regard to availability of funds and prioritization resulting in their lying incomplete for a period of 5 to 20 years. The Public Accounts Committee in their Fourth Report presented to Parliament in December 2009 had emphasized the need to

overcome resource crunch through effective prioritization by the Ministry of Railways.

The progress of 50 new line projects sanctioned more than ten years ago was reviewed to evaluate their present status and reasons for their non-completion. Audit noticed that in most of the projects, targets for completion were not envisaged and where targets were set, these were not achieved. The preliminary works required to be completed before commencement of works were delayed for years together. Delay in preparation of detailed estimates and sanction thereof and land acquisition were the problem areas in most of the projects. Investment schedules were not prepared leading to improper fund allotment. Inadequate coordination with State Government/Ministry of Environment for availability of site and clearance of forest land contributed to huge time and cost over runs. Besides, a number of contracts were terminated/ foreclosed due to insufficient planning on account of drawings not being made available, change in scope of works etc. Indian Railway committed resources of `8,549 crore on 50 incomplete new lines for an indefinite period with no certainty of the objectives being realized.

Summary of Recommendations

- *The availability of land for construction of a new line should be ensured before the approval of a new line project and the detailed estimates should be prepared immediately to facilitate the commencement and completion of works. There should be a clear cut date for completion of the project.**(Para 3.1.4.2 & 3.1.4.3)***
- *Railway Board should actively consider shelving of projects where the work is yet to commence or the physical progress is very low due to resource crunch. The projects lying in areas having good road infrastructure may be considered for shelving/lower priority so that funds are utilized on projects of higher priority.* ***(Para 3.1.4.4)***
- *Railways should prepare investment schedules of all ongoing projects consistent with project completion dates and commit resources accordingly. Thin spreading of scarce resources should be avoided and a proactive approach be adopted.* ***(Para 3.1.5.1 to 3.1.5.3)***
- *Once the works are undertaken, they should be completed within the shortest possible time to avoid cost and time over run. The construction of a new line should be commenced from the end that is linked with the existing line and completed in stretches so that train services are introduced on the completed part immediately to derive maximum benefit.**(Para 3.1.6.1 to 3.1.6.4)***

- *Though as per extant instructions Railways should not enter into any contract before completion of preliminary site investigation, approval of plans and drawings, etc., the same were not implemented. Railway Board should look into the reasons for the lapses/deviations that had caused hasty tendering without completion of preliminary formalities and tighten accountability.* ***(Para 3.1.7.1 & 3.1.7.2)***
- *Projects that were taken up at the instance of State Governments should be proactively pursued for commitment of participation in terms of funding or provision of land by the State Governments concerned.* ***(Para 3.1.8.1 to 3.1.8.3)***

3.1.1 Introduction

Indian Railway had remained, since its inception, the principal mode of public transportation for carriage of long distance passenger and freight traffic. Commencing its maiden journey on 16 April 1853 from Boribunder to Thane covering a short distance of 34 kms, the Railways had completed a rail network of 64015 route kilometers comprising 52,808 kms of Broad Gauge, 8,473 kms of Meter Gauge and 2,734 kms of Narrow Gauge as on 31 March 2009.

In order to meet the requirements of the growing economy, the Zonal Railways had expanded their carrying capacity of the network through various measures such as doubling of the lines, modernization of the signaling systems, strengthening the rail tracks and opening of new lines. While Railways undertook projects of expansion keeping in mind the financial viability and their operational requirements, socio economic development needs of the backward regions also played a major role from time to time in the initiation of a large number of new lines for providing rail connectivity, though these were non-viable. In the Vision 2020 document presented to Parliament, the Ministry of Railways (Railway Board) had stated that there was a huge shelf of 109 ongoing ‘New Line Projects’ covering a route length of 11,985 kms out of which only 12 were financially viable, 8 were national projects with assured funding, the remaining (97) being non-viable but sanctioned on socio-economic grounds.

3.1.2 Audit Objectives

The latest anticipated cost of these non-viable but socially desirable projects was ₹56,640 crore while the balance of funds required to complete them was ₹50,405 crore. According to the Vision 2020 Document, the Railways were unable to allocate more than ₹1500 crore per annum for these projects while the XI Five year Plan had envisaged a total allocation of ₹9000 crore at the rate of ₹1800 crore per annum during 2007-08 to 2012-13. Out of 97 financially non-viable but socially desirable projects, audit reviewed the progress of 50 projects, sanctioned more than ten years ago in the achievement of their underlying objectives. For this purpose, the following issues were examined in particular:

- Planning for execution of the project to achieve the stated goals.
- Scheduling of various activities and their implementation to complete the works.
- Funding pattern and actual utilization.

3.1.3 Audit Methodology

Audit reviewed those new lines that were sanctioned on considerations of socio-economic development more than ten years ago (excluding national projects) but were lying incomplete, to evaluate their progress and constraints in implementation. Audit studied budget documents including the Annual Works Programme of the Railway Board and the related construction records of 50 such new lines under implementation in Zonal Offices.

3.1.4 Audit findings

Audit examination of 50 ongoing works of new lines sanctioned on socio-economic development of backward regions revealed that five sanctioned more than 20 years ago, nine sanctioned between 15 and 20 years and 36 sanctioned between ten and 15 years ago were still lying incomplete as on 31 March 2010. The progress of works being very slow, eighteen of them were not expected to be completed within the next ten years. Railways have already incurred an expenditure of `8,549 crore on the 50 new lines projects and the balance funds required to complete these projects were of the order of ₹16,800 crore.

(Annexure XV & XVI)

3.1.4.1 Planning for execution

Decision to construct a new line is taken after a preliminary investigation to determine how the proposed line will fit in with the general scheme of future development of the Railways. After preliminary investigation, traffic survey is conducted to ascertain the financial viability of the project. Though as a set procedure, Railway take up the construction of new lines with anticipated yield of 14 per cent and above, they also undertake the construction of new lines on consideration of socio-economic development of backward or remote regions to provide rail connectivity. Sometimes the construction is also undertaken on public demand through its elected representatives to Parliament or Legislature.

Audit examination of the records pertaining to the new line projects sanctioned on consideration of socio-economic development of the backward regions revealed that the preliminary works required for successful execution of projects such as preparation/sanction of detailed estimates, acquisition of land etc were not commenced immediately and there were considerable delays as discussed in the ensuing paragraphs. In 36 projects, no target dates of completion had been set and in 14 projects where these were assigned, there were time overruns. With no revision of completion dates, these projects continue to remain in a state of in-definiteness and uncertainty.

3.1.4.2 Delay in preparation of detailed estimate and commencement of the works

After approval of the abstract estimate, the Railway Administration should undertake the final location survey, proceed with such preliminary arrangements such as land acquisition and ordering of stores etc. to the extent funds are allotted and undertake the preparation of detailed estimates or construction estimate. Construction of work should commence only after the detailed estimate is sanctioned. Our scrutiny of records of the offices responsible for execution of the new lines revealed that there was delay of 2 - 15 years in preparation of the detailed estimates in respect of 23 projects out of 50 which had been sanctioned more than ten years ago. The details of projects whose estimates were prepared and submitted after delay of 5 years are given below:

TABLE I

Railway	Name of project	Year of inclusion in budget	Date of submission of detailed estimate	Delay in terms of years
Northeast Frontier	Eklakhi – Balurghat & Gazole Itahar	1983-84	28.4.1995	**11 years**
Northeast Frontier	Dudhnoi – Mendhpathar (depa)	1992-93	28.12.2007	**14 years 9 months**
East Coast	Khurda Road - Bolangir	1994-95	1.4.2002	**7 years**
South Central	Macheria - Nalgonda	1997-98	19.9.2003	**5 years 6 months**
Southern	Angamali - Sabrimala	1997-98	9.3.2005	**7 years**
South Central	**Kakinada - Pithapuram**	**1999-2000**	**30.4.2006**	**6 years**

Audit noticed that Railway Board had taken one year to ten years for sanctioning the detailed estimates in respect of 14 projects. This showed clear lack of urgency/commitment on the part of the authorities to take up the works, though these were considered to be socially desirable projects.

3.1.4.3 Delay in initiation of action for land acquisition

It was noticed that the process for land acquisition was not commenced immediately and there was considerable delay running into years. In 34 projects, the land acquisition process had not been completed despite a lapse of more than ten years and as a result the construction activities on these stretches had not even commenced. The projects where the land acquired was less than 25 per cent are Macherla – Nalgonda (0 per cent), Kakinada – Pithapuram (0 per cent), Tirrunavaya – Guruvayoor (0 per cent), Hawrah – Amta-Bargachia-Champadanga-Tarkeshwar & Amta –Bagnan (0 percent in Amta – Bagnan section), Dudhnoi-Mendhpathar (Depa) (24.25 per cent), Khurda Road – Bolangir (21.70 per cent), Khagaria – Kusheshwarsthan (22.70 per cent), Hubli – Ankola (6.90 per cent), Munirabad – Mahboobnagar (10.86 per cent), Ramganjmandi – Bhopal (7.35 per cent), Angamali – Sabrimala (1.54 per cent) and Kotipalli – Narsapur (12.73 per cent).

The reasons for non acquisition of land were non-availability of land due to protests by land owners, non-clearances by the State Governments for handing over forest lands etc. **(Annexure XVII)**

Recommendation

The availability of land for construction of a new line should be ensured before the approval of a new line project and the detailed estimates should be prepared immediately to facilitate the commencement and completion of works. There should be a clear cut target date for completion of the project.

3.1.4.4 Non-shelving of projects with nil progress or little progress requiring huge throw forward

Public Accounts Committee (PAC) in its 61st Report presented in the 14th Lok Sabha on 1st December 2007, had recommended that the Working Group consisting of representatives of Ministry of Railways, Finance and Planning Commission should not only lay down the criteria for taking up various Railway projects but also review all the ongoing projects that were taken up on socio-economic considerations by the Railways and were pending for completion. It also recommended that as far as possible, only such projects which were substantially complete and had a reasonable throw forward should be continued and the rest of them may be shelved.

Ministry of Railways in their Action Taken Note (presented to Parliament by PAC on 17th December 2009) indicated that the above recommendations of the Committee were not accepted at the highest level on the ground that the new line projects were taken up based on the demands and aspirations of local people. Shelving such projects would have wider ramifications and invite public criticism.

The PAC in its Fourth Report presented to the15th Lok Sabha in December 2009 had observed that on the one hand, Railways were not prepared to shelve projects which were yet to take off while on the other, the State Governments were not prepared to share the cost. The Committee was, therefore, of the view that non-completion of projects taken up on socio-economic considerations within a definite time frame would have more adverse ramifications and certainly invite greater criticism. The Committee also observed that the very purpose of selecting socio-economic projects for connecting the backward, underdeveloped and remote areas got defeated when the Railways were unable to make available adequate resources and the concerned State Governments were reluctant to share the cost. The Committee, therefore, stressed upon the Railways to review all the new line projects taken up on socio-economic considerations but pending completion so that a fair assessment of continuing or shelving such projects was made.

Audit observed that no work had been taken up in five projects namely; Tirunnavaya – Guruvayoor in Southern, Bangalore-Satyamanglam in South Western and Macheria – Nalgonda, Kakinada – Pithapuram & Kotipalli – Narsapur in South Central Railways sanctioned in the year 1997-98 to 2000-01. As the Ministry had not committed any priority in taking up the works despite lapse of nine to 13 years, these works needed to be reviewed urgently for a final decision. Similarly, four projects where the overall physical progress was less than ten per cent, languishing for 14 to 22 years and requiring huge throw forward (approximately ₹3,600 crore) could be considered for shelving unless State Government concerned shared the cost and provided immediate funds.

Recommendation

Railway Board should actively consider shelving of projects where the work is yet to commence or the physical progress is very low due to resource crunch. The projects lying in areas having good road infrastructure may be considered for shelving/lower priority so that funds are utilized on projects of higher priority.

3.1.5 Financial Management

3.1.5.1 Non availability of project schedules

As per codal provisions, each investment proposal should be accompanied by a detailed plan showing scheduling of the project to match the traffic requirement and the financial outlay proposed for a year should be in accordance with the project schedule to enable the decision making authority to arrange funds for successful implementation of the programme. Audit, in almost all the new line projects that were reviewed, observed that project scheduling was not done. Funds were allotted thinly over a number of years without prioritization for completion of works resulting in projects lingering on for ten years to 35 years.

Railway Board had submitted (November 2007) to the Public Accounts Committee (PAC) that the system of allotment of funds to the various projects including new lines had been rationalized in March 2005 by prioritizing them into four categories. Accordingly new lines projects covered by the review were categorized as below –

Category I - Where the progress was more than 60 per cent and throw forward was less than `100 crore - 2 projects

Category II - Viable/ operationally required projects – Not covered within the scope of review

Category III - Projects in Assam & North Eastern Region (2) and Project identified for cost sharing with State Government (4)

Category IV – All other projects not covered in Category I, II and III (40 new line projects)

Though the Ministry had assured that the two projects in category I would be completed within the next 2/3 years, no time schedule for completion of Category III and IV projects was given. Therefore, PAC had recommended that the dates of completion in respect of projects placed in category III and IV should also be specified.

Audit, however, observed that –

- Two projects namely 'Eklakhi-Balurghat and Gazole-Itahar' over Northeast Frontier and 'Guna –Etawah' over North Central Railways which were placed in Category I and were to be completed within next 2-3 years were completed only partially and the physical progress was 76 and 71 per cent respectively. In the remaining portions viz. Gazole –Itahar (26 kms) and Bhind -Etawah even the land acquisition was not complete. While for Gazole –Itahar 162 hectare land was yet to be acquired, for

Bhind –Etawah section of Guna –Etawah project, 77.20 hectares land was still to be acquired. The broad reasons for non acquisition of land were delay in sending proposals/non-receipt of land estimate to/from state Government, non-availability of fund, non-clearance of forest land and public resistance.

- Out of six projects placed in category III, no target date of completion was fixed for two projects, three were to be completed fully by 31 March 2007 and one project namely Madarhill-Rampurhat via Dumka was to be completed partially by March 2007. Analysis by audit based on the funds allotment and progress achieved so far indicated that the Railway required another six months to complete the work of Deogarh – Dumka and fifteen years to complete the work of Mandarhill –Rampurhat.
- For the 40 new line projects placed in category IV, Railway Board had not specified (till March 2010) the target dates for 32 projects. Out of the remaining eight projects, four were targeted for completion in the 11th Five Year Plan and balance were to be completed on or before March 2007. However, no work had yet been taken up in Tirunnavaya-Guruvayoor line of Southern Railway and Kakinada –Pithapuram of South Central Railway. The progress of remaining two viz. Hasan – Bangalore and Howrah-Amta, Bargachia-Champadanga-Tarkeshwar & Amta-Bagnan was 30 per cent and 59 per cent respectively.**(Annexure XV & XVI)**

3.1.5.2 Allotment of Funds and utilization

As stipulated in Para 615 of the Indian Railway Code for the Engineering Department, the Railway Administration should make a realistic assessment of the amount required for each work in progress and necessary provision should be made in the Works Programme. In estimating the provision of funds for works during a year, a generous allowance should be made for those delays in execution which though unforeseen, were known from experience to be so liable to arise particularly during the initial stages of large projects.

Audit scrutiny of funds allotment for the 41 new line projects (excluding 9 projects of East Central Railway) revealed that while in 18 projects the budget provisions were increased at the time of final grant, the same were decreased in 16 projects. Audit also noticed that in respect of 15 projects the final grant was not utilized resulting in savings and surrender of funds. This indicated that Railways had not made a proper assessment of fund requirements; as a result, while some projects suffered for want of funds, the others had not utilized the funds alloted. The following instances: bring out failure on the part of Zonal

Railways in compliance with the cannons of financial propriety in the planning of fund deployment.

- In respect of Dallirajahara – Jadalpur project over South East Central Railway, funds of ₹13.00 crore were provided during 2007-08 but no work was commenced and the project was handed over to Rail Vikas Nigam Limited in March 2008. Despite this, funds of ₹34.59 (₹24.59 crore in 2008-09 and ₹10 crore in 2009-10) were again provided for this project but no work was undertaken and the funds remained unspent
- Similarly funds of ₹10.15 crore provided for Ahmednagar - Beed -Parli Vaijnath project during 2007-08 were not spent at all.
- Funds of ₹126.30 crore remained unspent in Munger-rail-cum-raod bridge on river Ganga over East Central Railway up to 2009-10.
- Funds of ₹37.20 crore in Deogarh –Dumka, and ₹10.83 crore in Tarakeshwar -Bishnupur over Eastern Railway, ₹17.86 in Dasua-Gangapur City over North Western and ₹12.36 crore in Ramganjandi – Bhopal over West Central Railways remained unspent up to the year 2009-10. **(Annexure XVIII)**

Audit study also revealed that in the following cases, the funds allotment in the initial stages of first five to fifteen years was not adequate and funds allotted were only 0.003 per cent to 39.90 per cent of the original estimated cost as indicated in Table II below:

TABLE -II

Railway	Name of the projects	Sanctioned Cost (` in crore)	Year of first allotment	Total funds up to 06-07	Actual Expenditure	% age of original cost	
						Funds	Expen-diture
NFR	Dudhnoi – Mendhpathar (Depa)	86.22	1992-93	2.11	0.50	2.45	**0.58**
ER	Deogarh-Sultanganj, Banka-Barahat and Banka-Bhitia Road	282.00	2000-01	77.12	44.57	27.34	**9.70**
ER	Tarkeshwar-Bishnupur extn up to Kumarkunda Bypass	260.00	2000-01	103.75	72.31	39.90	**27.81**
SECR	**Dallirajahara-**	**369.00**	**2005-06**	**0.01**	**0.004**	**0.003**	**0.001**

	Jadalpur						

3.1.5.3 Non-prioritization of projects for early completion

Railway had undertaken a large number of new line and gauge conversion projects without specifying the completion dates and ensuring availability of funds. The PAC in its 61st Report had observed that Ministry of Railways should distinctly enunciate the core objectives of the projects, frame clear project schedules at the initial stages to determine the completion dates, categorize all the pending projects and complete the same within a definite time line. Railway Board while noting the observations of the Committee had stated that they had requested the State Governments to share 50 per cent cost of such projects but the response was not encouraging. The Committee, in their Fourth Report (presented to Parliament in December 2009) had, therefore, impressed upon the Ministry to ensure that adequate funds were made available

Audit scrutiny of the records relating to 41 new line projects (excluding 9 projects of East Central Railway) revealed that project specific investment schedules had not been framed and pattern of fund allotment was not indicative of any clear targets for completion of the projects. Audit conducted an analysis of the funds provided and actual expenditure incurred during the years 2007-08 to 2009-10. The analysis revealed that based on the funds allotted and expenditure incurred during the last three years, Railways would be able to complete only four projects within the next one year and the time required for completion of the remaining projects would be more than one year to more than 25 years as indicated in Table III.

TABLE III

Sr. No.	Number of project likely to be completed	Time required for completion
1.	2	**Between 1 and 2 years**
2.	5	**Between 2 and 5 years**
3.	7	**Between 5 and 10 years**
4.	9	**Between 10 and 25 years**
5	**9**	**Above 25 years**

Note: The position in respect of nine projects over East Central Railway could not be ascertained as complete records were not available as these projects were sanctioned prior to formation of this Railway. Moreover, as indicated in Para 4.1.3 above the work in five projects had not even commenced.

Recommendation

Railways should prepare investment schedules of all ongoing projects consistent with project completion dates and commit resources accordingly and adopt a proactive policy for project completion and avoid spreading of scarce resources.

3.1.6 Execution

Execution of works included in the detailed estimate of a project should correspond to a logical project schedule as any imbalance in this regard affects the progress of the project besides non-achievement of contemplated objectives. In case the work is to be carried out through the agency of contracts, the tendering process should commence immediately and tender should be finalized within a period of three months from the date of opening.

3.1.6.1 Delay in commencement of works/finalization of tenders

Audit scrutiny of records of the authorities responsible for execution of the projects revealed that the works in the projects were not commenced immediately on sanction of detailed estimates. Tenders in 12 projects were called between one month and 10 years after the sanction of detailed estimates. Audit also noticed that apart from the delay in calling tenders for the works, 257 tenders were opened after delay of up to 257 days and 157 tender were not finalized within the prescribed period of three months. The broad reasons for delay in calling of tenders and their finalization/ were non-availability of site/funds, non-holding of tender committee meeting for one reason or the other respectively. **(Annexure XIX)**

3.1.6.2 Awarding of contracts without completing preliminary works

Taking note of audit paragraphs regarding award of contracts without completion of preliminary formalities such as acquisition of land for making available the site, approval of plans and drawings of the work, Railway Board had issued instructions in 1980 stating that no work should be awarded without ensuring that the clear site and approved plans and drawings were available for handing over to the contractor. These instructions were again reiterated by Railways Board in 2006.

Audit scrutiny revealed that in 21 new line projects, 198 contracts were awarded without availability of clear site and as a result, the sites were made over to the contractors after a delay of two months to 60 months. Similarly in 76 contracts of 20 projects, approved drawings were made available to contractors after abnormal delay between 3 months to 8 years. As a result, 32 contracts were terminated as the work could either not be commenced or the progress of the works was unsatisfactory. Apart from insufficient funding, the termination of contracts time and again was the major factor contributing to the delay in completion of the projects. **(Annexure XX)**

3.1.6.3 Huge increase in the project costs on account of time over run

As stipulated in the Indian Railway Code for Engineering Department, Railway should attempt to ensure project completion as per planned schedule to avoid time over runs. However, in a number of projects of new lines reviewed by Audit, it was observed.

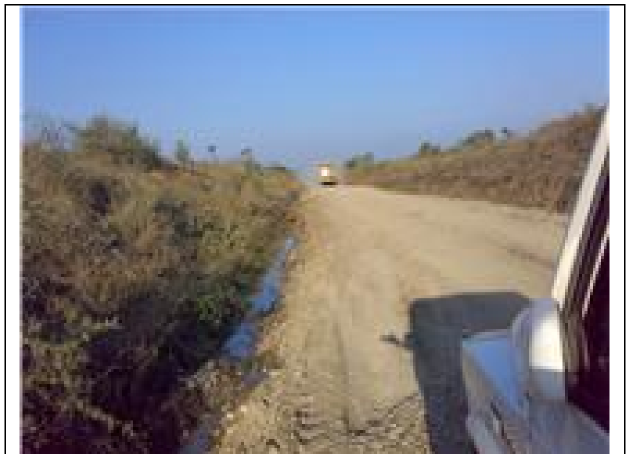
- That the works which commenced as far back in 1974-75 were yet to be completed. The progress of works in four projects (where work had been taken up) was ten percent or less. In seven projects, the progress was between 10 and 25 percent and in another seven, the progress was between 25 and 50 per cent. Only sixteen projects had reached the stage of more than 50 percent. (**Annexure XVI)**
- In most of these projects, there were problems such as non-availability of land requiring change in the original lay out, inadequate coordination with State Governments for land acquisition, non-clearance of forest land by the Environment Ministry and contracts being terminated time and again on this account. Audit observed that delay of 10 to 35 years in completion of these projects had led to increase in cost by more than double in most cases as compared with sanctioned estimate. The variation would be much more depending upon the expediency shown by the Railway Administration in completing these projects. (**Annexure XXI)**

3.1.6.4 Expenditure proving unproductive due to non-commission of partly completed sections of project

The work in a new line ideally should be so planned that the sections completed were made operational at the earliest and became remunerative. Audit scrutiny of the new line projects revealed as under:

- Though Railways had completed work in Amravati – Chandurbazar (44 kms) section of Amravati –Narkher new line of Cental Railway at a cost of ₹123. 07 crore in February 2006, train services were not introduced as originally planned. When the matter was taken up vide para 3.1.6 of the Report of Comptroller & Auditor General of India –Union Government Railways for the year ended March 2006, Railway Board in their Action

Taken Report furnished to Public Accounts Committee had stated that the entire line would be completed by December 2010 and train services commenced. It was observed that 26.92 hectare of land was still to be acquired and the overall progress was only 70 per cent as on 31 March 2010.



- The section between Hasan and Shravanabelgola (41.17 kms) of new line between Hasan - Bangalore was completed in January 2006 and train services were introduced in February 2006. However, due to non-posting of maintenance staff as required by Commissioner of Railway Safety, the train services were stopped in July 2006. Though the matter was taken up through Para 3.1.1 of the Report No. CA 19 of 2008-09 (Railways), no action had been taken thereafter to restore the train services; as a result, the investment of ₹140.00 crore was lying unproductive.

Till March 2010, Railway had incurred an expenditure of `8,549 crore on construction of 50 new lines taken up on socially desirable schemes. Till date, Railway had commissioned only seven partially completed sections on which expenditure of ₹ 945 crore was incurred. Thus the entire investment of ₹7,604 crore incurred in a span of 10 to 35 years was lying idle. This investment was likely to remain idle till all the works were completed and commissioned. Given the present rate of progress, majority of the projects may remain incomplete for many more years as brought out in the preceding paragraphs. **(Annexure XXII)**

Recommendation

Once the works are undertaken, they should be completed within the shortest possible time to avoid cost and time over run. The construction of a new line should be commenced from the end that is linked with existing line and completed in stretches so that train services are introduced on the completed part immediately to derive the maximum benefits.

3.1.7 Contract Management

The authority sanctioning the works may decide having regard to the economy and expediency whether the works of construction including new lines would be executed through departmental labour or the contractors. Almost all the works in Indian Railways were executed through contractors by following the due process of tendering. Active involvement of the user department from planning to commissioning of the project was essential to ensure its timely completion and acceptable quality standards in delivery to successful contract management. Scrutiny of relevant contracts in general revealed insufficient planning leading to contract failures as detailed below:

3.1.7.1 Delay in completion of works within the stipulated period

Audit reviewed the position of 1,399 contracts awarded in respect of 38 projects. The review revealed that as of 31 March 2010, only 109 contracts were completed within the stipulated period of completion. In 891 contracts, there was a delay between one month and 84 months. The reasons for delay in completion were non-availability of clear site (184 cases), non-availability of drawings (68 cases), change in scope of works (82 cases), non-availability of material (32 cases), slow progress by contractor (299 cases) and other reasons (213 cases). As a result of long delays/ slow progress, 60 contracts were foreclosed without any liability on either side. **(Annexure XXIII)**

3.1.7.2 Incurrence of extra expenditure

As per General Conditions of Contracts, if a contractor fails to complete the work in time or to the satisfaction of the Railway, his contract may be terminated and the Railway reserved the right to execute the balance work at the risk and cost of the defaulting contractor. Audit scrutiny of the contracts revealed that –

- 60 contracts were foreclosed by the Railways as they had not provided clear site or approved drawings in time and these were the main reasons for slow progress/non-completion of the works. Out of these, 51 contracts were re-awarded to other agencies resulting in extra expenditure of ₹75.67 crore.
- Though 114 contracts were terminated at the risk and cost of the defaulting contractors, risk and cost charges of ₹116.45 crore were not recovered as

the Railways failed to serve timely notices or pursue the matter effectively. **(Annexure XXIII)**

Recommendation
Though as per extant instructions Railways should not enter into any contract before completion of preliminary site investigation, approval of plans and drawings, etc., the same are not implemented. Railway Board should look into the reasons for the lapses/deviations that had caused hasty tendering without completion of preliminary formalities and tighten accountability.

3.1.8 Sharing of cost by State Government

Audit observed that in the case of the following projects, the respective State Governments had agreed to provide non-forest Government land free of cost, bear the cost of forestation of area equivalent of forest area to be given to Railway and bear the cost of earth work to some extent. However, subsequently neither the State Governments fulfilled their commitments nor Railways pursued these issues with them. Such cases are discussed below:

3.1.8.1 Khurda Road – Bolangir Rail link Project

During reappraisal survey in 1993, the then Chief Minister of Orissa had agreed to provide non-forest land and also to bear the cost of forestation of the land equivalent to the forest land required for construction of the line. The Government of Orissa had also agreed to bear the cost of earth work to the extent of ₹15 crore through deployment of labour in the Jawahar Rojgar Yojna. It was noticed that none of the commitments were fulfilled by the Government of Orissa and Railway had incurred a total of ₹12.50 crore (₹11.03 crore on earth work, ₹1.14 crore on cost of Government land and ₹0.33 crore for Cashew plantation on land in lieu of forest land). Railway did not pursue the matter with the State Government.

3.1.8.2 Hawrah-Amta including Bargachia – Champadanga

The construction of this line was sanctioned in 1974-75 in lieu of Howrah-Amta Light Railway as the Government of West Bengal had committed to provide land free of cost and a Memorandum of Understanding in this regard was signed between Railway and the State Government in 1973. The Howrah Amta section was completed by Railway in phases and commissioned between 1984 and 31 December 2004. As the Railway had taken 30 years to commence the work in the branch line from Bargachia to Champadanga (32 kms) and the cost of land had increased many fold, the State Government had expressed its inability to provide land free of cost. It was also observed that now Railway had agreed to bear 67 per cent of the total cost of land estimated at ₹100 crore. Thus delay in completion of the projects caused the State Government to back out from its commitment and as a result Railway had to incur additional liability of ₹ 67 crore.

3.1.8.3 Gadwal – Raichur new line

While sending the proposal for construction of this line (June 1998), the then Chief Minister of Andhara Pradesh had intimated to Railway Board that the land falling within the State would be provided free of cost and cost of earth work was also to be met by the State Government. Audit, however, noticed that Railway had not pursued this issue with the State Government and instead had deposited an amount of ₹ 5.43 crore for acquisition of the land.

Recommendation

Projects taken up at the instance of State Governments should be pro-actively pursued for commitment of participation in terms of funding or provision of land by State Governments concerned.

3.1.9 Conclusion

As part of its social responsibilities, Indian Railway had sought to provide rail connectivity to backward and remote regions of the country by taking up construction of a number of new lines. However, these efforts needed to be followed up with a clear commitment to ensure completion of the works at the earliest through clear goal enunciation and provision of requisite resources. Failure to prioritize the projects competing for scarce resources would entail greater costs in terms of objectives remaining unfulfilled with sunk investments.

The matter was brought to the notice of Railway Board (December 2010); their reply had not been received (January 2011).

3.2 North Eastern Railway: Irregular payment of ` 30.54 crore under Price Variation Clause

3.2.1 Introduction

Facilitation of fraudulent claim and irregular payment under Price Variation Clause in a Railway Board contract for supply of CI Sleeper Plates resulted in loss of ` 30.54 crore

(i) Governing Rules – Expenditure Control

In Railways, control over expenditure was achieved by ensuring that no authority would incur expenditure or liability on a work without or in excess of the sanctioned estimate (currency maximum 5 years) and allotment of the funds to the work. As regards expenditure control this was to be ensured at every stage of procurement including indenting, finalizing contracts, variations in contract conditions, paying bills and booking of expenditure. In lieu of exchequer control based on drawing limit imposed on drawing bank in favor of each disbursing officer, exchequer control was ensured in Railways by the system of cash authorization issued based on cash element of sanctioned grant to disbursing officers and watching the disbursement against it. Further all sanctions and orders involving financial considerations should be accorded by competent authorities specified for the purpose and with the expressed concurrence of Associated Finance. All such sanctions and orders should be accepted and acted upon by Associated Accounts after satisfying the authenticity, regularity and propriety of the same. Similarly a cent per cent pre check was envisaged under the Rules for passing every claim pertaining to purchases. As per Stores Code Provision, the power to effect variation in contract affecting the price etc. rested with the authority that approved the original contract.

(ii) Price Variation clauses in contracts for track items procured by Railway Board.

Procurement of track items including Cast Iron (CI) Sleeper Plates was centralized in the Railway Board. Contract Agreements for manufacture and supply of Cast Iron (CI) Sleeper Plates finalized by Railway Board contained price variation clauses (PVC) which inter alia provided for payment of escalation on increase in the cost of input materials like Pig Iron, Hard Coke and Steam Coal on the basis of announcements made by Joint Plant Committee (JPC) up to January 1992 and thereafter as per the notification of individual Steel Plants, Ministry of Energy (Department of Coal) and M/s Bharat Coking Coal Ltd (Price Announcing Authorities-PAA) during the currency of the contract. The price variation (PV) was applicable only to those

CI Sleeper plates inspected after 15 days from the date the revised price of pig iron came into effect. PV claims for Pig Iron should be admitted only on proof of purchase of prescribed quantity from steel plants after January 1992. Terms and conditions of contract regulated calculation of admissible payments including price variation. Railway Board from time to time calculated the price increase payable to suppliers including the Central Sales Tax (CST) based on change in price announced by PAA and circulated the details (PVC Notification) to Zonal Railways for compliance. These notifications, as a rule, were issued at the level of Deputy Director and with the concurrence of the Finance Directorate with provision of acknowledgement and endorsements to various authorities concerned including Railway Board Finance Branch.

3.2.2 Tender for supply of Cast Iron Sleepers required for the year 1987-88 and contract placed on M/s. Calcutta Iron and Engineering Co. Ltd., Kolkata (In this case, Price variation claims were paid up to August 2008)

(i) Value and quantity

Based on a Tender accepted by Minister of State (Railways) for the manufacture and supply of Cast Iron (CI) Sleeper Plates required by Indian Railways for the year 1987-88 in respect of works related to New Lines, Doubling, Track Renewals etc, Railway Board awarded a contract in February 1988 to M/s. Calcutta Iron and Engineering Co. Ltd., Kolkata for supply of 26100 MT of Cast Iron (CI) Sleeper plates for a total value of `8.79 crore in six Railway Zones (open line as well as construction units (43 consignees). The quantity was later (May 1989) increased to 33930 MT and the contract value revised to `.10.53 crore.

(ii) ***Rate, delivery period and paying authority***

The rate accepted (as per amendment dated 25.04.1988) was on the basis that fifty percent of the raw material (Pig Iron) required for manufacturing the item would be supplied free of cost by Railways in the form of CI Scrap. Though the responsibility for arranging the raw material solely rested with the supplier, Railways would issue the essentiality certificate to the appropriate authority enabling the firm to obtain stipulated quantity of pig iron. As per the Delivery Period stipulated, the supply of entire ordered quantity was to be completed by October 1989. Financial Advisor and Chief Accounts Officer (FA&CAO) of respective consignee units were the nominated paying authorities.

(iii) Extensions granted with PVC and without PVC

Due to scarcity of pig iron, change in consignee and quantity etc. several amendments were issued by the Railway Board extending the delivery period up to 04.04.1990 without denial clause (eligible for PVC) and thereafter up to 31.05.1991 with denial clause (not eligible for PVC). The final extension was granted on the basis that the firm dispatched the entire quantity prior to March 1991.

(iv) Completion of supply and payment

As per the verification report submitted by Zonal Railways, the firm supplied 33,590.512 MT of C.I. Sleeper Plates by March 1991 out of the total ordered quantity of 33,930 MT and the bills claimed by the firm including PVC were also paid by the respective Railways. The entire supply as per contract thus stood completed by March 1991.

3.2.3 Fraudulent claims under PVC

(i) ***Genesis***

Audit observed that the firm in June 1995 (4 years after completion of supply) approached Railway Board (Deputy Director/Track) to settle their claim on price escalation for the entire quantity supplied against the contract and requested for centralized payment through Construction Organization of North Eastern Railway (FA&CAO (C) NER), whereas as per the original completed contract, FA&CAOs of the respective consignees were responsible for arranging payments.

(ii) Claims based on non applicable PVC notifications

The claim was based on 13 PVC Notifications issued by Railway Board between June 1990 and April 1995 but effective from dates ranging between March 1990 and July 1994. These Notifications were issued after expiry of considerable period of more than two month when the price increase became effective. None of these circulars were applicable to the subject contract as the supplies were completed well before the price increase became effective barring one circular of June 1990 on which PVC had already been claimed.

(iii) Irregular issue of authorization letter of Price Variation by a Desk Officer of Railway Board

Railway Board (Desk Officer/Track-I) on 28 June 1995 issued a letter (authorization letter) addressed to all concerned Zonal Railways and

FA&CAOs without indicating finance concurrence, copy endorsing to Railway Board finance branch and the provision of acknowledgment, directing FA&CAO(C) NER to arrange necessary PVC payments to the firm in respect of 13 Railway Board Notifications mentioned ibid if such payments were due and had not been already paid by Zonal Railways earlier. As per relevant records made available to Audit there was no indication that these orders were issued after ensuring the availability of expenditure sanction and budget allotment. Further there was no indication that this letter was issued under authorization of the competent authority and after obtaining concurrence from Finance Directorate. Thus this letter was prima facie irregular.

(iv) Error in authorization letter and its revision

As there was error in indicating the name of the firm in the order, a revised letter correcting the name was issued on 20 July 1995 by the same Desk Officer.

(v) Further revision of the letter incorporating unusual condition linking PVC with allotment letter of pig iron overriding original condition of contract.

A revised order superseding the earlier one was issued on 31July 1995 by the same Desk Officer whereby the price variation was linked to the receipt of pig iron by the firm against Railway Board's allocation. This direction overrode the contract condition of linking PVC payment with date of inspection and also overrode the extension granted with the denial clause. These variations/over rides of contract conditions required the approval of the accepting authority of contract i.e. Minister of State (Railways). However, neither justification for such over ride nor the level at which the decision was taken, was available in the related records made available to audit.

(vi) Pig iron allotted

Subsequently, the same desk officer in September 1995 intimated FA&CAO (C) NER that 20,280 MT of Pig Iron were allocated to the firm without specifying dates of allocation. Audit observed that the pig iron requirement as per tender stipulation was 19,188.172 MT whereas a total quantity of 19,545 MT pig iron was obtained by the firm by September 1990 on the basis of Railway Board's allotment letters and 50 MT in April 1991 i.e. after the dispatch of supply as per records made available to Audit. Considering these facts as well as the fact that the responsibility of obtaining pig iron vested with the firm as per contract conditions, there was no justification for linking receipt of pig iron by the firm against Railway Board's allocation letter with PVC eligibility.

(vii) Receipt of first irregular authorization letter from Desk Officer at FA&CAO(C) NER office (new centralized paying authority)

The first irregular authorization letter regarding PVC payments issued by the Desk Officer on 28.06.1995 was received in the office of FA&CAO(C) NER. However, the office failed to point out the irregularities in the letter to Railway Board.

(viii) Claim of PV four years after obtaining authorization letter and Failure of Railway Board in re-examining the matter

On being approached by the firm with copies of Railway Board's authorization letters dated 31.07.1995 etc. (four years after the issue of authorization letter) FA&CAO(C) NER approached Railway Board in May 1999 and obtained copies which were not received by them till then. At this point, Railway Board failed to re-examine the matter, by taking into account the abnormal delay in claiming the PV by the firm and detect the irregularities involved.

(ix) Failure in exercising prescribed checks before accepting the irregular revised authorization letter for payment and reporting the matter to Railway Board

Before accepting the letter for action FA&CAO (C) again failed to detect the irregularities involved in the letters and take up the matter with Railway Board.

(x) Action taken to verify the quantity supplied and payment made earlier

The FA&CAO(C) accepted this irregular letter as an authorization letter for payment of PVC and obtained confirmation for the supply and payment position of the contract furnished by the firm from the related Zonal Railways between the periods from December 1999 and April 2002.

3.2.4 Modus operandi of fraudulent claim of PV

(i) Claims based on 13 circulars

The firm started submitting PV claim bills from December 1999 and continued up to August 2008 (101 bills, one bill missing). The modus operandi adopted was preferring PV claims pertaining to a few consignees (from different Zonal Railways) at a time for full quantity supplied based on a few Railway Board's PVC Notifications, in disregard to the effective date of PV and date of supply and claiming another similar bill after considerable time covering other consignees. Thus PVC was claimed over the same quantity repeatedly on the basis of various PVC authorization letters not relevant to the supply at all. The firm claimed bills aggregating to more than ` 19.22 crore under this category.

(ii) Other irregular claims valuing more than `. 11.32 crore

In addition to 13 authorized circulars, a few other PVC circulars issued by Railway Board were also used for claiming price variation in some bills (` 0.84 crore). There were also instances where claims were repeated over the years (`2.34 crore) and other instances such as claiming PVC rate applicable to supply where cost of raw material was entirely to be borne by the supplier instead of fifty percent of raw material supplied free of cost by Railways in this instance (` 5.40 crore), claiming CST again though PVC rate prescribed by Railway Board was inclusive of CST (`0.33 crore) applicable and in respect of downward revision of prices of raw materials (` 0.08 crore) and other misc items (`2.33crore)

3.2.5 Limited selective checks of claims by FA&CAO (C) and critical omissions

(i) Selective checks

These bills were passed and paid by FA&CAO (C), NER office at the level of Junior Scale Officers on the basis of cursory checks with relation to quantity supplied as certified by Zonal Railways and rates indicated in PVC Notifications.

(ii) Critical omissions at FA&CAO (C)

FA & CAO (C), NER passed payments in all these cases without linking the effective date of circulars with actual date of supplies/ date of release order of pig iron or insisting proof of purchase of pig iron from Steel Plants or detecting other irregular claims made. Further the availability of fund and sanction for expenditure with relation to works involved and inclusion of these expenses in the scope of authorization of disbursement etc. were not taken into account. The payments thus made overlooking vital facts were irregular, injudicious and against the basic canons of financial propriety. Further the irregular payments of such fraudulent claims over a prolonged period (more than eight years) strongly indicated the complicity of the concerned staff of FA&CAO(C), NER in the perpetration of the fraud.

(iii) Failure of supervisory control

The control system failed to detect such irregular payments as these escaped the notice of Senior Supervisory Officers during a period of over eight years. This was indicative of complete laxity of supervisory control over the activities of staff engaged for passing and paying Government money.

3.2.6 Non detection of irregularity by other Zonal Railways

The records of acceptance of debit by other related Zonal Railways in the initial period of payment indicated that while accepting debits they also failed to detect and raise the issue of financial and budgetary implications of such payments.

3.2.7 Total payment against fraudulent claim

Thus ` 30.54 crore (three times more than the original value of the contract) was irregularly paid to the firm by August 2008 against the fraudulent claims made by them through 101 bills submitted in a span of more than 8 years. (Last payment made 19 years after the completion of supply).

Breach of established Internal Controls that facilitated and sustained these fraudulent transactions lay in the following:

- Inordinate delay in issuing PVC notification letters from Railway Board during 1993-1995
- Lax supervision in Railway Board Office enabling a desk officer to issue three irregular letters (involving financial implications and change of vital contract conditions) to various Zonal Railways during June-July 1995. Failure of concerned Railways to detect the flaws in the amendment letters.
- Failure of Railway Board to reexamine the issue when the matter was brought to their notice again by FA&CAO(C) NER in May 1999.
- Authorizing a centralized paying authority in arranging payments that were earlier done by respective FA&CAOs.
- Failure to ensure the availability of work sanctions and budget allotments in the processing for payments and booking of expenditure(1999-2008)
- The failure of exchequer control system in detecting the irregular payments (1999-2008).

- Complete failure of internal controls governing matters of admission of orders involving financial implication, passing and paying claims against these orders in the office of FA&CAO (C), NER office including a complete failure of supervisory controls by the Senior Supervisory Officers of FA&CAO (C) NER during 1999-2008.

The matter of irregular payment was detected by Audit and reported to General Manager, North Eastern Railway in April 2009. The Railway Administration consequently referred the matter to Departmental Vigilance. In reply (August 2010), they stated that the Vigilance Department had completed the investigation and fixation of responsibility and initiation of disciplinary action was in progress. Subsequently the matter was taken up (December 2010) with Railway Board; in their reply (February 2011) they admitted the facts and lapses as detailed above. Citing a different case involving the staff of Northeast Frontier Railway, they stated that a case was registered against four defaulting firms including this firm by Central Bureau of Investigations (CBI) whereby the concerned records were seized in 1999 and a case was subsequently filed in CBI Court, Guwahati. The reply was not acceptable as necessary remedial action to tighten the internal controls governing contractual payments and monitoring compliance thereof should have been initiated without delay when the matter came to notice. Moreover, despite the CBI's actions involving another Zonal Railway officials, the fraudulent payments in this case continued for a decade which could have been prevented had Railway Board initiated prompt investigation to fix responsibility and to streamline controls at all levels. The reply also did not indicate any corrective measures proposed to avoid recurrence of such lapses in future.

3.3 Central Railway: Blockage of funds due to stoppage of work on a doubling project

Railway's failure to enter into project specific agreement with CIDCO not only resulted in blockage of funds of ₹56.92 crore due to stoppage of Belapur-Seawood Uran Double Line Project but also non-achievement of the main objective of providing rail connectivity to public

Central Railway, Government of Maharashtra (GOM) and City and Industrial Development Corporation (CIDCO) entered into a 'Tripartite Agreement' (March 1992) to take up construction of Mankhurd – Belapur Railway Project to expedite the development of New Bombay Area and facilitate operation of Train Services in the area. It was also decided that in principle costs would be shared by State Government, through CIDCO with the Railways in the ratio of 2:1 as agreed to in the case of Mankhurd-Belapur Railway project (March 1992). Cost of the land in New Bombay would be borne by CIDCO.

Belapur-Nerul/Seawoods-Uran Railway Line was one of the important projects identified for giving suburban railway connectivity to the public of Uran-Jawaharlal Nehru Port Trust (JNPT) area to Mumbai and Thane region. The major works envisaged were laying and linking of double BG line, construction of one important bridge of 754 meter length, tunnel of 100 meter length, four major bridges, 73 minor bridges, three ROBs and 12 RUBs.

Railway Board sanctioned this project (July 1997) at an estimated cost of ₹495.44 crore (Civil Engineering ₹299.61crore, Electrical Engineering ₹165.12 crore and Signal & Telecommunication ₹30.71 crore). The completion period of the project was four years (2002). The Central Railway's share of the total cost worked out to `163.49 crore and CIDCO's share at `331.95 crore.

Scrutiny of records (February 2009) revealed that the work of the project commenced in 1997-98 and despite incurring a total expenditure of `133.39 crore (`56.92 crore by Railway and `76.46 by CIDCO) the physical progress of the work was only 12 per cent till the end of March 2010. While the work of one major bridge, five RUBs and one ROB was in progress, the work on two major bridges, forty minor bridges, six RUBs and two ROBs had not been taken up at all. The land required for 2.71 kms section which was to be acquired by CIDCO had not been acquired and handed over to the Railway. The slow progress of the work was attributable to financial constraints of CIDCO who requested Railway in August 2001 to go slow and the construction activities were suspended from October 2005 to July 2008 due to stay orders of Mumbai High Court. Audit also noticed that CIDCO once again requested the Railway (August 2008), not to undertake any further new works on the ground of slow progress of the work, changes in the specifications and problems of land acquisition due to which the project cost had escalated from `.495.44 crore to `1300 crore. CIDCO also conveyed that due to Central Railway's unwillingness to share the additional cost, they were exploring the possibility of alternative funding arrangements.

In this connection the following audit observations were made:

- Railway had not signed any Project specific Agreement with CIDCO laying down investment schedule linked with work progress and safeguard provisions in case of failure to perform. This had not only resulted in blockage of huge funds of `56.92 crore spent by Railway but also put at risk the completion of project for an unspecified period.

- Against their share of `44.02 crore, Railway had spent `56.92 crore, an excess of `12.90 crore whereas CIDCO has spent only `76.46 crore against their share of `89.37 crore. This indicated that the funds had not been provided by CIDCO as originally envisaged.

- The work remained suspended from October 2005 to August 2008 as the Mumbai High Court had ordered not to take up any work within 50 meters of the mangrove areas. Though CIDCO had communicated this to Railway in December 2005 and as per Section 11 of The Railways Act, 1989 Railway Administration did not require any clearances from Environmental or Forest agencies for any Railway Projects, Railway took eight months to initiate action for vacation of the stay order. The case was also not pursued properly and ultimately there was delay of more than two years.

- Despite lapse of more than 12 years the main objective of providing suburban railway connectivity to the public of Uran-Jawaharlal Nehru Port Trust (JNPT) area to Mumbai and Thane region was not achieved.

When the matter was taken up with Railway Administration (March 2009), they stated (March 2009 and June 2009) that the delay was due to financial and other specific problems of CIDCO and not due to delay in execution of the project by Railways. The reply was not acceptable because Railways were also partly responsible for the delays in execution of the works as despite availability of specific safeguard in Railway Act, they took an unduly long time to get the stay vacated from the High Court. Moreover, failure on the part of Railway to enter into a legally binding agreement for timely completion of the project had resulted in the absence of a legal remedy vis-à-vis an erratic and unwilling partner, with no surety of its completion in the foreseeable future.

The matter was brought to the notice of Railway Board (September 2010); their reply had not been received (January 2011).

3.4 Northern Railway: Stoppage of work due to planning lapse

Commencement of a bridge work(for replacing existing Yamuna Bridge) passing through a portion of historical Salimgarh Fort without obtaining required permission and land from Archaeological Survey of India resulted in stoppage of work and unproductive expenditure (₹33.92 crore) since March 2007 besides retention of outlived bridge

Ancient Monuments and Archaeological Sites and Remains Rules 1959 prohibit construction activities within protected area except in accordance with permission granted by the Central Government. Railway Board's instruction stipulated that contracts for works should not be awarded unless the site plans had been completed and all hitches in handing over clear site to the contractor were removed.

The Railway Board sanctioned (August 1998) the construction of a new bridge in replacement of the outlived Road cum Railway Bridge(No.249) in August 1998 at a cost of ` 66.96 crore with targeted date of completion by June 2005. For connecting the proposed new bridge with the existing track towards the Delhi station, land measuring about 1,000 sqm within the premises of Salimgarh Fort adjacent to Red Fort, a centrally protected monument, was required to be acquired from Archaeological Survey of India (ASI) for laying Railway track.

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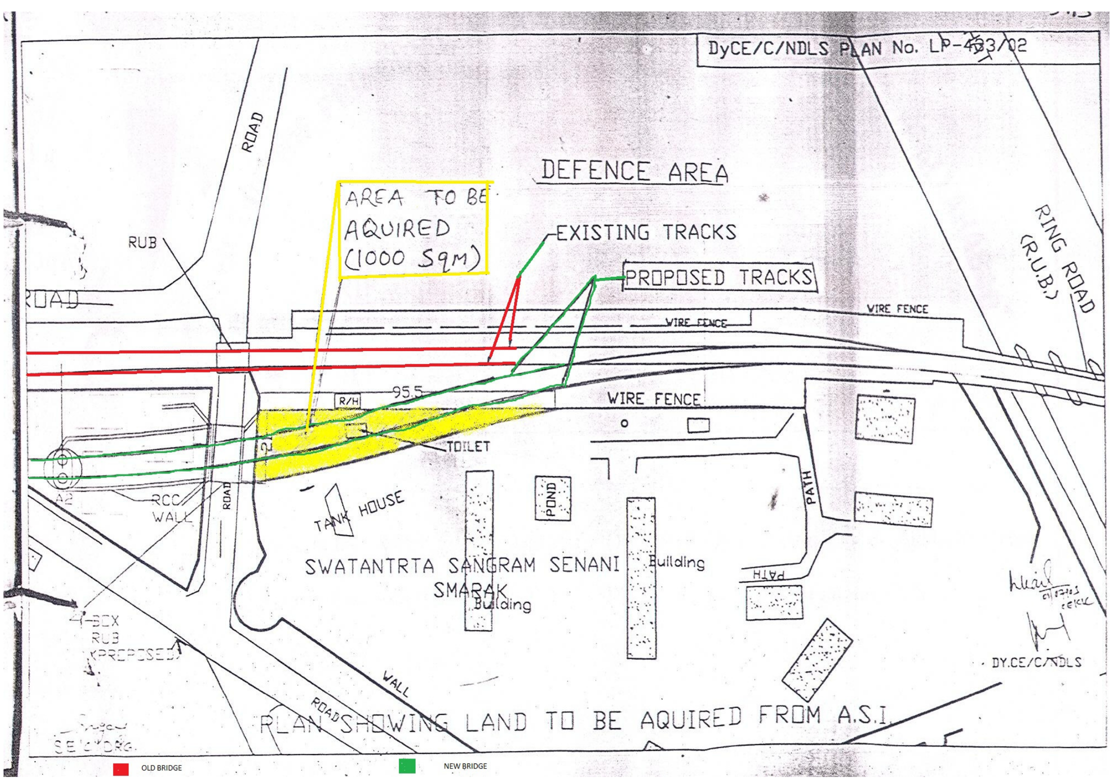

Northern Railway Construction Organization (NRCO) approached ASI with their plan, need of land and permission for the work within the premises of the monument in June 1997. However, the matter was not pursued in a time bound manner at the appropriate level resulting in ASI (Director ASI) intimating NRCO (January 2003) that Salimgarh Fort being a centrally protected monument the question of handing over the land to Railways did not arise. Subsequently, the matter was dealt between Director General, ASI and Chief Administrative Officer (Construction) and it was decided (May 2003) to refer the matter at Ministerial level as the permission and transfer of land was beyond the competency of DG, ASI. The matter was taken up for the first time at Ministerial level (September 2003) and in pursuance thereof, during a meeting between Railways and ASI (March 2004) ASI informally agreed to hand over the land to Railways in exchange of the adjacent Railway land to ASI. However, during process of finalization of formal agreement for transfer of land, ASI realized that Railway's proposal included dismantling of a portion of historic wall which would cause irreversible damage to the protected monument and they intimated to Railway Administration in May 2006 that permission for laying the Railway track in the premises could not be granted. Thereafter, a proposal for raising the rail level for avoiding the dismantling of Fort wall was considered (June 2007) by Railways involving substantial modification of existing structures which was not pursued further. The matters of getting permission and land from ASI remained unresolved though taken up at various levels. At last, a consultant was engaged(May 2010) to evaluate the impact of the proposed realignment in Salimgarh Fort and Red Fort as mutually agreed between Railways and ASI. The report was still awaited (September 2010).

Meanwhile, before obtaining permission under the relevant Act from the competent authority and possession of the land, NRCO, awarded (June 2003) the contract for the construction of the sub-structure of the new bridge to M/s L&T at a cost of ` 33.36 crore and the work of fabrication of steel girders costing ` 24.04 crore required for the bridge was entrusted to Railway Work Shop at Manmad (Central Railway) in November 2005. The work on new bridge was progressed up to March 2007 and NRCO had incurred an expenditure of ` 33.92 crore on it till then. The contract work given for the sub structure in June 2003 was terminated in June 2007(converted into short closure in March 2009) and the work had not recommenced (September 2010) mainly for want of permission and land from ASI.

Considering the high sensitivity of the issue affecting passenger safety, on the one hand and the historical heritage of the monument on the other, Railway Administration should have anticipated the initial difficulties and initiated dialogue at the highest level when the work of replacement of the old bridge was planned to facilitate better appreciation of the issues involved. On the contrary, Railway Administration displayed indifference when the work was commenced without permission and land from ASI. Failure in timely appreciation of the scope of the work involving the dismantling of part of the historic wall of the monument and evaluation of feasible alternatives at the planning stage resulted in stoppage of the work on which an expenditure of ` 33.92 crore had been incurred upto April 2007. At the same time the prolonged stoppage entailed retention of an outlived bridge for operations endangering passenger safety.

The matter was taken up with Railway Administration in May 2010; in reply, (September 2010) they contended that after resumption of this work, the expenditure incurred should be considered a saving vis-à-vis project cost at a future date. NRCO's reply was not acceptable because the expenditure incurred (` 33.92 crore) remained unproductive since March 2007 and the fate of the bridge and exact scope of work involved remained uncertain till date (September 2010).

The matter was brought to the notice of Railway Board (November 2010); their reply had not been received (January 2011).

3.5 North Western: Railway — Loss due to mis-handling of a simple project

Due to non-achievement of anticipated savings, Railway Administration suffered proportionate loss of ₹ 19.44 crore

According to the compendium of instructions issued by Railway Board (Works Directorate), the duration of the traffic block should be the barest minimum for a conversion work and if any section was likely to be blocked for more than 30 days, Board must be approached for prior approval with full justification.

The work of doubling of over saturated Jaipur-Phulera section (54.75 kms.) by converting the existing Metre Gauge (MG) line was sanctioned in the year 2004-05 and the project was expected to be completed in three years (2007-08). While justifying the project, the Railway Administration assessed the rate of return (ROR) at 38.38 per cent with the anticipated savings of ` 25.93 crore per annum on account of reduction in abnormal detention to freight trains. It was, therefore, incumbent on the Railway Administration to ensure timely completion of the project.

The project was started in September 2005 and while the work was under progress, the General Manager (GM) in June 2007 proposed the postponement of the target of the project by one year i.e. up to 2008-09 on account of isolation of Phulera MG loco shed and the upcoming route of Rewari-Ringus-Phulera for goods traffic. In less than a month's time, the GM in July 2007 again came up with a new idea for providing gauntleted track on the section quoting the same reasons. As no response to these proposals was received from Railway Board, it was decided in September 2007 to go ahead with the execution of the work as originally sanctioned i.e. normal doubling by gauge conversion.

It was noticed that frequent extensions were granted to contractors on Railway's account ignoring the targeted period of completion of the project. The preparation of plans and drawings was also delayed, which adversely affected the completion of bridge works and ultimately the project as a whole got delayed by nine months. Further, despite inadequate progress, the Railway Administration abruptly blocked the section in March 2008 for Gauge conversion and the unauthorized block continued for more than eight months without Railway Board's approval. Moreover, despite the CRS authorization for opening of the section in November 2008, the section could be opened only in January 2009 due to delayed completion of interlocking work.

Thus, due to non-achievement of anticipated savings as planned, Railway Administration suffered proportionate loss of ` 19.44 crore due to belated start of a project.

When the matter was taken up with the Railway Board (September 2010) they stated (December 2010) that the extension to contractors were granted on merit keeping in view the difficulties in execution due to proximity of work sites to a running line and such delays were unavoidable. They also stated that the section Jaipur – Phulera was automatically blocked with the blocking of Ajmer – Phulera section for RRI works being executed by RVNL.

The reply was not acceptable because the General Manager, Zonal Railway had requested for the postponement of the target for completion by one year stating that MG loco shed providing locos to MG network would be isolated. He had also proposed a provision for gauntleted track so that the gauge conversion of this section was de-linked from other projects. However, as Railway Board had not responded to these proposals, the work was executed as per the original plan and was completed in November 2008 after a delay of eight months. Further, Railway Board had not objected to the section remaining blocked for more than 30 days. Thus, delay in completion and opening of section had deprived the Railway of the anticipated savings of ` 19.44 crore.

3.6 Eastern Railway: Delay in finalization of tender

The work of construction of a new Railway Bridge in replacement of the existing Jubilee Bridge over Hooghly River in Bandel-Naihati Section was sanctioned by the Railway Board in 1999-2000 on safety account, the bridge being a distressed one. Trains were allowed to run on the bridge with a speed restriction 10 kmph. The design of the bridge for both the sub-structure and super-structure and their estimates were prepared by RITES who were engaged as consultant. The substructure of the work of the bridge costing ` 39.02 crore was completed by January 2008.

Inconsistent criteria adopted for selecting a qualified contractor led to avoidable delays of about 4 years in finalizing the tender related to the replacement work of a distressed bridge. This resulted in extra expenditure of ₹17.35 crore on escalation factor alone while the expenditure of ₹.39.02 crore incurred on substructure remained idle for more than two years

Railway Administration in December 2005 invited pre-qualification bid for the work of superstructure of the bridge consisting of three steel girders having a span length ranging from 135 -150 m. The qualifying criteria incorporated in the tender, among other things, included the condition that the tenderer should have executed at least one work of fabrication, assembly and launching of steel girder having a span length of 75 m for a Rail Bridge etc in the preceding 15 years. Six contractors participated in the tender. Three contractors including M/s Tantia Construction Co. Ltd. were technically qualified for the work based on the criteria prescribed. The tender was, however, discharged on the ground that the participants were not of national repute (April 2006). Consequently, a fresh pre-qualifying tender was invited in July 2006 by making the eligibility criteria more stringent by enhancing the span length of girders from 75 m to 135m. None of the three firms adjudged qualified in the first bid was qualifying the new criteria prescribed. In the second round, three firms participated out of which two were qualified. Commercial bids were thereafter invited from these firms in May 2007. The lowest offer was received from M/s Larsen & Toubro Limited. The Tender Committee after negotiations recommended the acceptance of the revised offer of `129.40 crore (` 65.56 crore higher than the estimated cost) as they were satisfied that the rates were reasonable having regard to the quality of the launching scheme proposed by the firm, which they considered as superior vis-à-vis that of RITES. Since the value of the contract exceeded the delegated powers of the Zonal Railway, the tender was referred to Railway Board in September 2007. Railway Board presumably due to the substantial difference between the estimated cost and negotiated rate received from the post qualified tenderer, directed Zonal Railway in December 2007 to discharge the tender and re-invite fresh tender in two-packet system based on realistic cost estimates after finalising the design and launching scheme. The tenderers were permitted to offer their own launching scheme.

The estimated cost of work was thereafter revised to `115.88 crore and tender in two packet system was invited afresh in August 2008. This time Railway Administration withdrew the stringent eligibility criteria incorporated in the second tender and reinstated the original criteria in respect of fabrication, assembly and launching of steel girder. Five firms participated in the tender out of which three firms including M/s Tantia Construction were found qualified for the work and the lowest offer received from M/s Tantia Construction with their own launching scheme at a cost of `140.24 crore was accepted (August 2009). The work was under execution.

The following observations were made:-

In the second pre qualification bid, the pre qualification criteria in respect of the fabrication, assembly and launching of steel girder had been revised and made stringent blocking participation of three original contractors otherwise adjudged qualified in the first tender. However, in the final tender, the original criteria were reinstated and one of the original contractors was again adjudged as qualified. Moreover, the launching scheme offered by the M/s Tantia Construction Co. Ltd. was accepted for execution. Thus, no gainful purpose was served in discharging the first tender with the criteria as originally envisaged being retained. The inconsistent criteria followed by the Railway Administration for selecting a qualified contractor for the work resulted in delay of about four years in finalizing the tender in a safety related work without achieving any fruitful improvement either in the qualification of the contractor or in reduction in rates. This resulted in extra expenditure of ` 17.35 crore on escalation factor alone (escalation plus overhead charges) while the expenditure of ` 39.02 crore incurred on substructure remained idle for more than two years. The loss on account of continued speed restriction imposed on the distressed bridge would be extra.

The matter was taken up (January 2010) with the Railway Administration; in reply (April 2010) they stated that M/s Tantia Construction Co. Ltd. had successfully satisfied the prescribed eligibility criteria both in initial as well as the last tender and there was no error in the entire process for selecting a reputed firm for executing superstructure of the bridge. The reply was not acceptable. The inconsistent criteria adopted for selecting a qualified contractor for the work resulted in avoidable delays of about four years in finalising the tender related to the replacement work of a distressed bridge endangering safety.

The matter was brought to the notice of Railway Board (October 2010); their reply had not been received (January 2011).

3.7 North Western Railway: Loss due to damage to track

Poor planning for movement of the loaded rakes according to the topography of the sections caused severe damage to the track, hampered train movement and endangered safety resulting in consequential loss of ₹ 14.15 crore

As per Station Working Rules (SWR), steep gradients warrant special precautions in train operations and these were subject to revision every five years.

In response to an earlier Audit Para No.2.1.3 of Report No.CA 11 of 2009-10 (Railways), the Ministry of Railways in their Action Taken Note had stated that most sections over North Western Railway were not yet fit for CC+8+2t operations. It was noticed that there was abnormal rise in the cases of premature/ casual renewal of rails as the track was damaged in certain stretches with steep gradients on Ajmer Division. Severe damage to rails was caused due to stalling/wheel burns/scabbing by excessive tractive effort applied by the locomotives to negotiate such gradients. Once loaded freight trains stalled at locations having steep gradients and attempted to move by applying excessive tractive effort with the existing powering arrangement, wheel burns occurred. The stalled trains had to be rolled back and only by providing additional locomotive, the gradient could be negotiated for onward journey. The process took substantial time on every occasion hampering train operations on the over saturated route. The instances of stalling/wheel burns/scabbing on the gradients showed a rising trend during the period

2007-08 to 2009-10 (up to December 2009) and as many as 1686 cases were noticed. This resulted in a loss of `14.15 crore (`10.02 crore incurred on cost of renewal/ replacement of rails and ` 4.13 crore due to loss of earning)

When the matter was taken up with Railway Board (September 2010), they stated (January 2011) that damages to track occurred in the transition period from the conventional system of haulage by double/ multiple locomotives to a more cost effective system of haulage by technologically advanced single locomotive of higher horsepower. Now with these locomotives the incidences of damage to track had been eliminated.

The reply was not acceptable because though the JPO was issued after two years of the repeated incurrence of the cases of track damages, yet the cases of damages to track and wheel burns continued to occur.

Thus, failure to properly plan the movement of the loaded rakes resulted in damage to track and consequential loss of ` 14.15 crore.

3.8 North Central Railway: Closure of a Road Over Bridge due to poor quality of construction

Poor quality of construction of Railway portion of a ROB resulted in the closure of the ROB created at an estimated cost of ₹12.26 crore within eight months of its opening to road traffic

Executive Engineer in charge of a work was responsible for the proper execution of that work irrespective of the executing agency. Assistant Engineer and Sectional Engineer should ensure that works were carried out according to the plans and specifications while maintaining quality through their frequent checks.

Construction of a Road over Bridge (ROB), over railway track at Etawah, linking Etawah - Farrukhbad link Road was sanctioned in May 2006 in lieu of the level crossing No. 27 special on the request of the State Government, taking into account the heavy traffic density. The estimated cost of the work `12.26 crore was to be shared between Government of Uttar Pradesh State (`6.96 crore) and the Railways (`5.30 crore). The contract for construction of Railway portion of ROB was awarded to Firm 'A' at a cost of `1.45 crore in June 2006. The work included construction and placing of Pre Stressed Concrete (PSC) Box girder of one span with a length of 46.30 meters. The ROB was opened for traffic in April 2008 without the safety certificate prescribed by the Commissioner of Railway Safety (CRS) and the level crossing was closed in the same month.

On finding wide cracks and a hole on the road surface of the bridge, the local administration closed the ROB for public traffic in December 2008.

Consequently the level crossing was reopened in January 2009. Railway Administration engaged(March 2009) Indian Institute of Technology (IIT), Kanpur at a cost of `0.12 crore for providing the technical opinion for rehabilitation of the damaged bridge.

IIT Kanpur, in its report (April/2009) concluded that the concrete present in the deck slab of the PSC Box girder did not meet the design requirements with likely adverse implications for its load carrying capacity and the long term durability of the structure due to its poor quality and integrity. Therefore, any rehabilitation scheme should consider either replacing it or remedying its flaws along with suitable strengthening measures to upgrade it to the original design requirement.

The Technical Report for rehabilitation work of ROB, submitted by IIT, was approved by Railway Administration in July 2009 and the contractor was asked to carry out the rehabilitation work. The work had been carried out by the contractor at his expense and the ROB was opened for traffic in May 2010 after inspection by Engineer-Incharge. Meanwhile ` 0.08 crore for manning the level crossing and `0.29 crore on supervision for rehabilitation work had been incurred up to April 2010.

The deficiencies in the deck slab of the PSC Box girder pointed out by IIT Kanpur evidently indicated that the Railway Administration had accepted and commissioned the same without ensuring necessary checks and supervision during execution.

Thus poor quality of construction by Railway and their failure to detect and rectify the defects during execution and its opening to traffic without the safety certificate prescribed by CRS, had led to closure of the ROB created at an estimated cost of `12.26 crore with State Government's participation for about one and half year causing inconvenience to the public. Moreover, an avoidable expenditure of ` 0.49 crore was incurred on the reopening and maintenance of level crossing, engagement of consultant etc.

The matter was taken up (September 2010) with the Railway Board; in reply (November 2010), they stated that the concerned officers and staff had been served major penalty charge sheets in August and September 2010. The reply, however, failed to indicate the action taken by the authorities to review the system failure and initiate corrective action for prevention of such lapses.

3.9 South Central Railway: Extra liability due to delay in execution of repair work of damaged bridge

The Zonal Railway noticed (1999) that Bridge No.04 DN (West) located on a very busy section (category A) between Vijayawada and Krishna Canal stations, erected in 1929, had outlived its life (60 years) and needed replacement of girders. Estimate for its repair at a cost of ` 1.08 crore was sanctioned in January 2000.

The Engineering Department placed (January 2001) an order for the fabrication of girders on Engineering Workshop, Lallaguda (Workshop). The Stores Authorities intimated the Workshop Administration in August 2001 that the required material Grade B was neither available in the market nor manufactured by the Steel Plants, who in turn communicated the position (June/December 2001) to Engineering Authorities of Headquarters office and advised them to explore the feasibility of using Grade 'A' material instead of Grade 'B' material through modification in the drawings.

> Delayed decision to modify the drawings of bridge girders to suit the material available for fabrication of girders resulted in delay in completion of repair works of an old bridge besides extra liability to the extent of ₹ 3.78 crore

Till October 2003, no action was taken either to modify the drawings or workout an alternative action plan despite the safety of the bridge being at stake. It was only in November 2003 that Chief Bridge Engineer (CBE) decided to get the fabrication of girders done by an outside agency approved by the RDSO without any modification of drawings. The agency for the execution of the work could not be decided for another 26 months despite invitation of open tenders thrice as either the participation of tenderers was poor or the rates quoted were considered high.

CBE eventually decided (February 2006) to get the fabrication work done by the Workshop duly revising the drawings suitable for material available in the market. The repair work was estimated to cost ` 6.14 crore. The revised drawings were made available to the Workshop in June 2006. In the mean time, in view of the delay in re-girdering of the bridge, Railway awarded a contract (May 2006) for the temporary repair of the bridge which was, however, not carried out. The Workshop supplied the girders in March 2008. Railway Administration thereupon fixed the agency to assemble the fabricated girders in June 2009. The work was expected to be completed by March 2010.

Thus, though a safety work on a category 'A' route was involved, Railway Administration took more than a decade to complete the same due to delay particularly in change/modification of drawings despite availability of funds. Although the Engineering Authorities were advised in June/December 2001 to explore the feasibility of using Grade 'A' material by modifying the drawings, the required modification in the drawings was carried out only in June 2006. The avoidable liability due to cost overrun in respect of this bridge worked out to ` 3.78 crore, excluding the impact of extra items added in the revised estimate.

When the matter was taken up (September 2010) with the Railway Board, they stated (December 2010) that since the bridge was a very critical component of the track, it was not considered desirable to change the specification of the material without making adequate efforts. Need based minor repairs to the bridge were carried out departmentally and safety was never compromised. Their contention was not acceptable. The Workshop Authorities were prepared to undertake the work but only awaited modification in drawings. It had never been specified by the Railway Administration that specifications conforming to the use of Grade 'B' material were only required. Even for outsourcing the work, modification of drawings was required in view of non-availability of Grade 'B' material in the market. Further, while need-based minor repairs were carried out on the bridges departmentally, these girders eventually needed to be replaced.

3.10 North Western Railway: Wasteful expenditure on M.G. Sections

Non compliance of extant orders on execution of MG track renewal works through casual renewal resulted in wasteful expenditure of ₹ 3.71 crore

The General Manager (GM), North Western Railway in September 2007 decided that all Metre Gauge (MG) sections except Marwar Junction – Mavli Junction – Bari Sadri and Ratangarh West – Sardarshahar would be converted into Broad Gauge (BG) in a time bound manner and hence the track renewal works on all other sections stood frozen. However, wherever condition of track warranted, casual renewal of the rails and sleepers could be carried out so that the track could be maintained in a safe condition.

Review in Audit of track renewal works in two MG sections over Bikaner Division revealed that contrary to the above instructions, the Complete Track Renewal (Secondary) [CTR(S)] for 9.27 kms. on Sriganganagar – Hanumangarh MG section was taken up in December 2007 i.e. subsequent to issue of GM's instructions and was closed in September 2008 after completion of CTR work for 7.97 kms. after incurring an expenditure of ` 2.46 crore. Similarly, in respect of Hanumangarh – Sadulpur MG section, CTR (S) for 22.07 kms., started in February 2007 was continued for 15 kms. despite GM's instructions. The work was closed belatedly in October 2008 entailing additional expenditure of ` 2.41 crore. Thus, the total expenditure on both the CTR works carried out on account of works not being frozen worked out to ` 4.87 crore. Audit analysis revealed that average cost of casual renewal per km came to `6.43 lakhs as against ` 29.88 lakhs for CTR work. In view of the planned conversion to BG, the Railway Administration, instead of incurring huge expenditure of ` 4.87 crore on CTR works, should have stopped the works forthwith and opted for casual renewal for maintenance of the track in safe condition that would have cost ` 1.16 crore.

The Divisional authorities confirmed (October 2009) the facts and stated that except these track renewal works, all other MG track works were frozen over Bikaner division after the issue of GM's order of September 2007 and only casual renewal works were carried out as per requirement.

When the matter was taken up with Railway Board (August 2010), they stated (December 2010) that the instructions of the GM were not meant to compromise the safety to save expenditure. They added the condition of track in sections was such that running of trains safely was not possible without carrying out complete track renewal. They, therefore, continued with the works in part of the sections.

The reply was not acceptable because the instructions to freeze the CTR works clearly stipulated that if the track conditions were not warranting safe running of trains, the casual renewal works be got sanctioned on 'out of turn' basis. However, the North Western Railway, instead of getting the sanction for 'casual renewal works', continued the CTR works that resulted in wasteful expenditure.

Thus, inability of the Railway Administration to timely implement the GM's instructions resulted in wasteful expenditure of ` 3.71 crore.

3.11 South Western: Railway — Extra liability due to injudicious discharge of a tender

Railway's decision to discharge a tender for work on injudicious grounds resulted in extra liability to the extent of ₹ 2.55 crore

Construction Organization of South Western Railway (Organisation) invited tenders (December 2007) for the construction of a Major Bridge and two Road Over Bridges as part of doubling work between Dharwad and Kambarganvi. In response, two offers were received. The lowest offer received was for `.9.09 crore.

The Tender committee (TC) conducted two rounds of negotiations with the lowest tenderer (L1) for obtaining reduction in rates. However, L1 expressed his inability to reduce the offered rates in view of increasing trend of market prices of various commodities like Petroleum and Steel. Notwithstanding the refusal of L1 to reduce the rates, Railway Administration issued Letter of Acceptance (LA) including, inter alia, counter-offer in respect of certain items, rates of which the Finance Member of TC considered high. Taking into consideration the counter offer, the overall value of the tender would have been ` 8.65 crore i.e. ` 0.44 crore (4.84 per cent) less than the value offered by L1. The L1 did not accept the counter offer.

After the non-acceptance of the counter-offer by the L1, the technical and the third member of the TC recommended the acceptance of the offer of L1 on the plea that discharging of tender and re-tendering thereafter would only result in substantial increase in the cost of work. However, the Finance Member of the TC advocated discharge of tender stating that the rates quoted for certain items were high. The tender accepting authority (TAA) while concurring with the views of the technical and the third member decided to accept the recommendations of the Finance Member and ordered discharge of tender. The tender was discharged (June 2008).

During fresh tendering (July 2008/August 2008), Organization split the work into two segments viz., (i) Construction of a Major Bridge and (ii) Construction of two ROBs and floated two tenders. After the finalization of these tenders, contracts for both the works were awarded (October 2008/November 2008) at a total cost of ` 10.77 crore to the same contractor whose offer was lowest against the earlier discharged tender. There were certain minor additions and deletions in the items of tender schedules in comparison to the previous combined tender. An analysis in audit of the schedules in respect of discharged tender and the accepted tenders, however, revealed that the Organization had to incur an extra liability of ` 2.55 crore in respect of common items of schedules of works in discharged single tender and the accepted double tenders.

When the matter was taken up (September 2010) with the Railway Board, they stated (February 2011) that the decision of the TAA to discharge the tender was taken in the context of erratic behavior of market prices of cement and steel. The work was split into two segments to obtain competitive rates. As the scope of the work was changed, the extra expenditure pointed out by audit was hypothetical. Their reply was not acceptable. When the decision to discharge the tender was taken by the TAA, the behavior of market prices of steel and cement showed an uptrend. In fact, in respect of steel, the main contract commodity under consideration by the TC, there was a continuous increase in the market prices after the floating of tender in December 2007. The purpose of re-tendering for segmented works was thus defeated as both the contracts were awarded at much higher rates to the same firm whose offer was not accepted against the discharged tender. Changes made in the items of tender schedule with reference to the discharged tender could also not be termed as change in the scope of the work as the value of items added and deleted was ` 0.46 crore (4.28 percent) and ` 0.14 crore (1.30 per cent) respectively only. Such minor additions/deletions of items of work were possible during the normal course of execution also.

3.12 Northeast Frontier Railway: Excess payment to the contractor for over-break in tunnel construction works

Faulty measurement towards inclusion of overbreak area in the measurement for payments in construction of tunnel resulted in excess payment of ₹ 2.39 crore to the contractor

For construction of 912 metres long single line Broad Gauge (BG) tunnel between chainage 87.390 km. and 88.302 km of Jirania – Teliamura section of Kumarghat – Agartala new line project, a contract was awarded at a cost of ` 19.39 crore in August 2003. The work was to be completed by May 2005. During execution of the work (October 2003), the ONGC authorities objected to the tunnel alignment due to its proximity to their gas well. Accordingly, the Railway Administration decided (November 2003) to shift the alignment by 100 metres from gas well which resulted in increase of tunnel length with attendant costs by 46.13 per cent. Due to increase in the length of the tunnel from 912 metres to 1110 metres and in the quantity of materials, Railway Administration entered into a new contract in January 2005 and another subsidiary contract in September 2006 with the same contractor.

As per drawing of the tunnel and clauses 4.7.1 to 4.7.7 of the special conditions of contract, the minimum excavation line was fixed as 3.150 metres and pay line was fixed as 3.300 metres from the centre line on both arch and vertical sections. Any enlargement beyond the pay line considered necessary by the contractor for the convenience of his work could be done by him with the prior approval of the Engineer-in-charge. All works carried out for such enlargement including the backfill would be purely at the contractor's cost. Any excavation carried out including through inadvertence beyond the pay line was to be deemed to be an over-break and no over-break beyond pay line would be measured for payment.

It was, however, noticed in audit that the Railway Administration had made payment to the contractor on the basis of the pay line measured up to 3.600 metres instead of 3.300 metres. This had resulted in overpayment of `2.39 crore to the contractor for executing 12,971.14 cum of work beyond the pay line of 3.300 metres during the period February 2004 and April 2009.

When the matter was taken up with the Railway Administration (April 2010), they claimed (July 2010) that the area required for inserting the concrete pipe on top of RCC lagging was minimum 300 mm and as such, minimum excavation line had been provided as 3,450 mm (i.e. 3.450 m). Further, in terms of Clause 4.8.1 of CA, minimum excavation line could be drawn/ established by Engineer-in-charge as per requirement. They also justified the variation in quantities on the ground of unavoidable Geological Over-break in certain sections with formation of dome at the top.

The contention of the Railway Administration was not acceptable on the following grounds:

- The Engineer-in-charge did not approve the enhancement of minimum excavation line up to 3.450 m during the execution because the Deputy Chief Engineer concerned had stated (November, 2004) that excess excavation was done because of inadequate equipment and hence the same could not be considered for payment. A lot of over breakage was taking place during execution in absence of proper equipment and skilled labourers. The Railway Engineer-in-charge concerned further emphasized that all payments were to be restricted up to the pay line as per Special Condition of the Contract.
- The tunnel construction work was actually executed considering 3.150 m as minimum excavation line in terms of contractual condition. In no case 3.450 m had been approved as minimum excavation line as noticed from the basic field records maintained during the execution of the tunnel work.
- Clause 4.7.10 of Special Conditions of Contract specifically stipulated that the contractor shall use every precaution to avoid excavation beyond the payment lines marked on the drawings. All drilling and blasting shall be carefully and skillfully performed so that the materials beyond the required lines were not shattered.

Thus, erroneous inclusion of over-break area in the measurement for payments in the construction of tunnel No.3 in Jirania-Teliamura section of Kumarghat-Agartala new line construction project resulted in excess payment of `2.39 crore to the contractor.

The matter was brought to the notice of Railway Board (September 2010); their reply had not been received (January 2011).

3.13 Central Railway: Non-recovery of departmental charges and maintenance charges of ROBs/RUBs

The failure of the Railway Administration to prepare Completion Reports, execute agreements and raise bills for the maintenance has resulted in non recovery of their legitimate dues of ₹1.83 crore

In terms of Para 1137 of Indian Railway code for Engineering Department (E), when Engineering Department of a Railway executes a work for outside parties including other Railways, government department, public bodies etc., Railway Administration should levy 12.5 percent departmental charges to cover the cost of tools, plant and of establishment supervision on the total cost of the work. Para 1851(E) stipulate that all deposit works in railway premises should be maintained by the Railway Administration at the cost of the parties who applied for them and before a Deposit work was undertaken or commenced, the capitalized value of the maintenance charges should be recovered in full and a formal Agreement should also be executed between the parties concerned. The Accounts Officer was responsible for the correct recovery of maintenance charges pertaining to all Deposit Works and should ensure that bills were promptly raised and payments were received.

The matter regarding non-execution of agreements, non-preparation of Completion Reports and non-recovery of departmental charges as well as maintenance charges in respect of the following ROBs/RUBs commissioned between March 1990 and December 2006 was taken up with the Railway Administration in May 2006:

Sl. No	Name of ROB/RUB	Financing pattern	Date of handing over to Open Line
1	ROB at Shahabad at km 592/9	Cost sharing with PWD, Government of Karnataka	13.03.1990
2	ROB at Akurdi at km 174/4-5	100% by Municipal Authority	15.12.1997
3	ROB at Akurdi at km 172/11-12	100% by Municipal Authority	12.09.2001
4	RUB at Dapodi at km 183/11-12	100% by Municipal Authority	20.08.2005
5	ROB Chinchwad at km 175/12-13	100% by Municipal Authority	18.12.2006

In reply, the Railway Administration had stated (July 2006) that the matter regarding signing of agreements was being pursued and that the maintenance charges could only be raised after drawal of completion reports and signing of agreements. As regards preparation of Completion Reports (CRs) it was stated that drawal of CRs in respect of two ROBs constructed at Akurdi and one at Sahabad was in process and the action for drawal of CR in respect of other ROB/RUB would be taken on completion of approach works.

Scrutiny of records of Engineering Department of Pune and Solapur Divisions of Central Railway (January 2010), however, revealed that despite lapse of a considerable period extending up to 20 years, Railway Administration had neither drawn the CRs nor signed the agreements. As a result, neither the departmental charges of `0.38 crore been recovered nor bills for maintenance charges of `1.61 crore (as assessed by Audit) had been raised. The net outstanding after deducting the excess amount deposited by the parties is `1.83 crore.

The matter was again taken up with the Railway Administration (April 2010) but their reply had not been received (August 2010). However, the fact of absence of a legally binding Agreement had been confirmed by the Sr. Divisional Engineer (Co-ordination) Pune (February 2010) due to which the realization of Railway dues was fraught with uncertainty.

The failure of the Railway Administration to prepare Completion Reports, execute agreements and raise bills for the maintenance had resulted in non recovery of their legitimate dues of `1.83 crore.

The matter was brought to the notice of Railway Board (September 2010); their reply had not been received (January 2011).

3.14 Northeast Frontier Railway: Avoidable extra expenditure on track lifting activities during mega block period

Irregular payments to the contractors for avoidable track lifting activities during the mega-block period resulted in extra expenditure of ₹ 1.22 crore

In May 2005, Ministry of Railways (Railway Board) issued necessary instructions/ guidelines that stipulated that wherever possible, various works related to gauge conversion should be completed in a mega block period of not more than 60 days although 30 days would be ideal.

In connection with gauge conversion of Katihar-Jogbani section, Railway Administration entered into five contracts during March 2007 to September 2007 for pre-mega block and mega block activities. The works under mega block period were executed during 1 January 2008 and continued till 4 June 2008 (more than five months) and the section was finally commissioned on 5 June 2008. As per terms and conditions of the contact, activities such as lifting of Metre Gauge (MG) track of wooden/ metal sleepers by 75 mm by providing ballast under running traffic condition, removing of ballast, etc. were scheduled to be carried out during the pre-mega block period.

Scrutiny of entries in the Record Measurement Book revealed that the Railway Administration executed the pre-mega block activities during the mega block period and made payment of ` 1.22 crore to the contractors for avoidable track lifting activities during the mega block period. Had these activities been executed during the pre-mega block period, it would not only have facilitated the smooth running of the MG trains but also resulted in reduction in the mega block period from more than five months to about one/ two months as per instructions/ guidelines of Railway Board.

Further, Ministry of Railways (Railway Board) had conveyed approval for cancellation/ termination of certain train services in connection with the gauge conversion of Katihar–Jogbani section and directed that the mega block should be for three months and that the gauge conversion should be completed within the stipulated time. Irrespective of these instructions, Railway Administration carried out the pre-mega block period activities during the subsequent mega block period and made irregular payment to the contractors.

When the matter was brought to the notice of the Railway Administration in April 2010, they stated (August 2010) that the entry in the Record Measurement Book had been done on 5 January 2008 (pre-mega block period) as per log book reference and the payment against lifting had been released in the first week of January 2008 which clearly showed that the works were executed during the pre-mega block period.

The contention of Railway Administration was not acceptable because Para 1322 of the Indian Railway Code for the Engineering Department clearly stipulated that the entries in the Record Measurement Book should be recorded simultaneous to the execution of work at the work site. The simultaneous execution of entries in the Record Measurement Book was essential for their validation as any entry subsequent to the date of execution or actual execution date was subject to manipulation/ fraud. Therefore, the entries in the Record Measurement Book being the primary record should be treated as authentic for making payment to the contractors and not the log book entries which were susceptible to manipulation. Further, the Railway Administration's claim that the bills were passed in the first week of January 2008 and the works were executed during the pre-mega block period was also not acceptable because for CC bill Nos. III to VI, the dates of measurement were between February 2008 and July 2008 and the bills were passed between February 2008 and October 2008.

Thus, by making irregular payments to the contractors for avoidable track lifting activities during the mega block period of the gauge conversion of Ktihar-Jogbani section, the Railway Administration incurred extra expenditure of ` 1.22 crore.

The matter was brought to the notice of Railway Board (October 2010); their reply had not been received (January 2011).

3.15 Southern Railway: Extra expenditure due to adoption of incorrect type of girder in the initial stage of construction of a bridge

Failure on the part of Railway in adopting appropriate type of girder for a bridge at the initial stage resulted in extra expenditure to the extent of ₹ 1.16 crore

Railway Board reiterated instructions (August 1980) issued from time to time that no contract for a work should be awarded unless soil tests/ site investigations had been completed and all plans/drawings and estimates approved/sanctioned by the competent authority.

During the doubling of track between Cheppad and Kanyakulam (2005), construction of Bridge No EAK-263 at KM 96/700-800 opposite to the existing bridge on single line was to be undertaken by the construction organization of Southern Railway (Organisation). The existing bridge was constructed with RCC slab and steel girder. The construction unit required to execute the work proposed (2005) to construct the new bridge on the second line with PSC slab and steel girder maintaining almost the same level at bridge location in view of the proximity of level crossing No.146 at Km.96/509. However, the Organization Headquarters decided to construct the bridge with PSC slab and PSC Box girder without site conditions being investigated. The tender was floated in November 2005 without General Arrangement drawing (GAD) for the work being finalized.

It was only after the award of contract (April 2006) that construction authorities inspected the site of work (June & July 2006) and discovered that the use of PSC slab and PSC BOX girder would result in a level difference of 1.615 m between the existing and proposed rail levels. To bring both the locations on par, the lifting of the existing Level Crossing by 1.23 m and re-grading of the existing track involving land acquisition or lowering of bed block/ bottom of girder would be required. In view of this, Organization Headquarters was requested (July 2006) to revise the GAD in favour of steel girder which was made available (semi-through steel) to the contractor in January 2007. In the mean time, no work was commenced by the contractor for want of approved GAD. On receipt of revised GAD, the contractor objected (January 2007) on the ground that the revised GAD was not within the scope of the original contract. The contractor sought the foreclosure of the contract (June 2007) without liabilities on either side on the grounds that (i) the GAD issued was not within the scope of the work, (ii) there was indecisiveness in the finalization of centre span (girder portion) and (iii) there was increase in the price of cement. The contract was, thus, foreclosed (July 2007).

Subsequently, the revised GAD was further changed to PSC slab and PSC 'U' type girder by the construction unit on the realization that there were restrictions on use of steel girders with rivets. The revised proposal (August 2007) was accepted and fresh tender for the construction of bridge with PSC slab and PSC 'U' type girder was floated (October 2007). As there was no response, construction authorities re-tendered four times between December 2007 and May 2008 with no result. The contract was eventually awarded in October 2008 after receipt of three offers during sixth tendering in July 2008.

Thus, avoidable cost overrun to the extent of `1.16 crore, based on the rates accepted for the foreclosed contract and present contract for the items of work other than centre span (girder portion) involving change in the scope of work was incurred owing to Railway's inability to finalize appropriate bridge design during planning stage before the first tender was floated.

When the matter was taken up (October 2010) with the Railway Board, they accepted (January 2011) the fact that the initial adoption of PSC box girder was not suitable in respect of this bridge. They stated that the PSC 'U' type girders were not in vogue for longer spans of Railway bridges at the time of first tender. As such, their adoption at initial stage could not be expected. The reply was not acceptable. In fact, Zonal Railway failed to acknowledge the prevailing peculiar site conditions through site investigations prior to tendering and incorrectly adopted PSC box type girder. Further, PSC 'U' type girder was not an innovation on Southern Railway as M/s. RVNL had adopted PSC 'U' type girder in their Inland Terminal work at Vallarpadam (February 2007). Had the Railway Administration carried out proper site inspections at the initial stage, it would have been possible to avoid delay in the selection of appropriate type of girder.

3.16 Eastern Railway: Extra expenditure due to avoidable discharge of two tenders

As per the Railway Board guidelines, a contractor because eligible for the award of a contract on fulfilling eligibility criteria laid down in the tender. The guidelines also stipulate that eligibility criteria may be modified on a case-to-case basis in respect of urgent Project/Works and specialized nature of work with the concurrence of Associate Finance and personal approval of General Manager.

Rejection of offers of two tenderers by the Railway on unsubstantial grounds and subsequently awarding the contracts at a higher cost to the same tenderers resulted in avoidable expenditure of ₹ 1.05 crore

A. Tender for earthwork in embankment, blanketing and construction of major/minor bridges, etc, in connection with doubling between Hotor and Magrahat Stations was invited by the Zonal Railway in December 2006. Against this, tender offers were received from three contractors (M/s NAP Construction Pvt. Ltd., M/s S.S. Civil Construction Pvt. Ltd. and M/s Bindu Sai JV). The Tender Committee in its meeting opined that none of the tenderers had satisfied the eligibility criteria since the list of works submitted by the firms as credentials did not constitute relevant work experience in a similar nature of work. Accordingly, the tender was discharged in July 2007. A fresh tender for the same work was called in August 2007, i.e. eight months after the original tender. This time offers were received from two firms including M/s. S.S. Civil Construction Pvt. Ltd., one of the earlier tenderers. After negotiations, the Railway accepted the offer of the lowest tenderer, viz. M/s S.S. Civil Construction Pvt. Ltd. Audit found that M/s S.S. Civil Construction had submitted the same list of works as of in the earlier tender (December 2006), wherein the firm was considered as lacking in work experience. The only difference was that this time the firm had submitted details of works undertaken when Railway requested for the same. The contract was thus awarded (January 2008) to M/s S.S. Construction at a value of ` 7.89 crore which was ` 0.61 crore higher than the earlier offered value (` 7.28 crore) of the firm.

B. Similarly, a tender for earthwork in embankment, blanketing and construction of minor bridges, etc. in connection with doubling between

Karea-Kadambagachi and Sondalia Stations was invited in October 2007. The Railway received only one offer against this tender from M/s A. K. Mukherjee and Co. The firm had submitted a list of works, executed under different tenders by way of work experience. The Tender Committee opined (December 2007) that among the listed works, only the works covered under Tender No.22 of 2003-04 and Tender No.LN/2 of 2005-06 satisfied the eligibility criteria. But the value of the works portion of Tender No.22 of 2003-04 was less than the required value for eligibility criteria. Regarding Tender No.LN/2 of 2005-06, they observed that although these works were completed, they were not yet commissioned and hence could not be considered. But the accepting authority observed that the different items of work covered under Tender No.LN/2 of 2005-06, although not commissioned, were being utilized by passengers and hence, it would be unjust to ignore the value of such items of work completed and put to use. Accordingly, the Tender Committee considered the portion of only completed works in use towards fulfillment of eligibility criteria. The Committee found that the tenderer had not completed any work of similar nature, for a minimum value of 35 per cent of the advertised tender value of work in the last three years. Therefore, it was considered that the tenderer did not fulfill the financial limit condition of the eligibility criteria. The tender was finally discharged in January 2008.

A fresh tender for the same work was called in March 2008. This time also the only offer received was from M/s. A. K. Mukherjee and Co. This time, the Tender Committee opined that M/s. A.K. Mukherjee and Co. were capable of taking up the work since they were the working contractors in the district and were executing works of similar nature. After negotiations, the Tender Committee accepted the offer of M/s A. K. Mukherjee & Co. on the basis of the same work credentials that had earlier been considered as not fulfilling the eligibility criteria. The contract was awarded to M/s A. K. Mukherjee & Co. (May 2008) at a negotiated value of ` 3.28 crore which was ` 0.44 crore higher than the earlier offered value (` 2.84 crore) of the firm.

Thus, rejection of offers of two tenderers by the Railway on unsubstantial grounds and subsequently awarding the contracts at a much higher cost to the same tenderers resulted in avoidable expenditure of ` 1.05 crore (` 0.61 crore +` 0.44 crore).

The cases were brought to the notice of the Railway Board (October 2010); in reply (January 2011) they stated that fresh tender in the first case was called against previous discharged tender with revised criteria. In the second case, the Railway Administration was of the view that the sole tenderer had failed to fulfill the requirement of completion of any work of similar nature for a minimum value of 35 percent of tender value in the last three financial years. The reply was not acceptable for the following reasons:-

- In the first case, there was no change in the eligibility criteria between the first and second tendering. The firm simply furnished the details of works executed in support of their work experience.
- In the second case, the tenderer had submitted the same documents as their credentials, which were furnished in the first instance. However, the Committee, in the first instance segregated the tender No.22 of 2003-04 to reject the same while in the second attempt; they justified its acceptance on the ground that the single tenderer was the working contractor in the district and had completed various items of work in Tender No.LN/2 of 2005-06 satisfactorily. However, the Tender Committee in the same case had earlier opined that these works although completed were not yet commissioned and therefore need not be considered.

3.17 Northeast Frontier Railway: Wasteful expenditure due to non-provision of dual gauge (MG/BG) standard sleepers

Unjustified provision of MG new steel channel sleepers instead of originally sanctioned dual gauge (MG/BG) sleepers resulted in wasteful expenditure of ₹1.63 crore

Consequent upon the sanction (2000-01) for gauge conversion of Jogbani (JBN)-Katihar (KIR) – Barsoi (BOE) – Radhikapur (RDP) section, the Metre Gauge (MG) section of Alubari (AUB) – Siliguri Junction (SGUJ) and Katihar (KIR)–Tejnarayanpur (TNPR) were likely to be gauge locked. Accordingly, the Railway Administration decided (May 2002) to convert AUB-SGUJ MG section into Broad Gauge (BG) which was sanctioned in 2006-07. Later, gauge conversion of KIR-TNPR was sanctioned as material modification in 2007-08. Meanwhile, in the Final Works Programme (2005-06) the Railway Administration decided to strengthen the wooden MG bridge sleepers with new Broad Gauge (BG) steel channel sleepers in selected bridges of BOE-AUB-SGUJ and KIR-TNPR sections with the justification that these new BG standard steel channel sleepers could be utilized during gauge conversion.

Accordingly, in the detailed estimate (November 2005) the Railway Administration had made for provision of steel channel BG sleepers for BOE-AUB-SGUJ and KIR-TNPR, MG sections. However, it was noticed in Audit that for BOE-AUB-SGUJ section, the Railway Administration wrongly provided and executed 2,079 MG standard steel channel sleepers. It was further noticed that the train services in the AUB-SGUJ section were under suspension since 16 August 2009, while the gauge conversion was in progress. Thus, 2,079 MG standard steel channel sleepers laid on the bridges in the BOE-AUB-SGUJ section had been prematurely rendered scrap. This had resulted in infructuous expenditure of `1.63 crore towards the cost of procurement, transportation and lying of MG standard steel channel sleepers.

When the matter was brought to the notice of Railway Administration (January 2010), they stated (June 2010) that the work of provision of MG standard sleepers in the selected bridges in BOE-AUB-SGUJ was executed as the condition of wooden sleepers was very bad and unserviceable. Considering the safety of railway track, the work was executed. The contention of the Railway Administration was not acceptable because the Divisional authorities had themselves justified the use of BG standard steel channel sleepers for both BOE-AUB-SGUJ and KIR-TNPR, MG sections. Had the Railway Administration executed the strengthening work as per original sanction, the use of BG standard steel channel sleepers would have not only ensured safe running of trains but also the sleepers could have been utilized in the on-going gauge conversion work of the said section. Moreover, the gauge conversion of AUB-SGUJ section was under active consideration since May 2002 and hence the strengthening work for BOE-AUB-SGUJ section by MG standard steel channel sleepers was improper and unjustified.

Thus, unjustified provision of MG steel channel sleepers instead of originally sanctioned BG steel channel sleepers resulted in infructuous expenditure of `1.63 crore (even after taking into account the scrap value of these MG steel channel sleepers).

The matter was brought to the notice of Railway Board (October 2010); their reply had not been received (January 2011).