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**STANDING COMMITTEE ON RAILWAYS
(2014-15)
SIXTEENTH LOK SABHA**

**MINISTRY OF RAILWAYS
(RAILWAY BOARD)**

[Action taken by the Government on the recommendations/ observations contained in the Twenty First Report of the Standing Committee on Railways (Fifteenth Lok Sabha) on 'Major Railway Accidents during the last five years – Causes and Remedial Measures']

FIRST REPORT



**LOK SABHA SECRETARIAT
NEW DELHI**

December, 2014/ Agrahayana, 1936 (Saka)

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STANDING COMMITTEE ON RAILWAYS
(2014-15)

(FIFTEENTH LOK SABHA)

MINISTRY OF RAILWAYS
(RAILWAY BOARD)

[Action taken by the Government on the recommendations/ observations contained in the Twenty First Report of the Standing Committee on Railways (Fifteenth Lok Sabha) on 'Major Railway Accidents during the last five years – Causes and Remedial Measures']

Presented to Lok Sabha on 18.12.2014
Laid in Rajya Sabha on 19.12.2014



LOK SABHA SECRETARIAT
NEW DELHI

December, 2014/ Agrahayana, 1936 (Saka)

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COMPOSITION OF THE STANDING COMMITTEE ON RAILWAYS (2014-15)

Shri Dinesh Trivedi - Chairperson

MEMBERS

LOK SABHA

2. Shri E. Ahamed
3. Kunwar Pushpendra Singh Chandel
4. Shri Ram Tahal Choudhary
5. Shri Sanjay Dhotre
6. Shri Gourav Gogoi
7. Shri Rajen Gohain
8. #Shri Chandra Prakash Joshi
9. Shri Ramesh Chander Kaushik
10. Shri Gajanan Kirtikar
11. Shri Balabhadra Majhi
12. Shri Arjun Ram Meghwal
13. Shri K.H. Muniyappa
14. Shri Thota Narasimham
15. Shri A.T. Nana Patil
16. Shri R. Radhakrishnan
17. Shri Mekapati Raja Mohan Reddy
18. Shri Lakhan Lal Sahu
19. Shri Ganesh Singh
20. Shri Uday Pratap Singh
21. Shri S.R. Vijayakumar

RAJYA SABHA

22. Shri A.K. Antony
23. Shri Mukut Mithi
24. Shri Dilipbhai Pandya
25. @ Vacant
26. Shri Ambeth Rajan
27. Shri T. Rathinavel
28. Shri Bashistha Narain Singh
29. Shri Devender Goud T.
30. Shri Alok Tiwari
31. Shri Motilal Vora

* Constituted *vide* Lok Sabha Bulletin Part II No.623 dated 01.09.2014

Sh. Bandaru Dattatreya ceased to be a Member on his appointment as Minister w.e.f. 09.11.2014. Shri Chandra Prakash Joshi was nominated as Member *vide* LSS Bulletin Part No.783 dt.14.11.2014

@ Smt. Kusum Rai retired on 25.11.2014 *vide* R.S.S. I.d. No.1(2)2014-coord. dt.20.11.14

SECRETARIAT

- | | | | |
|----|-------------------------|---|-------------------------|
| 1. | Shri K. Vijaykrishnan | - | Additional Secretary |
| 2. | Smt. Anita Jain | - | Joint Secretary |
| 3. | Smt. Mamta Kemwal | - | Additional Director |
| 4. | Ms. Banani Sarker Joshi | - | Sr. Executive Assistant |

INTRODUCTION

I, the Chairperson of the Standing Committee on Railways (2014-15), having been authorized by the Committee to present the Report on their behalf, present this First Report of the Committee on action taken by the Government on the Recommendations/Observations contained in the Twenty First Report of the Standing Committee on Railways on 'Major Railway Accidents during the last five years – Causes and Remedial Measures'

2. The Twenty First Report was presented to the Lok Sabha on 18.12.2013 and it contained 16 recommendations/observations. The Ministry of Railways have furnished their action taken replies in respect of all the recommendations/observations.

3. The Committee considered and adopted the draft Action Taken Report at their sitting held on 17.12.2014.

4. An analysis of the action taken by the Government on the recommendations/ observations contained in the Twenty First Report of the Standing Committee on Railways (Fifteenth Lok Sabha) is given in Appendix-II.

NEW DELHI;
17 December, 2014
26 Agrahayana, 1936 (Saka)

DINESH TRIVEDI,
Chairperson,
Standing Committee on Railways

CHAPTER I

REPORT

This Report of the Committee deals with the Action Taken by the Government on the recommendations and observations contained in the 21st Report (15th Lok Sabha) on 'Major Railway Accidents during the last five years – Causes and Remedial Measures'. The Report was presented to the Lok Sabha on 18.12.2013 and laid in Rajya Sabha on 06.02.2014.

1.2. Action Taken Notes have been received from the Government on all the 16 recommendations/observations contained in the Report. These have been broadly categorized as follows:

(i) Recommendations/observations which have been accepted by the Government:-

Para Nos. 1, 2, 3, 4, 11, 12, 13, 14, 15

Total : 9
Chapter II

(ii) Recommendations/observations which the Committee do not desire to pursue in view of the Government's replies:-

Para No. Nil

Total : Nil
Chapter III

(iii) Recommendations/observations in respect of which replies of the Government have not been accepted by the Committee and which require reiteration:-

Para Nos. 5, 6, 7, 8, 9, 10, 16

Total : 07
Chapter IV

(iv) Recommendations/observations in respect of which final replies are still awaited:-

Nil

Chapter V

1.3 The Committee trust that utmost importance would be given to implementation of the recommendations/observations

accepted by the Government. In cases where it is not possible for the Ministry to implement the recommendations for any reason, the matter should be reported to the Committee with reasons thereof. The Committee further desire that Action Taken Notes on the recommendations/observations contained in Chapter-I of this Report should be furnished to them at the earliest.

1.4 The Committee will now deal with the action taken by the Government on some of their recommendations/observations.

A Under utilisation of funds for safety related works

Recommendation (Para No.5)

1.5 The Committee note with concern that there was lack of utilisation of the allocated funds in the safety category during the last two financial years, i.e. 2011-12 and 2012-13 where there was shortfall in utilisation. The Committee fails to understand how the Railways could have ended up with unutilised funds in such a critical category as safety. This reflects very poorly on the Railways as regards safety which involves the lives of millions of passengers who avail of the Railway services. The Committee forcefully recommend that the Railways should fully utilise the funds meant for safety so that accidents/ untoward incidents are avoided.

1.6 In their Action Taken Reply, the Ministry of Railways have stated as under:

“Funds are allocated for safety related works, under both Plan and non-Plan side. This expenditure is largely met out of the internal resources generated by the Railways in addition to contributions received for Railway Safety Fund from Central Road Fund. From the expenditure incurred on safety related works in the last three years it will be seen that allocations in this regard show an increasing trend. There is no ‘surrender’ as such and lower expenditure was forced by the inadequate

resources generated during the year. The Railways had to regulate expenditure to match internal generation available. However, the Committee's observations have been noted for further enhancing the level of expenditure and its utilisation for safety related activities."

1.7 The Committee find that expenditure incurred for safety related works are largely met out of internal resources generated by the Railways, in addition to contribution received for Railway Safety Fund. The Ministry has stated that during the last year the shortfall in utilization of allocated funds was forced by the inadequate internal resource generation by the Railways. The Committee find it unacceptable that such a critical aspect of safety is being compromised due to reduced internal resource generation and strongly recommend to the Ministry to ensure that there is no reduction in expenditure for safety from the allocated amount due to any reason, and to suitably enhance it so that all safety related works can be undertaken effectively. The Committee, therefore, reiterate their earlier recommendation that the Ministry must place maximum emphasis on safety and ensure that the outlays are suitably enhanced and fully utilised.

B Elimination of Unmanned Level Crossings

Recommendation (Para No. 6)

1.8 The Committee are extremely distressed to note that more than fifty per cent of all accidents across the Indian Railways occur at level crossings, both manned and unmanned. The Committee are quite critical of the premise of the Railways that the main factor responsible for the high rate of accidents at level crossings is as a result of the negligence of road users. The Committee are equally critical of the fact that of the total 31254 level crossings across India, 12582 level crossings remain unmanned even today which comes to about 40%. This is in spite of the fact that the Railways have committed in their 'Vision

2020' document to eliminate all unmanned level crossings. The Committee feel that the Railways is not addressing this serious issue with the desired purposiveness as is seen from the fact that the targets for elimination of unmanned level crossings have never been achieved in the last five years. It is even more distressing that the progress of manning of unmanned level crossings has been woefully inadequate, with only 2310 of the 5351 level crossings identified having been actually manned. The Committee also find with consternation that funds meant for road related safety works have consistently been underutilized during the last five years - at times to the tune of less than 40 per cent utilization. The Committee take a very serious view of this apathetic attitude of the Railways, especially their stand that the onus of safety at level crossing is on the road user. The Committee wish to remind the Railways of their social and moral responsibility towards the travelling public as also the road users and urge them to take proactive measures to put an end to accidents at level crossings. While noting that the task of elimination of level crossings is gigantic, the Committee reiterate their position that the Ministry should urgently take measures to discourage people/vehicles from using level crossings rashly.

The Committee understand that the alternatives to level crossings are grade separators, i.e., ROBs/RUBs. They are, however, greatly concerned that there has been very tardy progress in respect of construction of ROBs/RUBs during the last five years. The Committee, in several meetings, have emphasized the need for speedy and time-bound completion of work on ROBs/RUBs so that accidents and loss of life at unmanned level crossings could be eliminated. However, not much has been done by the Railways in this regard. It is pertinent to mention again that utilization has fallen short of allocation by up to forty per cent in all years from 2008-09 to 2012-13 which is reflective of the lackadaisical approach of the Railways to very serious safety issue. The Committee are not convinced by the reasons forwarded by the Ministry for under-achievement of targets such as late sanction of corresponding work in the State Budget, inadequate fund allocation by the State Government,

non-availability of encumbrance-free land, etc. The Committee are of the view that the Ministry should give focused attention towards resolving these problems and take expeditious measures to achieve the set targets and achieve optimum utilization of allocated funds.”

1.9 In their action taken reply, the Ministry of Railways have stated as under:

“Elimination of Unmanned Level Crossings:

It has emerged from the analysis of pattern of accidents that manning of unmanned LCs is not an ideal solution. Therefore, Railways have decided to progressively eliminate all unmanned LCs by:

Closure - Closing unmanned LCs having NIL/negligible TVU

Merger - Merger of unmanned LCs to nearby LCs/grade-separators by construction of diversion road

Provision of Subways/RUBs

Manning- Unmanned LCs which cannot be eliminated by above methods will be progressively manned.

In the last 5 years, Indian Railways have eliminated 5,400 unmanned level crossings (2,310 by manning and 3,090, by grade-separators and other methods). Year-wise details are as below:

Year	By Closure/ Merger/Subway	By Manning	Total
2008-09	556	259	815
2009-10	553	377	930
2010-11	800	434	1234
2011-12	481	777	1258
2012-13	700	463	1163
TOTAL	3090	2310	5400

Utilisation of Road Safety Fund:

Railways is making its best efforts to achieve the targets for elimination of level crossings. Elimination of all these Level Crossings is a gigantic task and involves lot of manpower, resources and budgetary support. It is a continuous process and is done as per need, inter-se priority of works, availability of funds and co-operation of State Government, particularly, in getting consent for closure of level crossing and undertaking to maintain road and drainage in future for subways. In general, Railway undertakes construction of ROB in Railway Bridge Portion whereas approaches are being constructed by State Government. Smooth progress of ROB/RUBs mainly depends on positive cooperation from the State Government. Most of the times, progress of ROB/RUBs is hampered due to:

- late sanction of corresponding work in the State Budget
- inadequate fund allocation by the State Government
- non-submission of General Agreement Design (GAD) and estimate by the State Government.
- frequent changes in alignment of approaches
- late finalisation of tender for the work of approaches
- non-availability of encumbrance free land for construction of approaches,
- not providing undertaking to maintain road and drainage in future for RUBs,
- delay in providing consent of closure of level crossings

To reduce the effect of above factors on timely completion of ROB/RUBs, Railways has taken following Pro-active Measures:

- engaging single agency for construction of Railway Bridge as well as the approaches,
- joint survey with all concerned including State Government to finalise the tentative GAD,

- circulation of check list and guidelines for preparation of GAD to State Government to avoid any back reference from Railway to State Government,
- standardization of drawings for various spans to avoid delay in designing,
- nomination of nodal officer for single window clearance of GAD from Railway side, and
- use of pre-cast /pre-fabricated components of the bridge.

Several policy initiatives have been taken to expedite faster completion of the construction and to remove the various roadblocks. This has resulted in increased utilisation of allocated funds for the purpose over the years, as shown under:

Year	Allocation (Rs. Crore)	Expenditure (Rs. Crore)	% Utilisation
2008-09	1300	566	43.5
2009-10	1600	900	56.3
2010-11	1700	1101	64.8
2011-12	2000	1329	66.5
2012-13	2000	1558	77.9
2013-14 (upto Dec'13)	1500	1132.26	75.48

Thus, it is clear from above that Railways is trying to utilise the available resources to its optimum capacity to achieve the targets.”

1.10 The Committee are not satisfied with the reply of the Ministry. The Committee are distressed to note the slow progress with regard to elimination of unmanned level crossings where only 5400 of a total of 12582 unmanned level crossings have been eliminated in the last 5 years through manning/closure/merger/provision of ROBs/RUBs, etc. At this pace, the committee are left wondering how the Ministry would be able to keep their commitment of eliminating all level crossings by 2020 as reflected in their 'Vision 2020' document.

The Committee while, taking note of the efforts being made by the Ministry to eliminate unmanned railway crossings, desire that the Railways take up this matter with increased urgency and vigour with effective coordination with the State Governments to ensure that the targets set are achieved within the timeframe.

C Vacancies in the safety category

Recommendation (Para No. 7)

1.11 The Committee further observe that requisite manpower, fully equipped and adequately trained, is a prerequisite for the safety of the travelling public. However, the Committee are surprised to note that currently there exists 5209 vacancies in the posts of gateman or staff manning level crossings. The Committee observe that such a scenario is not at all desirable or satisfactory and recommend that recruitment and deployment of these personnel should be done with utmost urgency. The Committee would like to be kept apprised of the progress in this regard.

1.12 In their action taken reply, the Ministry of Railways have stated as under:

“Arising and filling of vacancies of Gatemen is a continuous process and necessary action is being taken by the zonal railways to fill these vacancies on priority basis.”

1.13 The Committee are unhappy with the comments furnished by the Ministry on such an important aspect as vacancy in security categories. The Committee are disappointed that on being reminded that the Ministry should show urgency in completing the recruitment for safety related posts, the Ministry has provided a vague reply instead of addressing the concerns of the Committee. The Committee

strongly recommend that the Ministry should provide detailed replies to their recommendations in future.

The Committee, as such, reiterate their earlier recommendation to expedite the recruitment and deployment of gatemen/staff manning level crossings at the earliest and would like to be kept apprised of the concrete measure being taken to fill up the huge backlog of vacancies critical to railway safety. The Ministry should issue instructions to the Zonal Railways for filling up these vacancies on an urgent basis.

D Delays in implementation of TAWD, ACD, TCAS and TPWS

Recommendation (Para Nos. 8)

1.14 The Committee note that the Railways have initiated the project of Train Actuated Warning Device (TAWD) which gives audio-visual warning to road users about an approaching train. The Committee further note that there were certain lacunae detected in this system which are being investigated and corrective action being taken by the RDSO. The Committee call upon the Railways to hasten the deployment of TAWD so that accidents/ casualties at level crossings can be avoided/ lowered. The Committee would like to be kept apprised of the progress in this regard.

1.15 In their Action Taken Replies, the Ministry of Railways have stated as under:

“Trials of Train Actuated Warning Device (TAWD) which gives audio-visual warning to road users about an approaching train at Level Crossing Gate were undertaken. However, the system was found unworkable / unsuitable due to various reasons such as law and order, theft, inaccessibility of site, poor power supply and public vandalism which resulted in non-availability

of system. Provision of Train Actuated Warning System at unmanned LCs can be implemented after an effective and theft proof system is developed by RDSO.”

Recommendation (Para Nos. 9)

1.16 The Committee find that the Anti-Collision Device (ACD) was developed by Konkan Railway Corporation (KRCL) to prevent collision like situation of trains. It was taken up as a pilot project on the North East Frontier Railway (NFR) in June 2007 covering 1736 Route Kilometers. Though some operational difficulties were noticed in the pilot project, the Ministry is actively trying to resolve these issues. Considering that several years have gone by in various trials, the Committee urge the Ministry to take appropriate steps to resolve the operational difficulties so that the benefit of this safety measure can be made available on the entire rail network. The Committee would like to be kept apprised of the position in this regard and urge that all help should be rendered to KRCL for glitch-free installation of ACD in Indian Railways.

1.17 In their Action Taken Replies, the Ministry of Railways have stated as under:

“Based on the experience of North East Frontier Railway (NFR), to improve reliability and dependability of Anti-Collision Devices (ACDs) and to test its functioning on multiple lines as well as electrified routes, the specifications and design configuration were revised and the system as evolved was tried on the electrified multiple lines, automatic signalling section of the Southern Railway in 2010-2011. A number of operational and technical problems were experienced during the trials on Southern Railway, which cannot be fully resolved by Konkan Railway Corporation Limited (KRCL) due to design limitation of ACD. After above trials on electrified multiple lines and Automatic Signalling sections of Southern Railway, further development of ACD version 2.0 has been put on hold by KRCL. In view of

above, it has been planned to undertake development of Train Collision Avoidance System (TCAS) by Research Design and Standards Organization (RDSO) for its deployment on main line sections of Indian Railways. ACD provided by KRCL and on trial on NFR also has some operational and technical issues for which efforts are underway by KRCL and RDSO to resolve the identified issues. In this connection, improved ACD Software Version 1.1.2m has already been validated by Electronics Test and Development Centre (ETDC)/ Chennai in July, 2013. This software Version 1.1.2m has been loaded in all stationary ACDs, Loco and Guard ACDs of the trains that ply on Tinsukia Division of NFR. After the performance evaluation jointly by RDSO, KRCL and NFR, deployment of ACD version 1.1.2m on remaining four divisions of NFR (Katihar, Alipur Duar, Rangia and Lumding) has also been taken up.”

Recommendation (Para Nos. 10)

1.18 The Committee have observed that the Train Collision Avoidance System (TCAS) was initiated by the Indian Railways based on the experience gained from the ACD and Train Protection Warning System (TPWS). Currently, it is under trial over 200 kms for safety validation and assessment of operational performance over different rolling stock and under various traffic conditions. However, as in the case of the ACD, trial has been going on for several years. The Committee would like to state that the Railways should work towards making it available on the entire rail network by December 2014 and ensure that the deadline is met. The Vigilance Control Device (VCD) too should be equipped in all diesel and electric locomotives.

1.19 In their Action Taken Replies, the Ministry of Railways have stated as under:

“To overcome major problems noticed in ACD due to its dependence on Global Positioning System (GPS) for location, error in Deviation Count

Theory resulting in wrong Track ID (TID) and need for large numbers of mid-section repeaters, RDSO finalized specification of Train Collision Avoidance System (TCAS) by involving Indian vendors. TCAS shall be a fusion of functionalities of TPWS and ACD and shall prevent Signal Passing at Danger and Collisions. After invitation of Expression of Interest, six Indian firms have been shortlisted by RDSO. Pilot system developed indigenously by one of the firms was successfully demonstrated during Proof of Concept Trials in October / November 2012 on Tandur-Nawandgi section of Vikarabad-Wadi section of South Central Railway. Based on the successful demonstration of Proof of Concept Trial of the technology, extended field trials have been planned by RDSO on 250 Route Kilometers section of Lingampalli-Vikarabad-Wadi-Bidar of South Central Railway for further development of TCAS with multi-vendor, interoperability features for which a work has been sanctioned at a cost of Rs. 29 crore and funds to the tune of Rs. 6 crore have been allocated during the current year 2013-14. After safety assessment, validation and conclusion of extended field trials and based on results of these trials, further deployment of TCAS on Indian Railways will be considered.

RDSO has allocated work for the complete 250 kilometers section to three indigenous firms to facilitate parallel development work by multiple vendors. Prototype of the product developed by vendors is undergoing field trials. All electric locomotives and 99% of diesel locomotives are equipped with Vigilance Control Devices.”

1.20 The Committee observe that the Ministry has developed several new technologies like the Train Actuated Warning Device (TAWD), Anti-Collision Device (ACD), Train Collision Avoidance System (TCAS), Train Protection Warning System (TPWS), etc. in order to enhance the safety of Indian Railways. However, all these mechanisms are in trial/pilot phases only and their implementation over the entire rail network will take time. The Committee are of the

considered view that all these innovations would go a long way in enhancing rail safety and that their development should be accorded the highest priority by the Railways. This would not only improve the safety performance of the Railways but also eliminate accidents/mishaps arising due to human negligence/error. The Committee strongly recommend that the Ministry place utmost emphasis on the timely completion of trials on these safety devices and make them available on the entire rail network so that railway accidents can be avoided/reduced.

E Delays in project implementation

Recommendation (Para No. 16)

1.21 The Committee would also like to emphasize that the usefulness of any project, however well intentioned it be, will be lost if there are inordinate delays in its implementation. As such, the Committee recommend that the Ministry should take corrective steps to ensure that the deadlines of all projects should be met and that there are no spill-overs.

1.22 In their action taken reply, the Ministry of Railways have stated as under:

“Railways are sensitive towards its responsibility for completion of projects in a time bound manner. The slippage in the deadlines are primarily on account of delays in obtaining clearances in the process of land acquisition and handing over of land to the Railway Authorities for execution of work, law and order issues and lack of sustained flow of funds. However, all efforts shall be made to ensure that the deadlines of projects are met.”

1.23 The Committee do not agree with the reasons furnished by the Ministry regarding non-compliance of deadlines and spillover of projects. The Committee are of the view that the blueprint of any project should take into account all issues relating to land acquisition,

finances, implementing agencies, etc., and the project should be formulated accordingly. Delays and bottle-necks point to poor and inadequate planning, resulting in huge cost escalations, besides hindering timely completion of projects. The usefulness of these projects also get diluted in the face of inordinate delays. The Committee, therefore, recommend that the Ministry put in place a mechanism to eliminate all impediments in the initial planning stages of a project itself.

CHAPTER-II

RECOMMENDATIONS/OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

Recommendation (Para No. 1)

The Committee note that the Railways have a very comprehensive and well developed definition of the different types of accidents which have been graded according to their severity. Consequential or major accidents have been classified on the basis of loss of lives of 10 or more passengers or serious damage to Railway property of the value exceeding Rs. 2 crore or interruption of rail traffic ranging from 3 to 6 hours on broad gauge routes. The Committee are of the considered view that the Railways should strictly comply with this classification to facilitate speedier investigation and consequent corrective measures, wherever required. The Committee also suggest that the Railways should review the classification, if so desired, to rationalise the categories further.

Reply of the Government

The classification of consequential train accidents issued vide Board's letter No. 2000/Safety(A&R)/19/20 dated 13.12.2000 has been reviewed by the Ministry of Railways from time to time to meet the requirements and to make these classifications relevant. Necessary amendments have accordingly been incorporated from time to time. Indian Railways strictly comply with the classification of consequential train accidents issued vide Board's letter referred above. Recommendations of the Standing Committee for further review of the above classification have since been noted.

Recommendation (Para No. 2)

The Committee are, however, concerned that incidents of run over of passengers/ pedestrians by trains are not accounted for as accidents under the

Railway classification scheme. They feel that there is a lack of adequate deterrence insofar as pedestrians and vehicular traffic is concerned. The committee strongly urge the Ministry to take appropriate measures to discourage road users and vehicles from crossing railway tracks by putting up physical barriers, considering punitive fines and giving wide publicity on the disastrous consequences and dangers of such acts.

Reply of the Government

In view of direction of Standing Committee, instructions have been issued to zonal railways to direct concerned officers and staff down the line to make all out efforts to discourage road users and vehicles from crossing railway tracks.

Following preventing measures are being taken by Railway Protection Force (RPF) to prevent road users and vehicles from crossing railway tracks:

- i. Random checks are conducted against trespassers by RPF in coordination with Safety Branch, Government Railway Police (GRP) and local police and offenders are prosecuted under the Railways Act.
- ii. People are being educated and alerted through poster, banner and public address system asking them to desist from using the Railway tracks for crossing.
- iii. Awareness campaigns are organized to sensitize the passengers/ public about the dangers of crossing Railway track and advising them to make use of the foot over bridges.
- iv. Deterrent action against road vehicle drivers involved in accidents causing damage to Level Crossing Gates is taken and the errant drivers are dealt under relevant provision of the Railways Act.

- v. Wide publicity is given to the general public appealing them to strictly adhere to the safety rules while crossing manned/ unmanned level crossings through print and visual media.

Moreover, Section 161 of the Indian Railways Act, 1989 provides that “if any person driving or leading a vehicle is negligent in crossing an unmanned level crossing, he shall be punishable with imprisonment which may extend to one year. For the purpose of this section, “negligence” in relation to any person driving or leading a vehicle in crossing an unmanned level crossing means the crossing of such level crossing by such person –

- (i) without stopping or caring to stop the vehicle near such level crossing to observe whether any approaching rolling stock is in sight, or
- (ii) even while an approaching rolling stock is in sight”.

Recommendation (Para No. 3)

The Committee understand that the Railways have defined the liability of the Rail Administration in the event of a consequential accident under Section 124 of the Railways Act of 1989. However, the Committee note that the award of compensation to victims are dependent on the decree awarded by the Railway Claims Tribunal, the formalized process of which has no fixed time frame. The Committee take strong exception to this and recommend that in the case of accidents accompanied by loss of life, limb or livelihood, the Railways should dispose of cases in the shortest possible time so that compensation is not denied or delayed when most needed. The Committee wish to remind the Ministry that when the general public travels on trains, the Railways have a moral responsibility to transport them safely to their destination. Further, the Committee find that there is no policy to provide employment to the dependents of the deceased in train accidents. The Committee find it distressing that the Ministry take the view that this is done only in those cases where the Minister of Railways makes an announcement. This position is certainly not desirable, since the Committee feel

that there has to be a clear and consistent policy in this regard. Though, it is understandable that it may not be feasible to provide employment to all families affected by train accidents, yet the Committee urge the Ministry to examine compassionately and in a humane manner those cases where the head of the family/ sole earning member has lost his/ her life, subject to laid down guidelines. The Committee also recommend that investigation into accidents should be expeditious and time-bound and compensation issued to the victims' families without inordinate delay. Where action is to be taken against erring officials or in the case of follow up action for remedial measures, these too should not be kept pending.

Reply of the Government

The procedure for payment of compensation which is in vogue at present is a judicial process. The compensation is decided by the Railway Claims Tribunal, which is a quasi-Judicial body independent from the Railways after following the judicial process.

However, in accidents involving loss of lives of passengers, ex-gratia relief is given by the Railway Administration soon after an accident to meet the immediate expenses of the victims. With effect from 01.08.2012, the rate of ex-gratia in case of death as defined under Section 124 of the Railways Act, 1989, is Rs. 50,000/- payable to the next of the kin of the deceased passenger. In case of grievous injuries, the ex-gratia is paid at the rate of Rs. 25,000/- upto 30 days of hospitalization and if indoor treatment is required for more than 30 days, additional ex-gratia is paid at the rate of Rs. 300/- per day to be released at the end of every 10 day period or discharge whichever is earlier. The maximum period of payment of such ex-gratia will be 12 months. Ex-gratia in case of simple injuries under Section 124 for train accidents is Rs. 5,000/-. In exceptional cases, Hon'ble Minister of Railways announces payment of ex-gratia at enhanced rate to next of kin of the deceased.

Regarding provision of employment to the dependents of the deceased in train accidents, the issue was examined by this Ministry but the same has not been found feasible.

All consequential train accidents are investigated either by Commissioner of Railway Safety (CRS) under the Ministry of Civil Aviation or by the Departmental Inquiry Committees on the zonal railways depending upon severity of the accident. All efforts are made to complete these departmental inquiries on zonal railways within the stipulated time frame of 10 days (15 days if staff of foreign railway is involved). After receipt of the inquiry reports of the Commissioners of Railway Safety/ Departmental Inquiry Committees and fixation of responsibilities of the staff found guilty, these reports are examined by the zonal railways and disciplinary action is initiated on priority against the staff found guilty. The remedial measures as suggested through recommendations of the inquiry committees are taken up for implementation by the zonal railways.

The procedure for payment of compensation which is in vogue at present is a judicial process. The compensation is decided by the Railway Claims Tribunal after following the judicial process, as it is a quasi-Judicial body independent from the Railways.

Recommendation (Para No. 4)

The Committee note that the Ministry has utilised 97.7 per cent of Rs. 16694.66 crore, i.e. Rs. 16318 crore, allocated under the Special Railway Safety Fund (SRSF). Since the mandate of the SRSF was to wipe out the arrears in renewal of over-aged assets within a fixed time, close to cent percent utilisation of funds points to its purposive implementation. The Committee further note that the renewal of tracks, bridges, signalling gears, rolling stock, etc. carried out have shown very positive results as is evident from the reduction of consequential train accidents from 415 in 2001-02 to 194 in 2007-08 and 121 in 2012-13. Similarly, accident per million kilometre has come down from 0.55 in 2001-02 to 0.22 in 2007-08 and eventually to 0.13 per million km in 2012-13. The Committee are of the opinion that the Railways should now move to the next level of safety. For

this purpose, the Ministry may consider requesting the Government to provide another fund on similar lines to enhance the safety index of the Railways. The Committee would also like to recommend that the Railways should further strive to generate investible surplus from within its own resources to contribute towards the safety fund.

Reply of the Government

Ministry of Railways is grateful for the appreciation by the Committee of its efforts in achieving targets of utilising allocated funds under 'Special Railway Safety Fund' (SRSF) for various categories and thereby ensuring improvement in safety of passengers and operation of trains.

SRSF was set up in 2001-02 with a corpus of Rs. 17,000 crore and was in operation till 2007-08.

Although Railways' demand for setting up of another fund on the lines of SRSF is being raised at different fora, the financial position of the Government does not support such a fund and therefore presently all activities relating to renewal/replacement of assets, road related safety works and other safety works are being taken up under 'Depreciation Reserve Fund' (DRF), 'Development Fund' (DF) and 'Railway Safety Fund' (RSF). While DRF and DF are financed through the Railways' internal resources, RSF receives appropriations from the Central Road Fund. Investment in safety gets close attention at all times. Fund allocation on safety related activities is also being increased over the years as feasible. While Railways would strive to continue to contribute to this fund from investible surplus, any gesture from Government to provide a specific fund for this purpose would be welcome.

Recommendation (Para No. 11)

Insofar as derailment is concerned, the Committee note with concern that poor maintenance of track is the major cause of such derailment. The

Committee, however, find that the Railways are making strenuous efforts to improve the condition of tracks. In fact, there has been optimum utilization of the allocated funds and achievement of targets has been satisfactory. The Ministry is also taking proactive steps, including introduction of technological innovations to improve tracks. Further, the Committee note that the Railways have a well defined inspection mechanism to ensure rail-worthiness of tracks.

Reply of the Government

Indian Railways is making continuous efforts to improve the condition of track. The progress of Track Renewal vis-à-vis targets and achievement during the last three year are as under:

Year	Target	Achievement (Km of CTR Units)
2010-11	3150	3465
2011-12	3000	3300
2012-13	3000	3296
2013-14	3000	2155 (Upto December, 2013)

In current year 2013-14 (upto Dec'13), the total number of consequential accidents due to track defects are 19 against a total number of 87 consequential train accidents. Out of these 19 consequential train accidents, only 8 accidents were due to poor maintenance of track. In order to improve safety, modern track structure consisting of PSC sleepers, 52 kg/60 kg, 90 or higher UTS rails, fanshaped layout of PSC sleepers, Steel Channel Sleepers on girder bridges is being used while carrying out primary track renewals. Further it has been decided to lay Thick web switches, Weldable Cast Manganese Steel crossings on identified routes. Use of higher section of rail i.e. 60 kg rails will progressively be increased. To assess the internal defects and take remedial action well before any failure of rail or weld, ultrasonic flaw detection (USFD) is carried out as a preventive measure.

Number of derailments have increased on account of rail/weld fractures. Major cause of rail fractures is corrosion of rail foot due to dropping of

excreta from the coaches directly on the rails. All passenger train coaches need to be fixed with zero-discharge toilets.

Following measures are being taken to protect the rails from corrosion due to above reasons:

(i) The corrosion resistant rails Nickel-Chromium-Copper (NCC) rails and Copper-Molybdenum (Cu-Mu) rails have also been developed and are under trial in different Zonal Railways.

(ii) Anti-corrosive bituminous painting of rails and greasing and sealing of liner contact area is being done on identified corrosion prone areas.

(iii) A study on rail corrosion due to micro organisms and remedial measures, has been entrusted to Centre for Electro Chemical Research Institute (CECRI)/Karaikudi through a Memorandum of Understanding (MOU) between Research Designs & Standards Organisation (RDSO) and CECRI/Karaikudi entered into in the month of February 2012. The study is in progress.

Increase in speed, axle loads and volume of traffic requires more maintenance efforts and superior quality of maintenance. At the same time, due to increase in traffic, time available for maintenance of track has reduced considerably. Therefore, complete mechanization of track maintenance and construction has been planned. High initial quality of track laying needs lesser maintenance. Also the durability of mechanized maintenance is much more. Mechanization reduces bottlenecks in operation. Vision 2020 document of Indian Railways envisages complete mechanisation of track maintenance and construction.

In addition, an elaborate system of inspections of track has been laid-down in Indian Railways Permanent Way Manual (IRPWM) for Keymen, Gangmate, Junior Engineer (Permanent Way), Section Engineer (Permanent Way), Assistant Engineer and Divisional Engineer. Higher officials not only conduct technical inspections but also keep check on quantity and quality of

inspections conducted by their juniors. The periodicity of track inspection has been defined in IRPWM.

Recommendation (Para No. 12)

The Committee are of the opinion that 'Signal Passing At Danger' is a major cause of concern as it points to human failure. Therefore, the early introduction of the Train Protection Warning System which seeks to eliminate accidents caused due to human error is certainly very much needed. The Committee, while appreciating this initiative by the Ministry, urge them to protectively eliminate all bottlenecks in its implementation all across the railway network so that the added benefits can accrue to both the Railways and the travelling public.

Reply of the Government

TPWS prevents accidents caused by human error like Signal Passing at Danger (SPAD) and over speeding. Two pilot projects of TPWS were sanctioned one each on Southern and North Central Railway.

The pilot project on Southern Railway was taken up on Chennai Central - Gummiddipundi (50 Route Kms) sub-urban section and was commissioned in May'2008 and since then it is operational. On North Central Railway, it was taken up in non-suburban section on Delhi-Agra section (200 Route Kms) where TPWS has been provided and service trials are in progress on 35 locomotives on nominated trains. TPWS has been commissioned on One AC rake on Kolkata Metro and 5 more rakes have been equipped with TPWS equipment. Work is in progress to provide TPWS system on all rakes on Kolkata Metro.

Based on the experience gained, works for deployment of TPWS on High Density Network (HDN)/Automatic Signaling Sections have been sanctioned at a cost of Rs.1768 crore covering 3397 route kilometers over 8 Zonal Railways i.e. Central, Eastern, Northern, South Central, North Central, Southern, South Eastern and Western.

In first phase, process to acquire TPWS (ETCS Level 1) on Automatic Signalling Suburban Sections where EMUs, MEMUs and DEMUs and Main Line Locomotives ply on Eastern, South Eastern and North Central Railways, has been initiated. In next phase, balance sanctioned works of TPWS shall be taken up.

Besides above, Indian Railways is developing low cost indigenous system, namely, Train Collision Avoidance System (TCAS) which can prevent signal passing at danger, over speeding as well as mid-section collision. Specifications of the system have already been finalized by Research Design and Standards Organization (RDSO). The proof of concept trial of TCAS were successfully carried out during October/November, 2012 on South Central Railway.

Extended field trials on 250 kilometres Lingamapalli-Vikarabad-Wadi-Bidar Section of South Central Railway have also been planned by RDSO.

Recommendation (Para No. 13)

With over one lakh bridges, out of which 30-35 percent being hundred years old, the Committee feel that the Railways should stringently monitor their carrying capability and special emphasis must be laid on their proper maintenance. Inspection procedures must be strictly complied with, and appropriate action taken whenever required. The Committee would appreciate if the Railways could initiate a comprehensive survey of all bridges on its network with focused attention on the more than hundred year old ones, so that any safety issue could be accordingly dealt with and where required rehabilitation/ rebuilding could be effected.

Reply of the Government

A regular and rigorous system of inspection of bridges is followed on Indian Railways for identification of bridges requiring attention. Under this system, all the bridges are thoroughly inspected once a year by designated officials. In addition, the inspecting officials also inspect the bridges during their routine inspections. The rebuilding/ rehabilitation/strengthening of bridges is

undertaken on the basis of their physical condition as ascertained during their regular inspections and not on the basis of age. Rehabilitation/rebuilding/strengthening of Bridges is a continuous process on Indian Railways. During the last five financial years, a total of 5609 railway bridges have been rebuilt/rehabilitated/ strengthened. As on 01.04.2013, 3426 bridges are sanctioned for rehabilitation/ rebuilding/strengthening. During current year 2013-14, 791 bridges are planned for rebuilding/rehabilitation/ strengthening and upto December'2013, 508 bridges have been rebuilt/rehabilitated/ strengthened.

Recommendation (Para No. 14)

Another area of concern for the Committee is that of accidents due to fire which have been classified as Class B Category accidents by the Railways. Accidents occurring as a result of fire have a very high casualty rate. The Committee while taking note of the measure introduced by the Railway to prevent incidents of fire on train, urge the Ministry to take steps to ensure that inflammable/ combustible material are not carried on board through a system of rigorous security checking at entry points at stations. Further, train originating at such places where combustible/ inflammable material are manufactured (such as crackers) should be more thoroughly and meticulously checked for prevention of carriage of such materials. There should be very stringent checks during festival seasons in different parts of the country. The Committee also urge the Ministry to conduct awareness campaign regularly among the travelling public of the dangers of carrying of such material on board so that there is self-deterrence on the part of the passengers. At the same time, the Railways should also address other factors responsible for fire incidents in the train.

Reply of the Government

To reduce the possibility of carriage of dangerous/ prohibited goods on trains, instructions have already been issued stipulating the following:

- Ticket checking staff at stations should observe that inflammable and dangerous/ prohibited goods are not brought into the railway stations.
- On trains, whenever such goods are detected, ticket checking staff, detecting these items, should intimate about the same to the station staff for necessary action.
- Coach Attendant detecting these items should bring it to the notice of ticket checking staff on the trains.

The extant instructions have been reiterated to all concerned for strict compliance. In addition, Zonal Railways, as per the recommendation of Committee, have also been advised that checking of carrying of combustible/ inflammable material at entry point at locations/ stations, where such materials (such as crackers) are manufactured may be made more rigorous and strengthened, especially during festival seasons.

Railway Protection Force (RPF) also takes following measures to prevent carriage of inflammable material in trains:

1. Regular drives are being conducted in coordination with Commercial Department and Government Railway Police against the carrying of inflammable/ combustible materials in trains and at railway premises and the offenders are prosecuted under the Railways Act.

2. Rigorous security checking is being done at entry points at stations against the carrying of inflammable/ combustible materials. Frisking of passengers luggage is done either manually or by X-ray baggage scanners installed at important Railway Stations.

3. Joint checks are conducted at parcel offices to identify the presence of fuel in the vehicles booked for transportation and other inflammable/ combustible material if any booked.

4. Sustained campaign for public awareness is being launched through appropriate print and electronic media, exhorting passengers not to carry inflammable/ dangerous/ explosive articles as a part of their luggage.

5. Regular announcements are made through Public Announcement System urging the passengers to desist from smoking and carrying inflammable material in trains.

6. The train escort parties are briefed to keep strict watch/ vigil on carrying of inflammable/ combustible material in trains.

Instructions have also been issued to zonal railways to direct concerned officers and staff down the line to be more vigilant and alert and to take effective measures to check the carriage of inflammable articles to avoid fire accidents in railways.

Railways have taken various measures to prevent incidents of fire in trains, which include the following:

1. Indian Railways have always endeavoured to enhance fire worthiness of coaches by using fire retardant furnishing materials in the interior of its coaches which conform to international norms of fire retardancy.
2. Portable dry chemical powder type fire extinguishers are being provided in all air-conditioned coaches, second class – cum – guard and luggage vans, pantry cars and train locomotives in all mainline trains.
3. Railways have also taken measures to prevent fire due to electrical short circuit in coaches, which include (a) Multi tier electrical protection system and fire retardant cables are used in all coaches working on Indian Railways for

prevention of fire due to any electrical defect; (b) separation of positive and negative wires; (c) use of fire retardant materials in all electrical items.

4. With a view to improve fire safety in running trains, Automatic Fire and Smoke Detection System has been provided on coaches of one rake of Train Nos. 22812 and 22824 New Delhi-Bhuaneswar Rajdhani Express as pilot project. The system provides advance warning in case of any fire hazard in running train and thus enables the passengers to protect them from fire. Recently one rake of Train No. 12425 New Delhi-Jammu Tawi Rajdhani Express has also been provided with such system. Based on the feedback, technical specification has been revised and air brake system has been interfaced with this system for stoppage of trains in emergency situations. Provision of similar automatic fire alarm system in 20 more rakes for extended field trial has also been planned.
5. Detailed instructions have been issued to zonal railways for observance of safe practices in handling of pantry cars and for ensuring periodical inspection of electrical and LPG fittings in the pantry cars.
6. Prohibition of petrol/diesel in two wheelers booked as luggage/parcel.
7. Intensive publicity campaigns to prevent the travelling public from carrying inflammable and explosive goods are regularly undertaken.
8. Strict enforcement of no smoking policy inside trains and on railway premises.
9. Two separate Fire Safety Audit Teams have been constituted recently to plan safety audit in selective stations, coaching depots and workshops, etc.

Recommendation (Para No. 15)

The Committee wish to reiterate that technology upgradation should be a consistent endeavour of the Railways. Technological advancements can go a long way in reducing the risk of accidents. The Railways should focus on increasing efforts towards this end and at the same time learn from the best practices prevalent in other countries. Filling up of vacancies, skill development of personnel, and regular monitoring of their health parameters should also be a top priority.

Reply of the Government

Technological upgradation in the laying and maintenance of track is being carried out continuously. Few of the various items of technology upgradation are as under:

1. Switching over to Mobile Flash Butt Welding technology in place of Alumino Thermit (AT) welding to carry out weld renewals. The quality of Mobile Flash Butt Welding is superior to AT welding. At the same time, technology of Alumino Thermit welds has been upgraded by introduction of Auto weigh method, pre-heating with compressed air petrol and 3 piece moulds, so as to upgrade the quality and reliability of welds.
2. Single rail panels of 65m length are being manufactured at the steel plant to minimize number of Alumino Thermit/Flash Butt welding joints in the track which are being converted into 260m/130m long panels by Flash Butt welding technology which is superior to Alumino Thermit welding.
3. Digital Ultrasonic testing machines capable of freezing scan as well as storing data have been developed. Zonal Railways have been advised to progressively use digital machines.

4. Vision 2020 document of Indian Railways envisages complete mechanization of track maintenance and construction activities. Towards this goal, various aspects of track maintenance and track renewal are progressively being mechanized with the help of modern state of the art track machines for optimization of track inputs, better quality and improved safety environment at work sites. A Master plan has been drawn for procurement of track machines to achieve complete mechanization and procurement of machines. A 3 tier system of track maintenance is being adopted. As the 1st tier, heavy on track machines would be used for planned maintenance. The 2nd tier of Mobile Maintenance Units will provide Rail/Road borne transport to track men, small machines and track materials for which hitherto no satisfactory system exists. The 3rd tier of sectional gangs will deal with sundry activities.

As on 01.04.2013, total 708 number of track machines are in operation, 119 number are under supply, whereas 111 number of track machines are under procurement.

5. Two numbers of Rail Grinding Machines have been procured to reduce gauge face corner cracks.

6. Electronic monitoring of track geometry is carried out with Track Recording Cars (TRC) and Portable Oscillation Monitoring Systems (OMS) to detect geometry defects for planning maintenance as per frequencies laid down depending upon speed and route classification.

7. Track management system is being introduced progressively on Indian Railways for development of database and decision support system and to rationalize maintenance requirement and optimize inputs.

Following Technical up-gradations are being carried out by Telecom Department which will go a long way in reducing the risk of accidents:

a) All over head alignments are being replaced with underground copper cable and Optical Fiber cable for the working of Block, Control, Block Proving by Axle Counter (BPAC) circuits etc.

b) Progressively Mobile Train Radio Communication is being introduced on "A" "B" & "C" routes of Indian Railway Network to provide secured means of communication.

Technological advancement/upgradation is continuous endeavour and a major thrust area in Signalling on Indian Railways. Status as on 31.12.2013 is:

1. Track Circuiting of the complete station section has been provided at 30323 locations. Thus completing about 93% of total track circuiting to be provided on Indian Railways. On A, B & C routes 99.8% track circuiting has been provided.
2. Fouling Mark to Fouling Mark track circuiting on entire A,B, C,D Spl and D routes, where permissible speed is more than 75 Kmph, has been completed.
3. Electrical/Electronic Interlocking has been provided at 5142 station out of 6189 interlocked stations on Broad Gauge.
4. Block Proving by Axle Counters (BPAC) for 'Last Vehicle Check' has been provided on 4085 Block Sections.
5. Interlocking of Level Crossing (LC) Gates has been provided at 10378LC gates.
6. Automatic Block Signalling (ABS) has been provided on 2601 RKms.
7. Intermediate Block Signalling (IBS) has been provided on 445 block sections.

The following technological upgradation has been carried out in electric locos to enhance safety:

- Electric locomotives are fitted with Vigilance Control Device (VCD), a safety device which monitors and judges the alertness of driver on run to ensure safety of the train.
- Twin beam headlights for improving the visibility of the drivers during night time.
- Flasher lights which gets automatically switched on in case of train parting due to derailment or otherwise.
- Air dryers for improved reliability of the braking system.
- Simulator based training is being imparted for improving upon the driving skills and the reaction time of drivers.
- In order to reduce fatigue level of loco crew, ergonomically designed Loco cabs are being provided and facilities in running rooms are being improved.

Arising and filling up of vacancies is a continuous process and necessary action is being taken by the zonal railways to fill the vacancies on priority basis. All categories of employees on Indian Railways undergo a structured training at zonal railway training centre at induction stage. In addition, the employees also undergo promotional/ refresher courses at periodic intervals.

Provision for Pre-periodical medical examination of railway employee in safety category is mandatory and is being done regularly.

CHAPTER III

RECOMMENDATIONS/OBSERVATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE GOVERNMENT'S REPLIES

NIL

CHAPTER IV
RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH
REPLIES OF THE GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE
COMMITTEE AND WHICH REQUIRE REITERATION

Recommendation (Para No. 5)

The Committee note with concern that there was lack of utilisation of the allocated funds in the safety category during the last two financial years, i.e. 2011-12 and 2012-13 where there was shortfall in utilisation. The Committee fails to understand how the Railways could have ended up with unutilised funds in such a critical category as safety. This reflects very poorly on the Railways as regards safety which involves the lives of millions of passengers who avail of the Railway services. The Committee forcefully recommend that the Railways should fully utilise the funds meant for safety so that accidents/ untoward incidents are avoided.

Reply of the Government

Funds are allocated for safety related works, under both Plan and non-Plan side. This expenditure is largely met out of the internal resources generated by the Railways in addition to contributions received for Railway Safety Fund from Central Road Fund. From the expenditure incurred on safety related works in the last three years (Statement placed at **Annexure**), it will be seen that allocations in this regard show an increasing trend. There is no 'surrender' as such and lower expenditure was forced by the inadequate resources generated during the year. The Railways had to regulate expenditure to match internal generation available. However, the Committee's observations have been noted for further enhancing the level of expenditure and its utilisation for safety related activities.

Comments of the Committee

(Please see recommendation para no.1.7 of Chapter I)

Recommendation (Para No. 6)

The committee are extremely distressed to note that more than fifty per cent of all accidents across the Indian Railways occur at level crossings, both manned and unmanned. The Committee are quite critical of the premise of the Railways that the main factor responsible for the high rate of accidents at level crossings is as a result of the negligence of road users. The Committee are equally critical of the fact that of the total 31254 level crossings across India, 12582 level crossings remain unmanned even today which comes to about 40%. This is in spite of the fact that the Railways have committed in their 'Vision 2020' document to eliminate all unmanned level crossings. The Committee feel that the Railways is not addressing this serious issue with the desired purposiveness as is seen from the fact that the targets for elimination of unmanned level crossings have never been achieved in the last five years. It is even more distressing that the progress of manning of unmanned level crossings has been woefully inadequate, with only 2310 of the 5351 level crossings identified having been actually manned. The Committee also find with consternation that funds meant for road related safety works have consistently been underutilized during the last five years - at times to the tune of less than 40 per cent utilization. The Committee take a very serious view of this apathetic attitude of the Railways, especially their stand that the onus of safety at level crossing is on the road user. The Committee wish to remind the Railways of their social and moral responsibility towards the travelling public as also the road users and urge them to take proactive measures to put an end to accidents at level crossings. While noting that the task of elimination of level crossings is gigantic, the Committee reiterate their position that the Ministry should urgently take measures to discourage people/vehicles from using level crossings rashly.

The Committee understand that the alternatives to level crossings are grade separators, i.e., ROBs/RUBs. They are, however, greatly concerned that there has been very tardy progress in respect of construction of ROBs/RUBs during the last five years. The Committee, in several meetings, have emphasized the need for speedy and time-bound completion of work on ROBs/RUBs so that accidents and loss of life at unmanned level crossings could be eliminated. However, not much has been done by the Railways in this regard. It is pertinent to mention again that utilization has fallen short of allocation by up to forty per cent in all years from 2008-09 to 2012-13 which is reflective of the lackadaisical approach of the Railways to very serious safety issue. The Committee are not convinced by the reasons forwarded by the Ministry for under-achievement of targets such as late sanction of corresponding work in the State Budget, inadequate fund allocation by the State Government, non-availability of encumbrance-free land, etc. The Committee are of the view that the Ministry should give focused attention towards resolving these problems and take expeditious measures to achieve the set targets and achieve optimum utilization of allocated funds.

Reply of the Government

Elimination of Unmanned Level Crossings:

It has emerged from the analysis of pattern of accidents that manning of unmanned LCs is not an ideal solution. Therefore, Railways have decided to progressively eliminate all unmanned LCs by:

Closure - Closing unmanned LCs having NIL/negligible TVU

Merger - Merger of unmanned LCs to nearby LCs/grade-separators by construction of diversion road

Provision of Subways/RUBs

Manning- Unmanned LCs which cannot be eliminated by above methods will be progressively manned.

In the last 5 years, Indian Railways have eliminated 5,400 unmanned level crossings (2,310 by manning and 3,090, by grade-separators and other methods). Year-wise details are as below:

Year	By Closure/ Merger/Subway	By Manning	Total
2008-09	556	259	815
2009-10	553	377	930
2010-11	800	434	1234
2011-12	481	777	1258
2012-13	700	463	1163
TOTAL	3090	2310	5400

Utilisation of Road Safety Fund:

Railways is making its best efforts to achieve the targets for elimination of level crossings. Elimination of all these Level Crossings is a gigantic task and involves lot of manpower, resources and budgetary support. It is a continuous process and is done as per need, inter-se priority of works, availability of funds and co-operation of State Government, particularly, in getting consent for closure of level crossing and undertaking to maintain road and drainage in future for subways.

In general, Railway undertakes construction of ROB in Railway Bridge Portion whereas approaches are being constructed by State Government. Smooth progress of ROB/RUBs mainly depends on positive cooperation from the State Government. Most of the times, progress of ROB/RUBs is hampered due to:

- late sanction of corresponding work in the State Budget
- inadequate fund allocation by the State Government
- non-submission of General Agreement Design (GAD) and estimate by the State Government.

- frequent changes in alignment of approaches
- late finalisation of tender for the work of approaches
- non-availability of encumbrance free land for construction of approaches,
- not providing undertaking to maintain road and drainage in future for RUBs,
- delay in providing consent of closure of level crossings

To reduce the effect of above factors on timely completion of ROBs/RUBs, Railways has taken following Pro-active Measures:

- engaging single agency for construction of Railway Bridge as well as the approaches.
- joint survey with all concerned including State Government to finalise the tentative GAD,
- circulation of check list and guidelines for preparation of GAD to State Government to avoid any back reference from Railway to State Government.
- standardization of drawings for various spans to avoid delay in designing.
- nomination of nodal officer for single window clearance of GAD from Railway side
- use of pre-cast /pre-fabricated components of the bridge.

Several policy initiatives have been taken to expedite faster completion of the construction and to remove the various roadblocks. This has resulted in increased utilisation of allocated funds for the purpose over the years, as shown under:

Year	Allocation (Rs. Crore)	Expenditure (Rs. Crore)	% Utilisation
2008-09	1300	566	43.5
2009-10	1600	900	56.3
2010-11	1700	1101	64.8

2011-12	2000	1329	66.5
2012-13	2000	1558	77.9
2013-14 (upto Dec'13)	1500	1132.26	75.48

Thus, it is clear from above that Railways is trying to utilise the available resources to its optimum capacity to achieve the targets.

Comments of the Committee

(Please see recommendation para no.1.10 of Chapter I)

Recommendation (Para No. 7)

The Committee further observe that requisite manpower, fully equipped and adequately trained, is a prerequisite for the safety of the travelling public. However, the Committee are surprised to note that currently there exists 5209 vacancies in the posts of gateman or staff manning level crossings. The Committee observe that such a scenario is not at all desirable or satisfactory and recommend that recruitment and deployment of these personnel should be done with utmost urgency. The Committee would like to be kept apprised of the progress in this regard.

Reply of the Government

Arising and filling of vacancies of Gatemen is a continuous process and necessary action is being taken by the zonal railways to fill these vacancies on priority basis.

Recommendation (Para No. 8)

The Committee note that the Railways have initiated the project of Train Actuated Warning Device (TAWD) which gives audio-visual warning to road users about an approaching train. The Committee further note that there were certain

lacunae detected in this system which are being investigated and corrective action being taken by the RDSO. The Committee call upon the Railways to hasten the deployment of TAWD so that accidents/ casualties at level crossings can be avoided/ lowered. The Committee would like to be kept apprised of the progress in this regard.

Reply of the Government

Trials of Train Actuated Warning Device (TAWD) which gives audio-visual warning to road users about an approaching train at Level Crossing Gate were undertaken. However, the system was found unworkable / unsuitable due to various reasons such as law and order, theft, inaccessibility of site, poor power supply and public vandalism which resulted in non-availability of system.

Provision of Train Actuated Warning System at unmanned LCs can be implemented after an effective and theft proof system is developed by RDSO.

Recommendation (Para No. 9)

The committee find that the Anti-Collision Device (ACD) was developed by Konkan Railway Corporation (KRCL) to prevent collision like situation of trains. It was taken up as a pilot project on the North East Frontier Railway (NFR) in June 2007 covering 1736 Route Kilometers. Though some operational difficulties were noticed in the pilot project, the Ministry is actively trying to resolve these issues. Considering that several years have gone by in various trials, the Committee urge the Ministry to take appropriate steps to resolve the operational difficulties so that the benefit of this safety measure can be made available on the entire rail network. The Committee would like to be kept apprised of the position in this regard and urge that all help should be rendered to KRCL for glitch-free installation of ACD in Indian Railways.

Reply of the Government

Based on the experience of North East Frontier Railway (NFR), to improve reliability and dependability of Anti-Collision Devices (ACDs) and to test its functioning on multiple lines as well as electrified routes, the specifications and design configuration were revised and the system as evolved was tried on the electrified multiple lines, automatic signalling section of the Southern Railway in 2010-2011. A number of operational and technical problems were experienced during the trials on Southern Railway, which cannot be fully resolved by Konkan Railway Corporation Limited (KRCL) due to design limitation of ACD.

After above trials on electrified multiple lines and Automatic Signalling sections of Southern Railway, further development of ACD version 2.0 has been put on hold by KRCL. In view of above, it has been planned to undertake development of Train Collision Avoidance System (TCAS) by Research Design and Standards Organization (RDSO) for its deployment on main line sections of Indian Railways.

ACD provided by KRCL and on trial on NFR also has some operational and technical issues for which efforts are underway by KRCL and RDSO to resolve the identified issues. In this connection, improved ACD Software Version 1.1.2m has already been validated by Electronics Test and Development Centre (ETDC)/ Chennai in July, 2013. This software Version 1.1.2m has been loaded in all stationary ACDs, Loco and Guard ACDs of the trains that ply on Tinsukia Division of NFR. After the performance evaluation jointly by RDSO, KRCL and NFR, deployment of ACD version 1.1.2m on remaining four divisions of NFR (Katihar, Alipur Duar, Rangia and Lumding) has also been taken up.

Recommendation (Para No. 10)

The Committee have observed that the Train Collision Avoidance System (TCAS) was initiated by the Indian Railways based on the experience gained from the ACD and Train Protection Warning System (TPWS). Currently, it is under trial over 200 kms for safety validation and assessment of operational performance over different rolling stock and under various traffic conditions. However, as in the case of the ACD, trial has been going on for several years. The Committee would like to state that the Railways should work towards making it available on the entire rail network by December 2014 and ensure that the deadline is met. The Vigilance Control Device (VCD) too should be equipped in all diesel and electric locomotives.

Reply of the Government

To overcome major problems noticed in ACD due to its dependence on Global Positioning System (GPS) for location, error in Deviation Count Theory resulting in wrong Track ID (TID) and need for large numbers of mid-section repeaters, RDSO finalized specification of Train Collision Avoidance System (TCAS) by involving Indian vendors. TCAS shall be a fusion of functionalities of TPWS and ACD and shall prevent Signal Passing at Danger and Collisions. After invitation of Expression of Interest, six Indian firms have been shortlisted by RDSO. Pilot system developed indigenously by one of the firms was successfully demonstrated during Proof of Concept Trials in October / November 2012 on Tandur-Nawandgi section of Vikarabad-Wadi section of South Central Railway. Based on the successful demonstration of Proof of Concept Trial of the technology, extended field trials have been planned by RDSO on 250 Route Kilometers section of Lingampalli-Vikarabad-Wadi-Bidar of South Central Railway for further development of TCAS with multi-vendor, interoperability features for which a work has been sanctioned at a cost of Rs. 29 crore and funds to the tune of Rs. 6 crore have been allocated during the current year 2013-14. After safety assessment, validation and conclusion of extended field trials and based on results of these trials, further deployment of TCAS on Indian Railways will be considered.

RDSO has allocated work for the complete 250 kilometers section to three indigenous firms to facilitate parallel development work by multiple vendors. Prototype of the product developed by vendors is undergoing field trials.

All electric locomotives and 99% of diesel locomotives are equipped with Vigilance Control Devices.

Comments of the Committee

(Please see recommendation para no.1.20 of Chapter I)

Recommendation (Para No. 16)

The Committee would also like to emphasize that the usefulness of any project, however well intentioned it be, will be lost if there are inordinate delays in its implementation. As such, the Committee recommend that the Ministry should take corrective steps to ensure that the deadlines of all projects should be met and that there are no spill-overs.

Reply of the Government

Railways are sensitive towards its responsibility for completion of projects in a time bound manner. The slippage in the deadlines are primarily on account of delays in obtaining clearances in the process of land acquisition and handing over of land to the Railway Authorities for execution of work, law and order issues and lack of sustained flow of funds. However, all efforts shall be made to ensure that the deadlines of projects are met

Comments of the Committee

(Please see recommendation para no.1.23 of Chapter I)

CHAPTER V

**RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH
FINAL REPLIES ARE STILL AWAITED**

NIL

NEW DELHI;
17 December, 2014
26 Agrahayana, 1936 (Saka)

DINESH TRIVEDI,
Chairperson,
Standing Committee on Railways

**MINUTES OF THE SIXTH SITTING OF THE STANDING COMMITTEE
ON RAILWAYS (2014-15)**

The Committee sat on Wednesday, the 17th December, 2014, from 1500 hours to 1530 hours in Committee Room No. '62', Parliament House, New Delhi.

PRESENT

SHRI DINESH TRIVEDI - CHAIRPERSON

MEMBERS

LOK SABHA

2. Shri E. Ahamed
3. Kunwar Pushpendra Singh Chandel
4. Shri Ram Tahal Choudhary
5. Shri Chandra Prakash Joshi
6. Shri Sanjay Dhotre
7. Shri Gaurav Gogoi
8. Shri Rajen Gohain
9. Shri Ramesh Chander Kaushik
10. Shri Gajanan Kirtikar
11. Shri Balabhadra Majhi
12. Shri K.H. Muniyappa
13. Shri Thota Narasimham
14. Shri R. Radhakrishnan
15. Shri Mekapati Raja Mohan Reddy
16. Shri Ganesh Singh
17. Shri Uday Pratap Singh

RAJYA SABHA

18. Shri Mukut Mithi
19. Shri Dilipbhai Pandya
20. Shri Ambeth Rajan
21. Shri T. Rathinavel
22. Shri Devender Goud T.
23. Shri Alok Tiwari
24. Shri Motilal Vora

SECRETARIAT

1. Shri K. Vijaykrishnan - Additional Secretary
2. Smt. Anita Jain - Joint Secretary
3. Smt. Mamta Kemwal - Additional Director

2. At the outset, the Chairperson welcomed the Members to the sitting of the Committee. Thereafter, the Committee took up for consideration the following draft Reports and adopted the same without any modifications:

- (i) Action Taken by the Government on the recommendations of the Committee contained in their 21st Report on "Major Railway Accidents during the last five years – Causes and Remedial Measures";
- (ii) Action Taken by the Government on the recommendations of the Committee contained in their 25th Report on "Ongoing and Pending Railway Projects, with special emphasis on Projects in the Northeast Region"; and
- (iii) Demands for Grants 2014-15 of the Ministry of Railways.

3. The Committee also authorized the Chairperson to finalise the Reports and present the same to Parliament.

The Committee, then, adjourned.

APPENDIX-II

**ANALYSIS OF ACTION TAKEN BY THE GOVERNMENT ON THE
RECOMMENDATIONS/OBSERVATIONS CONTAINED IN THE 21TH REPORT
(15TH LOK SABHA) ON 'MAJOR RAILWAY ACCIDENTS DURING THE LAST FIVE
YEARS-CAUSES AND REMEDIAL MEASURES'**

Total number of Recommendations/Observations	16
(i) Recommendations/Observations which have been accepted by the Government –	9
Para Nos. 1, 2, 3, 4, 11, 12, 13, 14 and 15	
Percentage of total	56.25%
(ii) Recommendations/Observations which the Committee do not desire to pursue in view of the Government's replies –	NIL
Para Nos. NIL	
Percentage of total	0%
(iii) Recommendations/Observations in respect of which replies of the Government have not been accepted by the Committee and which require reiteration –	7
Para Nos. 5, 6, 7, 8, 9, 10 and 16	
Percentage of total	43.75%
(iv) Recommendations/Observations in respect of which final replies are still awaited -	Nil
Para Nos. Nil	
Percentage of total	0%