

Chapter II

Measures to reduce Road Accidents

Effective planning is crucial for the success of any policy as it sets clear goals, ensure efficient use of resources, identifies and mitigates risks, coordinates efforts and provides a road map for monitoring progress. It enhances decision making, adaptability and communication which increases the likelihood of success of the policy.

The Government of Rajasthan (GoR) approved the Rajasthan State Road Safety Policy in March 2017. It outlines activities such as strengthening institutional, legal and financial environment, to ensure safer and efficient road infrastructure, improving quality of drivers, safer vehicles, safety for vulnerable road users, enforcement of safety laws, road safety education and training, emergency care and medical services for road accident victims, establishing road safety information database, *etc.*

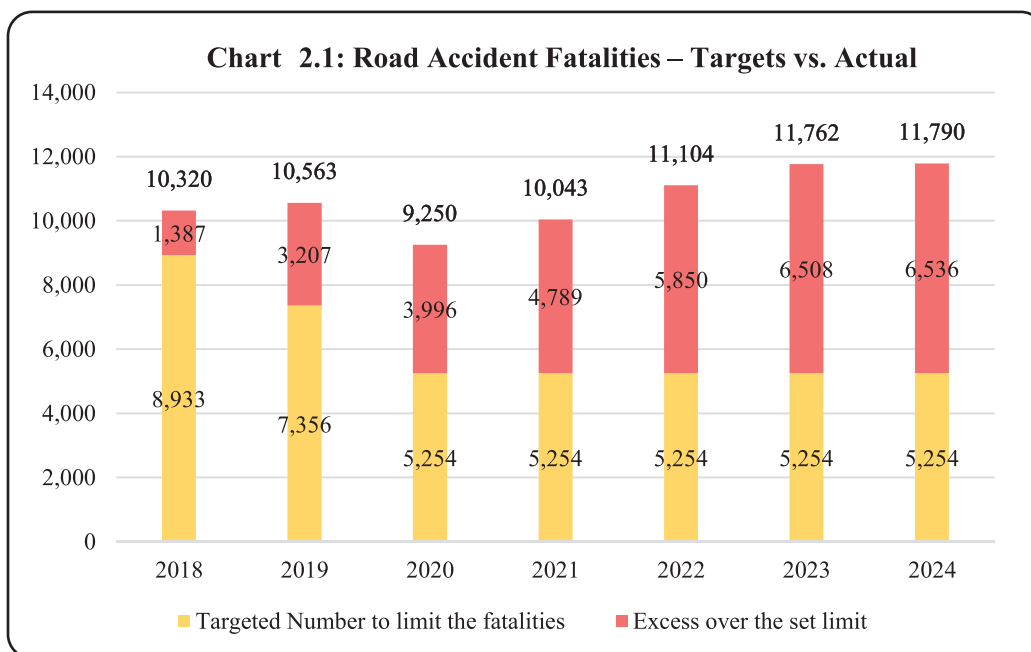
A Road Safety Action Plan, 2018-2020 was prepared (October, 2017) to achieve the goals of Road Safety Policy. Various road safety measures were work out under this plan across five road safety pillars, namely Road Safety Management, safer Roads and Mobility, safer Vehicles, safer Road Users and Post-Crash Response. Further, as per the 2020–21 Budget speech, GoR prepared the Rajasthan Road Safety Road Map-2020, outlining State and departmental initiatives to reduce accidents and fatalities through coordinated efforts and institutional strengthening.

After completion of previous action plan in 2020, GoR prepared (July 2024) the next Road Safety Action Plan 2024-33, with a delay of four years. Action Plan set out key areas of actions under six identified strategic pillars *i.e.* Road Safety Management, Safer Road and Roadside, Safer Speed, Safer Vehicles, Safe Road Users and Post-crash care. The overall target of the plan was to reduce road crashes and fatalities by 75 *per cent* by 2033, starting with a 5 *per cent* reduction in fatalities of the base year 2022, to be achieved during the calendar year 2025.

Audit examined various preventive actions and measures taken by Stakeholder Departments for effective implementation of Road Safety Policy, Road Safety Action Plan, Road Map and audit observations noticed are discussed in the succeeding paragraphs.

2.1 Road accident fatalities

According to the Road Safety Action Plan 2018-2020, the State had set targets to reduce road accident fatalities taking 2015 as the base year. The goal was to decrease fatalities by 15 *per cent* in the year 2018 and 2019 each and by 20 *per cent* in 2020, aiming for a cumulative 50 *per cent* reduction in fatalities by the end of 2020. Shortfall in achieving of these targets is shown in the **Chart 2.1**.



Source: Information provided by the Transport Department

Note: comparison between target for reduction and actual number of fatalities occurred during the year 2021 to 2024 has been made by considering the targeted number to limit the fatalities during the year 2020, as no specific targets could be set for the subsequent years due to the absence of a subsequent action plan.

The **Chart 2.1** shows an overshoot against the set limit, ranging from 1,387 (16 per cent) to 3,996 (76 per cent) during the period 2018-2020. Since no action plan was in place for the years 2021 to 2024, the targets for those years were assumed the same as for 2020. The overshoot during the period (2021 to 2024) was ranging from 91 per cent to 124 per cent against the set limit.

The GoR replied (April 2025) that Road Safety is a complex issue that requires a multi sectoral approach for reducing road crashes and fatalities. It further added that the targets could not be achieved despite efforts of the Government. New targets have been set on the lines of Global/National goals under comprehensive 10-year Road Safety Strategy and Action Plan.

Audit is of the view that several critical initiatives which are crucial to reduce road accident fatalities such as establishment of Integrated Traffic Management System, strengthening of trauma care, procurement of various equipment required for enforcement, rectification of black spots, conducting road safety audit, *etc.* were not implemented adequately, as discussed in succeeding paragraphs of chapter II, III and IV.

2.2 Preventive measures to ensure Road Safety

As per point No. 2 (iii) of State Road Safety Policy, the State Government was to take measures to introduce, review, improve and maintain standards pertaining to safety in the design of roads and bring them in consonance with international best practices keeping in view the local traffic conditions of the State. Further, Road Safety Action Plan 2018-2020 envisaged various safety measures to be undertaken by the stake holder departments. Besides, Supreme

Court Committee also issued several directions to ensure safer roads. Action and measures taken by the stakeholder departments to reduce accidents, deaths and injuries are discussed in the following paragraphs.

2.2.1 Road Safety Audit

Road Safety Audit is a formal procedure for evaluating the accident potential of both existing roads and those under construction. Indian Road Congress (IRC) stipulates Road Safety Audit at design, construction and completion stages of new highways (tri-stage audit). In respect of existing roads, the Road Safety Audit was to be conducted every year by specialists not related to construction/maintenance of the particular road. Road Safety Audit includes various aspects of road *i.e.* design inconsistency, quality of roads, encroachments, ageing infrastructure, inadequate maintenance of road and traffic control devices, *etc.*

The Supreme Court Committee issued (August 2016) directions that the construction work of any road costing above ₹ ten crore should be commenced only after conducting of Road Safety Audit by third party at design stage and the recommendations of the auditor should be implemented. Road Safety Audit should be conducted at construction and operational stages also. Accordingly, the State Government incorporated the 'Road Safety Audit' as a road safety measure to reduce mortality and morbidity due to road accidents, in its Road Safety Policy, 2017. Thereafter, the Supreme Court also ordered (November 2017) that at the stage of design, Road Safety Audit should be carried out invariably for all the new road projects of five kilometre or more.

In 146 roads (34.35 per cent) out of 425 roads of PWD, no safety audit was conducted at any stage during 2018-19 to 2024-25.

Information regarding the Road Safety Audit of the roads constructed by various agencies (NHAI, PWD, *etc.*) was sought. However, only the details pertaining to roads of the Public Works Department (PWD) was made available to the Audit and details are given in the **Table 2.1**.

Table 2.1: Details of roads where Road Safety Audit was carried out

Year	Total number of roads (having cost of ₹ 10 crore and above)	Roads where tri-stage audit was carried out	Roads where only design & construction stage audit was carried out	Roads where only construction & operational stage audit was carried out	Roads where only design stage audit was carried out	Roads where only construction stage audit was conducted	Roads where only operational stage audit was carried out	Roads where no audit was conducted
2018-19	32	10	01	00	04	00	02	15
2019-20	20	06	01	00	09	00	03	01
2020-21	25	02	04	00	07	00	03	09
2021-22	52	07	03	00	15	00	01	26
2022-23	78	07	08	02	14	00	00	47
2023-24	116	00	09	00	00	00	107	00
2024-25	102	00	17	00	00	00	37	48
Total	425	32	43	2	49	0	153	146

Source: Information provided by the Public Works and Transport Department.

The **Table 2.1** shows that out of 425 roads constructed by the PWD, a tri-stage road safety audit was conducted for only 32 roads (7.53 *per cent*). A two-stage audit (covering either the design and construction phases or the construction and operational phases) was completed for just 45 roads (10.59 *per cent*). Additionally, only a design-stage audit was performed for 49 roads (11.53 *per cent*), while only an operational-stage audit was carried out for 153 roads (36 *per cent*). Significantly, 146 roads (34.35 *per cent*) did not undergo safety audit at any stage. Besides, no third-party empanelment for Road Safety Audit was made by PWD.

As per record, provided by Transport Department out of 1,175 roads of five kilometres or more constructed by PWD and NHAI, design level audit of only 636 (54.13 *per cent*) roads was carried out. Further, audit reports of selected roads were also sought (April 2025) for scrutiny and impact assessment from the nodal department but the same was not provided to audit except from PWD.

A total of 11,685 road accidents happened claiming the lives of 5,184 individuals due to improper road conditions like curved road, bridges, culverts, potholes and steep grades etc during the period 2019-24.

The GoR accepted the facts and replied (April and September 2025) that instructions were circulated time to time for conducting Road Safety Audit of all new roads having length more than five kilometers. Road safety audit of existing roads was carried out regularly. Additionally, three stage Road Safety Audits have been mandated and incorporated in detailed project report/tender documents of all major road projects of PWD and its associate agencies.

2.2.2 Management and rectification of black spots

According to the Ministry of Road Transport & Highways (MoRTH), a black spot¹ is defined as a stretch of National Highways or other categories of roads (State Highways/Major District Roads/other roads) approximately 500 meters in length, where either five road accidents involving fatalities or grievous injuries, or ten fatalities, have occurred over the last three calendar years (combined). The deficiencies noticed in management and rectification of the black spots are discussed in following paragraphs:

2.2.2.1 Rectification of black spots

As per Road Safety Policy, 2017, identification, survey, budget allotment, rectification and monitoring of accident-prone spot/black spots was to be done in a time bound manner. These spots are required to be identified by Police Department and rectified by road owning agencies. Further, rectification of black spots and post rectification audit of these spots was also planned in Road

¹ Black spots are identified by Police department based on accident data of past three calendar years. List of identified black spots is circulated by the Police department to all road owning and managing agencies for rectification.

Safety Action Plan, 2018-20. The details of black spots identified and rectified during the period 2019-24 are given in the **Table 2.2**.

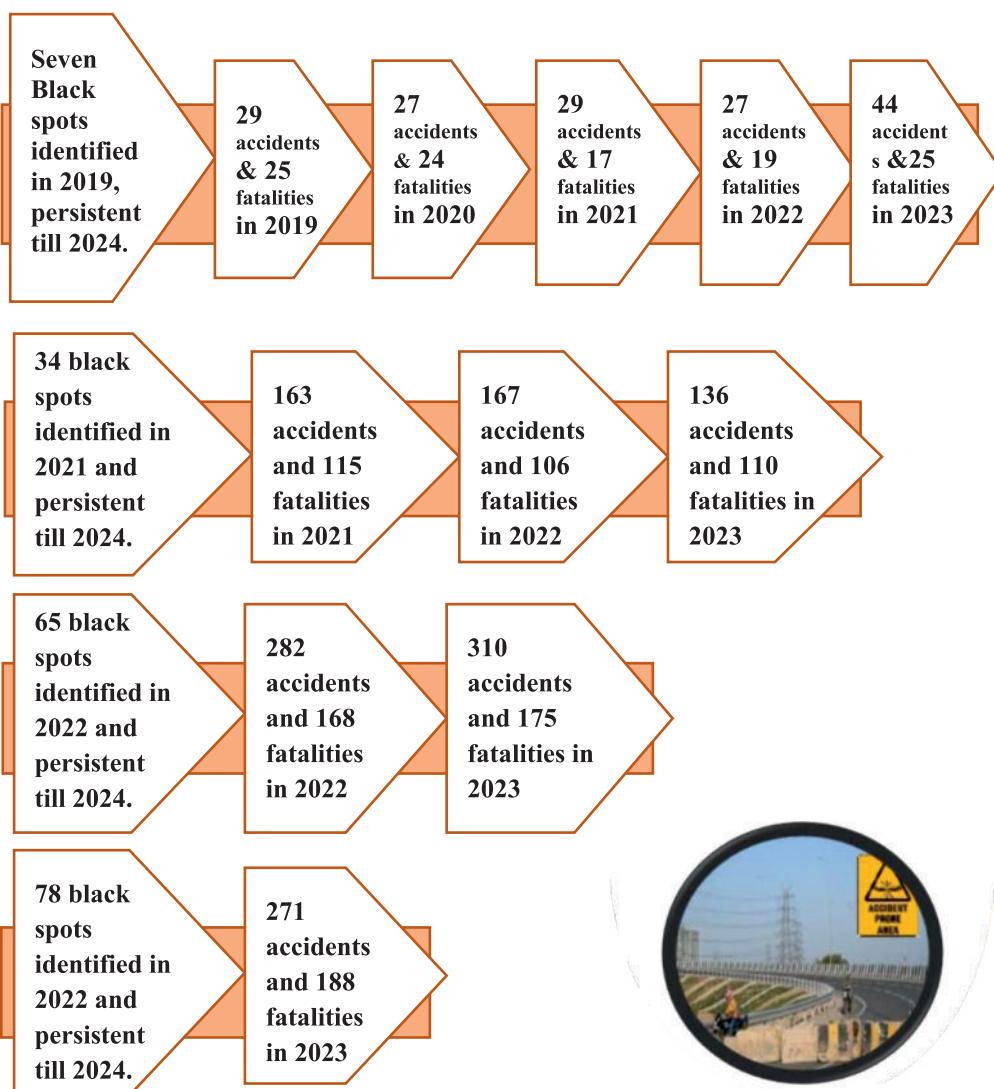
Table 2.2: Details of black spots identified and rectified

Year	Total number of identified accident prone/ black spots (NH & SH)	Number of accidents happened at these spots	Number of consequent fatalities	Number of black spots at roads owned by PWD	Number of spots rectified by PWD	Percentage of unrectified black spots
2019	805	10,042	5,929	325	324	0.30
2020	523	6,171	4,495	193	189	2.07
2021	584	7,017	4,885	242	217	10.33
2022	546	6,750	4,785	225	158	29.78
2023	497	6,191	4,343	203	79	61.08
2024	448	5,686	3,869	171	63	63.16

Source: Compiled from the data provided by the Police, PWD and Transport Department

It can be seen from the **Table 2.2** that stretches/spots of various roads, ranging from 805 to 448, were identified as black spots during 2019-24, which accounted for a total of 41,857 accidents and 28,306 fatalities. It was noticed that black spot, which were to be rectified by PWD, remained unrectified ranging 0.30 *per cent* to 63.16 *per cent* during this period. The details of rectification of black spots pertaining to other road owning agencies, including NHAI, were not provided to audit. Audit analysis revealed that some of the identified black spots persistently remain unrectified as shown in the **Chart 2.2** (list of persistent black spots are annexed in *Appendix-2*).

Chart 2.2: Black Spots identified persistently over the years



Further Scrutiny revealed that there were three persistent black spots (2019-24) within a short stretch of four kilometres (48.7 kms to 52.7 kms) on NH-3/44. Similarly, there were three black spots (2022-24) on NH-21 within a stretch of 3.5 kilometres (380 kms to 383.5 kms), which shows lack of proper management of black spots.

This indicates laxity on the part of the road-owning agencies as well as the Transport and Road Safety Department in addressing road safety concerns.

The GoR replied (April and September 2025) that agency wise bifurcation of Black spots was done and circulated by the Transport Department with the assistance of the Police Department. As soon as the identification of black spots were informed by the PWD, temporary rectification of all the black spots

were carried out immediately and permanent rectification of Black spots, if any, would be carried out as per availability of budget.

2.2.2.2 Non-development of black spot management system

Paragraph number 5.4 of Rajasthan Road Safety Road Map-2020 envisaged that an independent technology-based solution customizing the integrated Road Accident Database (iRAD, an initiative of MoRTH, GoI) was to be developed wherein details of black spots would be stored and retrieved. The status of the black spots such as detailed project report preparation, work in progress, completed, pending, *etc.* were also to be updated by road owning agencies concerned. This data was to enable stakeholder departments to generate district wise, stretch wise reports on identified black spots along with their current status.

It was observed that no such system was developed in the State even after lapse of more than four years of the launching of Road Safety Road Map.

The GoR accepted the facts and replied (April 2025) that development of Black spot Management System has been taken up under World Bank funded Rajasthan Highways Modernization Project which is expected to be started in near future. It was further stated in September 2025 that the initiative was to be carried out by road-owning agencies, but it remained undeveloped. The Lead Agency would now coordinate with these agencies to ensure the development of the system.

2.2.3 Other road safety measures

The Road Safety Action Plan 2018-20 outlined several key measures to enhance road safety, including the improvement of junctions on highways and in populated areas, intending to reduce road hazards and improve overall traffic safety.

It was observed that 16,328 junctions² at highways were identified by PWD and NHAI as improper³ and were considered for rectification (speed calming measures⁴) during the period 2018-24. However, only 8,163 (50 *per cent*) junctions were rectified.

The GoR replied (September 2025) that traffic calming measures such as speed breakers, thermoplastic road markings and necessary road signs were being implemented at most junctions.

² A total of 15,527 improper junctions were identified by PWD, of which 7,421 junctions (47.79 *per cent*) could be rectified. Similarly, 801 junctions were identified by NHAI, of which 742 junctions (92.63 *per cent*) could be rectified.

³ Improper junctions refer to road intersections or crossings that are poorly designed, constructed, or managed, leading to confusion, traffic conflicts and a higher risk of accidents.

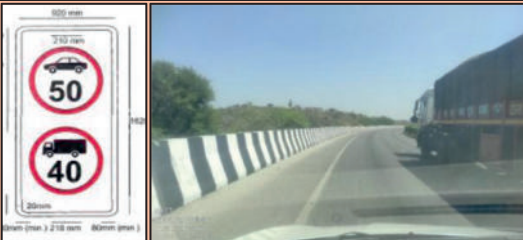
⁴ Speed calming measures, including physical (speed breakers, rumble strips, roundabouts) and non-physical (signage, road markings) interventions, are implemented at high-risk locations to reduce vehicle speeds and enhance road safety.

2.2.4 Deficiencies found in Road Infrastructure

The Rajasthan State Road Safety Policy, 2017 suggested to introduce, review, improve and maintain standards pertaining to safety in the design of roads and bring them in consonance with international best practices. Various road owning agencies⁵ were liable to construct and maintain the road infrastructure in the State.

Joint Physical Inspections of 33 roads (14 National Highways, 13 State Highways and six City roads) were carried out in selected districts for field study by the Joint Inspection Team comprising of members of Performance Audit Team, road safety consultants and district level representatives of PWD and NHAI to test check the road infrastructure in the State. Road geometric designs, traffic control signs, traffic control devices and compliance/violation of traffic rules, *etc.* were covered during the inspection. During inspection various deficiencies were noticed in the road infrastructure and evidences were collected using the Global Positioning System (GPS) based mobile camera. Brief of deficiencies are given in the **Table 2.3**.

Table 2.3: Brief of deficiencies found during the Joint Physical Inspection of Roads

1. Road Signs: According to the IRC 67:2015, road signs are to promote road safety and efficiency by providing the orderly movement of all road users on all roads. Road Signs are classified under three categories <i>i.e.</i> (i) Mandatory/Regulatory Signs ⁶ , (ii) Cautionary/Warning Signs ⁷ and (ii) Informatory/ Guide Signs ⁸ .	
Observation	
(i) At 506 locations, 13 National Highways and 13 State Highways mandatory/regulatory signs (such as Speed limit signs at 294 locations, Overtaking sign at 92 locations, U-turn sign at 9 locations and Curve sign at 111 locations) were missing. As can be seen in the photograph that on sharp curve speed limit sign board was missing on National Highway - 27 (Udaipur).	

⁵ National Highways Authority of India (NHAI), Public Works Department (PWD), Rajasthan, Rajasthan State Road Development & Construction Corporation Limited (RSRDC), Rajasthan Local Self Government, Rajasthan Urban Local Bodies (ULBs), *etc.*

⁶ Speed limit signs, Overtaking sign, U-turn sign, Curve sign, Junction sign, *etc.*

⁷ Optical hazard marking, Merging sign, School location sign, Gap in median, chevron sign, pedestrian sign, *etc.*

⁸ Petrol sign, Hospital sign, *etc.*

(ii) At 825 locations on 13 National Highways and 13 State Highways cautionary/warning signs boards (Optical hazard marking at 694 locations, merging sign at 23 locations, School location sign at 33 locations, Gap in median, chevron sign and pedestrian sing at 20 locations) were missing. As can be seen in the photograph that pedestrian marking found but pedestrian crossing sign board was missing on National Highway – 27 (Sirohi).



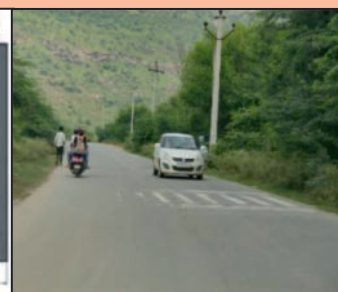
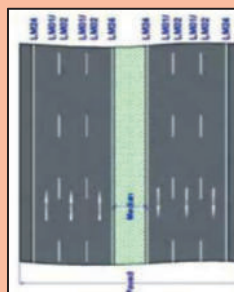
(iii) On all six inspected city roads, various road signs such as speed limit, school sign, pedestrian crossing sign, overtaking sign, no parking sign, *etc.* were missing at 23 locations and Optical Hazardous Markings (OHM) were missing at 51 locations.

2. Road Markings: According to the IRC 32:2015, Road markings are defined as lines, patterns, words except road signs which are applied or attached to the carriageway or kerbs⁹ or to objects within or adjacent to the carriageway for controlling, warning, guiding and informing the road users. Road Markings perform an important function of guiding and controlling traffic on a highway.

Observation

Road markings such as Centre line/Edge Marking, Merging/Diverging Markings, Kerb Marking and Road Studs¹⁰ were either not placed or not in accordance with IRC code.

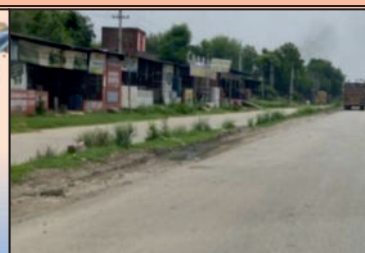
(i) Road Marking: At 148 locations on 13 National Highways and 13 State Highways Road markings (Road marking at 85 locations, merging/diverging markings at 49 locations, Kerbs marking at 14 locations) were not placed. As can be seen in the photograph that road markings were missing or faded on State Highway – 14 (Alwar).



3. Traffic Safety Barriers: According to IRC119:2015, Traffic Safety Barriers, also known as Crash Barriers, were to be provided on high-speed highways to prevent accidents when vehicles lose control and run off the road; especially at dangerous road sections with sharp curves, approaches to bridges with restricted roadway, high embankments, hazardous obstacles such as poles, trees and bridge structural elements.

Observation

Road edge Barriers/Crash Barriers: At 205 locations on 14 National Highways and five State Highways were missing or broken. As can be seen in the photograph that road edge barriers / crash barriers were missing on National Highway – 48 (Jaipur).



4. Unauthorized Access/Gap in Median: According to IRC 119: 2015, Median Barriers are those that are provided in the Medians of highways. They accordingly protect the traffic on both the carriage ways. They are intended to prevent heads on collisions caused by out of control vehicles jumping across the medians.

⁹ Kerbs are raised edges that separate the pavement from the road on a highway.

¹⁰ Road studs are small reflective devices that are used to mark the edges and lanes of highways to help improve visibility and guide drivers.

Observations	
Unauthorized Access/Gap in Median: At 67 locations on ten National Highways and one State Highway, unauthorized access points in the medians were found, which were utilized by road users for crossing the roads or trespassing to the other side of the carriageway, posing a risk of accidents. As can be seen in the photograph that median barriers were missing on unauthorized gap on National Highway – 21 (Dausa).	
5. Junctions: According to IRC 67: 2022, sign boards were to be placed at Junctions <i>i.e.</i> an intersection or a point where two or more roads meet or cross each other.	
Observations	
It was found that at 87 locations, the junction warning signboards (T-junctions, Y-junctions, or crossroads) on seven National Highways and six State Highways were missing. It can be seen in the photograph that junction sign board was missing on National Highway – 27 (Sirohi).	 

The Transport Department did not have a mechanism to inspect the road in time bound manner to inform the road owing agencies to remove the deficiencies and to monitor the improvement in road infrastructure.

The GoR, accepted the facts and replied (April 2025) that it is a continuous process and instructions were being circulated time to time to field offices in this regard. It was further stated (September 2025) that all road-owning agencies were required to audit the existing road network and implement remedial measures. Road safety audits were ongoing, but auditing over three lakh kilometres and taking remedial action was a time-consuming process.

2.3 Issuing of driving licence

Drivers of motor vehicles are primary users of the roads. Drivers' fault is one of the most significant cause of road accidents and leads to 79 *per cent* of total road accident fatalities. Therefore, proper evaluation of driving skills of an individual applying for driving licence is of paramount importance in road safety. Quality driving schools, stringent driving tests are pre-requisites for ensuring competence of drivers before issuance of driving licences. To qualify for getting a driving licence, the applicant has to pass an online test with respect to traffic laws for learning licences and thereafter physical driving test on a prescribed track for permanent licenses. Availability of a well-designed and maintained testing track is pre-requisite to administer proper driving test.

As per Section 9(3) of Centre Motor Vehicle Act, 1988, no driving licence shall be issued to any applicant unless he passes such test as prescribed by the Central Government. Norms of such test are prescribed in Rule 15 of Central Motor Vehicle Rules, 1989. The test was to be taken mandatorily on driving

tracks¹¹ in compliance the order dated 2 February 2009 of the Transport Department.

To enhance the efficiency and transparency of the driving competence test, the Transport Department decided to establish Automated Driving Testing Tracks for conducting driving tests prior to issuing licenses. The Automated Driving Testing Tracks features an innovative camera-based system using image and video analytics to objectively evaluate applicants' driving skills without human intervention. It records test history and generates computerized reports with key parameters such as direction, reversing, stopping, track deviation, duration and speed capabilities absent in manual systems. In September 2017, the Road Safety Steering Committee approved ₹ 39 crore from the Road Safety Fund for the construction of automated driving tracks at 37 Regional Transport Offices/District Transport Offices.

A review of records and information revealed that automated driving tracks were established at only 13 RTO/DTO¹² offices even up to March 2025. However, the remaining 24 offices had yet to be equipped with automated driving tracks, despite more than seven years having passed since the project was approved. The 13 automated driving tracks remained functional only up to March 2023. Thereafter, these automated driving tracks could not be operationalized due to non-extending the Memorandum of Undertaking (MoU) with a Company for automated operation of these tracks. As on March 2023, driving licenses were being issued by 82 transport offices¹³ in the State.

Further scrutiny of data revealed that automated tracks were more efficient in assessing the driving competence of drivers as over two *per cent* of applicants were declared failed during the period 2022-23 at the offices with automated driving tracks. Whereas, only 0.18 *per cent*¹⁴ and 0.32 *per cent*¹⁵ of applicants were declared failed in 17 offices with manual tracks and 30 offices with no tracks respectively. Furthermore, there were 24 offices (15 offices without any track and nine offices with manual tracks) where all applicants were declared passed in driving test on the first attempt.

The situation was alarming as highest number (34.45 *per cent*) of licences were issued during 2022-23 by those 44 offices which had no testing track, which was in contravention to the Transport Department order dated 2 February 2009 *ibid*. Therefore, without checking/testing the driving ability, the driving licences were being issued. Track wise details of licences issued during the period of 2022-23 are given in the **Table 2.4**.

¹¹ A well-designed driving track includes 'S' bend, symbolic traffic signals and lights *etc.* to check competence of applicant.

¹² RTO: Alwar, Bharatpur, Bikaner, Chittorgarh, Dausa, Kota, Jaipur, Jodhpur, Plai, Sikar and Udaipur. DTO: Deedwana and Jhalawar.

¹³ 13 offices with automated driving tracks, 25 offices with manual tracks and 44 offices without track.

¹⁴ Only 969 out of 5,34,829 applicants were declared failed in offices with manual tracks.

¹⁵ Only 1,742 out of 5,47,345 applicants were declared failed in offices without any track.

Table 2.4: Driving Track wise details of licences issued during 2022-23

S. No.	Type of track	Number of offices	Number of licences issued
1	Automated Driving track	13	2,15,694
2	Manual Driving Track	25	2,32,448
3	No Track available	44	2,35,557
Total		82	6,83,699

Source: Information provided by the Transport Department and SARATHI dashboard

The above details showed that the Transport Department failed not only to establish the automated driving tracks as planned, but also to maintain already established tracks and made them operational.

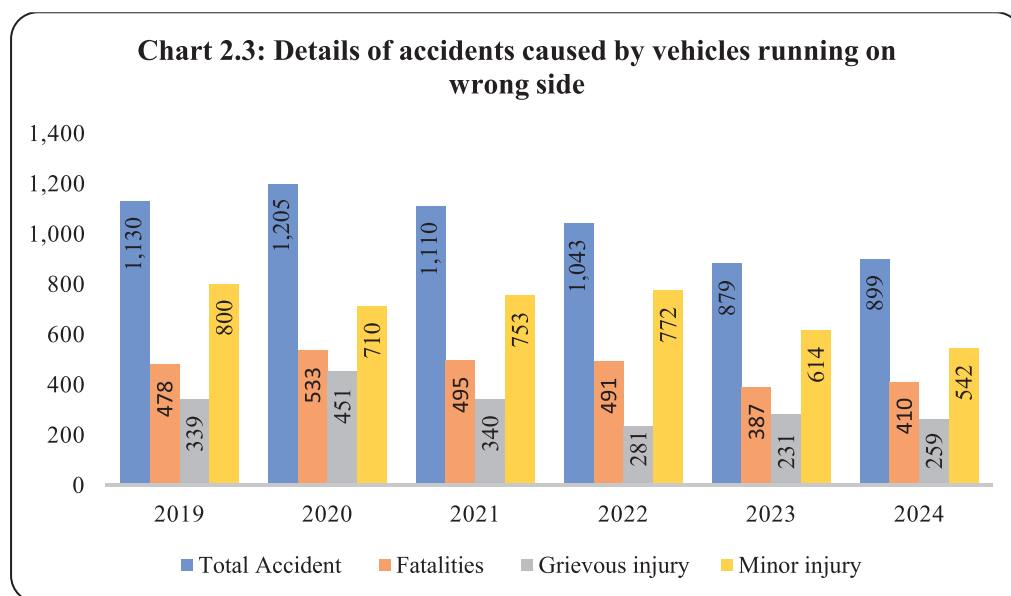
The GoR, accepted the facts and replied (April 2025) that the Department is in process of establishing the automated driving tracks and these were expected to be established soon.

2.4 Wrong side driving

As per Section 184 of the CMV Act 1988, driving vehicles against the authorised flow of traffic and violation of any stop sign¹⁶ are considered as offences of dangerous driving. Vehicles plying on the wrong side and no entry areas reveals a significant breach of traffic rules and safety regulations and increases likelihood of accidents posing a serious risk to the safety of drivers, passengers and pedestrians. As per Section 184 (e) of CMV Act, 1988, driving against the authorised flow of traffic is a non-compoundable offence. Imprisonment for six months (extendable up to one year) or fine of ₹ 1,000 (extendable up to ₹5,000) or both for first time offence and imprisonment of six month (extendable up to two years) or fine of ₹ 10,000 or both for subsequent offence has been prescribed in this Section.

The details of accidents caused by vehicles running in the wrong direction are given in the **Chart 2.3**.

¹⁶ As per Rajasthan Motor Vehicle Rules, 1990 stop sign on road surface is a line painted or on inlaid into the surface of any road at the approach to a road junction or to a pedestrian crossing or otherwise, no driver shall drive a motor vehicle so that any part thereof projects beyond that line at any time when a signal to stop is being given by a Police or Transport Officer or by means of traffic control lights or by a traffic sign.



Source: Information provided by the Police Department¹⁷.

It can be seen from the **Chart 2.3** that a total of 6,266 accidents claiming the lives of 2,794 individuals happened during the period 2019-24 due to vehicles running on wrong side.

During Joint Physical Inspections of the selected roads, wrong side driving was observed at 77 locations across inspected stretches of 11 roads. Despite the severity of this issue, data from the Police Department shows that 15,22,460 challans were issued for wrong side driving between 2018-19 to 2024-25 across the State. However, the Transport Department did not issue a single challan for this violation during the same period.

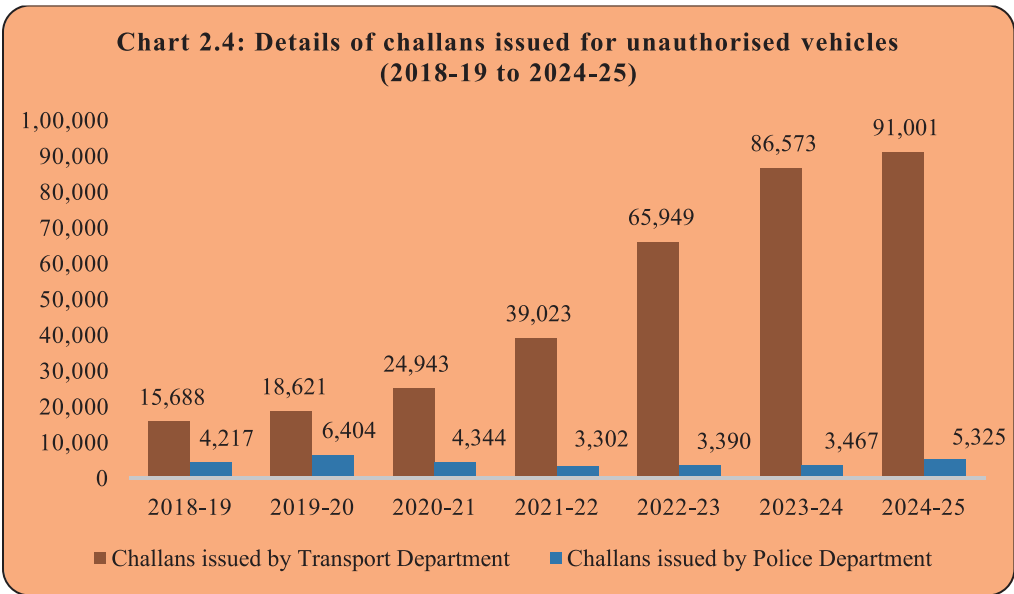
The GoR accepted the facts and replied (April 2025) that enforcement is a regular work being done by Police, Transport and Road Safety Department. It was further stated (September 2025) that regular and stringent action would be ensured to prevent wrong side driving.

2.5 Prohibition of unauthorized/customized vehicles

As per Section 39 of the Motor Vehicles Act, 1988, only registered vehicles with valid permits are permitted to operate on public roads, while Section 52 permits alteration of vehicles only with prior approval of the Registration Authority. According to an order issued by the Transport Department (April 1996) under the provisions of the CMV Rules, 1989 and RMVT Act, 1951, illegally manufactured vehicles such as 'Jugad,' cannot be registered. For ensuring public safety and compliance, such vehicles were required to be seized and dismantled and thereafter auctioned in parts separately under Section 207 of the MV Act and Section 17 of the RMVT Act.

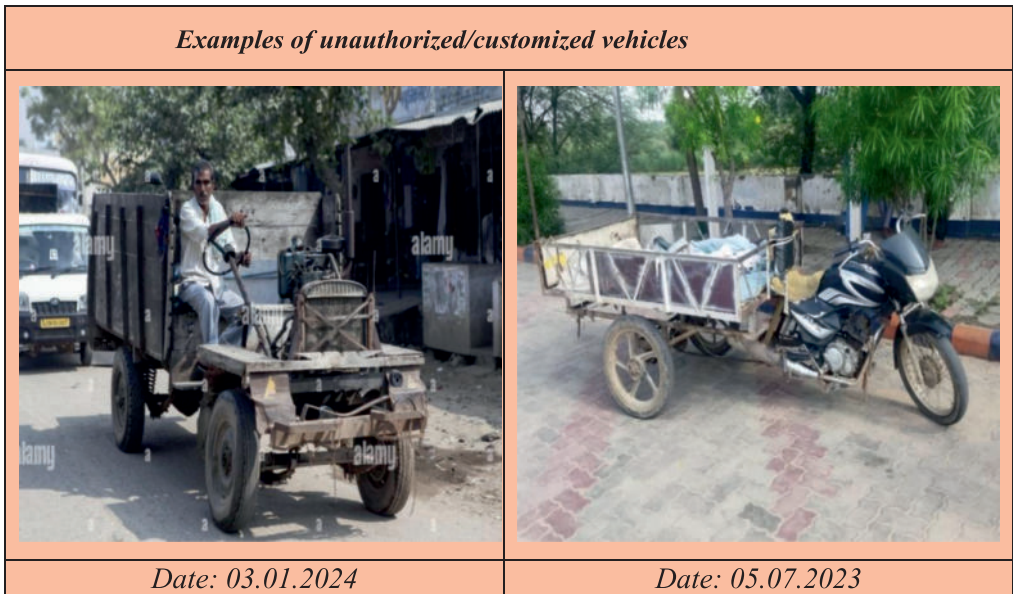
¹⁷ Information for the period 2018 was not provided.

Scrutiny of information regarding challans revealed that a number of unauthorized/customized vehicles were plying on roads. The details of challan issued by Transport and Police Department are shown in the **Chart 2.4**.



Source: Information provided by the Transport and Police Department.

As seen from the **Chart 2.4**, 3,72,247 challans were issued by the Transport Department and the Police Departments against unauthorized vehicles during 2018-19 to 2024-25, The rising number of challans indicates increase in plying of unauthorized vehicles. Despite being sought (July 2024), no details regarding dismantling or auctioning of such vehicles were provided by the Transport Department. This reflects failure of both Transport and Police Departments to effectively enforce orders, resulting in continued operation of unauthorized/customized vehicles, violation of traffic laws and increasing accident risks.



Source: Photograph taken by Audit team during physical inspection of selected roads.

The GoR replied (April 2025) that according to Police Department, a total 12,228 challans were made against vehicles plying without registration/permit and 18,333 vehicles were seized, whereas a total of 4,775 challans were made against customized vehicles and 2,749 vehicles were seized in the State during the years 2018 to 2023. It was further stated (September 2025) that the Transport Department had made challans of 110 customized vehicles of which 65 vehicles had been dismantled and 36 had been seized during 2018 to 2025.

However, no information about dismantling and auction of seized vehicles was provided by the Police Department. Besides, only 65 vehicles were dismantled and 36 were seized by the Transport Department.

2.6 Measures to enforce speed regulations and other traffic violations

As per MoRTH's annual reports, majority of road crash deaths happened on National Highways and State Highways. Over speeding is one of the major cause of deaths.

2.6.1 Interceptors and Highway Patrol Vehicles on National and State Highways

Road Safety Action Plan 2018-20 envisaged deployment of interceptors at every 50 kilometre on National Highways and State Highways in the State in phased manner by 2020 to effectively enforce the speed regulation and check other traffic violations to curb the fatal road crashes. As provisioned, the number of interceptors with the Police Department were to be increased from 64 in the year 2017 to 388 up to the end of the year 2020.

Further, it was decided in Rajasthan Road Safety Road Map-2020, that the highway patrol vehicles of the Police Department would be stationed on the stretches of National and State Highways across the State within a distance of 50 kilometres each with the aim to remove damaged vehicles involved in the road accidents, to check over speeding and to help road accident victims at accident spot as first responder.

It was observed that only 74 interceptors were functional against required 563 Interceptors¹⁸. Similarly, only 63 Highway Patrol Vehicles were functional in place of 563 vehicles in the State (as of October 2024). Hence, instead of deployment of interceptors and highway patrol vehicle each within a distance of 50 kilometres of both National Highways and State Highways, these vehicles were deployed at an average distance of 381 kilometres and 447 kilometres respectively.

Given the fact that 63,882 accidents (*46.73 per cent of total accidents*) and 36,367 fatalities (*56.37 per cent of total fatalities*) happened on National and

¹⁸ Number of vehicles required: National Highway 10,790 kilometer + State Highway 17,376 kilometer = 28,166 kilometer/50 kilometer = 563

State highways during the period 2019-24, the Police Department failed in deployment of interceptors and highway patrol vehicles as planned in the Road Safety Action Plan and Road Map.

The GoR replied (April and September 2025) that a total of 47 interceptors were procured from road safety funds which are currently being used on National and State Highways. It was further stated that the State is now focusing on implementation of electronic enforcement on high risk and high density corridors and cities having population more than five million to reduce manual intervention.

2.6.2 Speed governors in transport vehicles

As per Rule 118 of Central Motor Vehicle, all transport vehicles shall be fitted with speed governors (speed controlling devices). The speed governor shall be so set that vehicle is incapable of being driven at a speed in excess of the maximum pre-set speed of the vehicle. Further, it was also decided to ensure the fitment of speed governor in prescribed vehicles in the Road Safety Action Plan 2018-20. Information provided by the selected RTOs/DTOs is given in the **Table 2.5**.

Table 2.5: Details of transport vehicles registered and fitted with speed governors in six test checked districts during the period from 2018-19 to 2024-25

Name of districts	Total number of transport vehicle registered during the period	Total number of transport vehicles fitted with speed governor	Percentage (of vehicles fitted with speed governor)
Udaipur	22,166	20,889	94.24
Alwar	11,892	11,892	100.00
Dausa	18,590	4,092	22.01
Tonk	8,634	3,102	35.93
Sirohi	4,419	2,673	60.49
Sri Ganganagar	9,254	9,254	100.00
Total	74,955	51,902	69.24

Source: Information provided by selected RTOs/DTOs.

It can be seen from the **Table 2.5** above that fitting of speed governors in 100 per cent transport vehicles was ensured in only two districts (Alwar and Sri Ganganagar), whereas in remaining four districts (Dausa, Tonk, Sirohi, Udaipur) transport vehicles ranging from 22.01 per cent to 94.24 per cent only were fitted with the speed governors. Thus, a number of 23,053 transport vehicles (out of 74,955 vehicles) were registered without ensuring the fitment of speed governors in four test checked districts during the period 2018-19 to 2024-25. However, state-wide information on transport vehicles registered and vehicles equipped with speed governors was not made available to audit.

The Government replied (April 2025) that entry in registration certificate regarding installation of speed governor is being done in respect of newly registered vehicles, whereas fitment of speed governors in older vehicles was ensured by the Department at the time of re-registration/renewal of fitness of the vehicles. Besides, checking of speed governors was being done through regular enforcement activity by the flying squads of the Department.

It was further stated (September 2025) that during the period 2018-19 to 2023-24, the Transport Department inspected 23.51 lakh transport vehicles for installation of speed governors. Of these, 23.12 lakh (98.34 *per cent*) vehicles were found equipped with the device, 22.95 lakh devices were found functional, while tampering was detected in 0.17 lakh vehicles.

However, issuance of 58,681 challans for non-installation/non-functionality of speed governors highlights the vulnerability and ineffectiveness of this critical device during the period (2019 to 2024).

Given the fact, that over speeding is the leading cause of accidents in the State. An analysis of fatal road accidents from 2019 to 2024 revealed that 82.20 *per cent* of fatalities were due to over speeding. The Department failed not only to comply with the provisions of the Central Motor Vehicle Rules but also to enforce the Road Safety Action Plan in the State. Without the mandatory installation of speed governors in transport vehicles, effective speed control measures could not be implemented.

2.7 Integrated Traffic Management System

Strict enforcement of traffic regulations is a prerequisite for safer roads. Considering the length of roads and increasing number of vehicles it is practically impossible to enforce rules of law through physical deployment of police personnel's only. To address this, the Road Safety Action Plan 2018-20 proposed the establishment of an Integrated Traffic Management System (ITMS) across all districts in phases by 2020. ITMS involves the installation and use of advanced technologies, such as Closed-Circuit Television (CCTV), Automatic Number Plate Recognition (ANPR) cameras, speed guns and devices for detecting over-speeding (OSVD) and red light violations (RLVD). These systems monitor traffic violations effectively, with data integrated into the '*e-challan Traffic Enforcement Solution*' to issue notices to violators in a seamless, non-intrusive manner.

Automatic Number Plate Recognition (ANPR) System with Speed Detection Cameras

To enhance road safety and to enforce traffic regulations, Police Department sent a proposal (October 2018) to Road Safety Cell for installation of 60 Automatic Number Plate Recognition (ANPR) cameras with speed detection capabilities at 10 identified locations of National Highway No. 48 (between Jaipur to Kishangarh) in the first phase during the years 2019-20 and 2021-22. The main objective of installation of these cameras was to prevent road accidents at national highways by identifying the traffic violations and issuance challans. The proposal was approved by the Road Safety Steering Committee in its meeting (held in August 2019), with a partial revision to install ANPR cameras at various locations of NH from Jaipur to Bhilwara instead of Jaipur to Kishangarh on the same route and an amount of ₹ 8.86 crore was sanctioned from Road Safety Fund for procurement and installation of ANPR cameras during the year 2020-21. Thereafter, the issue was consistently discussed in subsequent meetings of Steering Committee held in June 2020 and July 2021. Moreover, the sanctioned amount for the purpose

was increased from ₹ 8.86 crore to ₹ 9.58 crore in the meeting held in July 2021.

However, the ANPR cameras had not been procured by the Police Department even after a lapse of more than six years of the issuance of the required approval and sanction of funds from Road Safety Fund.

The Police Department replied (May 2023) that the project could not be implemented due to COVID outbreak during 2020-21 and lack of approval from the Department of Home, GoR during 2021-22. Thereafter, the project was to be implemented on Public Private Partnership (PPP) mode by Road Safety Cell as announced in the budget declaration 2021-22. As per the reply of the Transport Department the projects¹⁹ for implementation of ITMS on five National Highways/Expressways was under progress.

Thus, the project approved in 2019-20 and thereafter revised in subsequent meetings with enhanced sanctioned amount, was not implemented. Audit noted that the ANPR cameras were installed at two highways only in the State by the NHAI.

The GoR replied (September 2025) that the ITMS and allied technology solutions are still evolving. Identification of suitable locations, selection of solutions, procurement, installation, commissioning, integration with e-challan and generation of challans was a long process that requires significant time. Installation of ITMS on three NH stretches (NH-48, NH-52 and NH-25) was initiated by the State Government under a Budget Announcement (2024-25), through the PM Gati-Shakti Scheme. Installation was currently in progress and is likely to be completed soon. Further, ITMS installation was also underway under the World Bank-funded RSHDP-II project on other five State Highway stretches.

However, the reply was silent about installation of ANPR cameras on the selected stretch (Jaipur to Bhilwara) approved from Road Safety Fund.

Conclusion

The audit findings highlight that despite the formulation of the Rajasthan State Road Safety Policy (2017), Road Safety Action Plan (2018–2020) and subsequent Road Safety Road Map (2020), the implementation had been far from satisfactory. While the Government of Rajasthan had demonstrated intent to reduce road fatalities through successive plans and initiatives, shortfall against the target set for reduction in number of accident fatalities indicates towards persistent gaps in enforcement and infrastructure management.

¹⁹ ITMS on three National Highways in Rajasthan (Shahjahanpur to Ajmer, Sikar to Bikaner and Bar Bilada to Jodhpur) have been approved under the Prime Minister Gati Shakti Scheme and ITMS on Delhi-Mumbai Expressway and Amritsar-Jamnagar Expressway have been implemented by National Highways Authority of India (NHAI).

Critical shortcomings were observed in the conduct of tri-stage Road Safety Audits, rectification of black spots and deficiencies noticed in road infrastructure related to road safety.

Despite the framework established for comprehensive road safety audits, gaps remained in the availability of data across various agencies, as evident from the limited information provided by the NHAI and other road owning agencies to the audit. There was significant lack of conducting tri-stage road safety audit of roads pertaining to Public Works Department (PWD) as 146 roads (34.35 *per cent*), each road costing more than ₹ 10 crore did not undergo safety audit at any stage. Besides, out of 1,175 roads of five kilometres or more constructed by PWD and NHAI, design level audit of only 636 (54.13 *per cent*) roads was carried out.

Despite clear policy directives and action plans, the rectification of black spots remained unsatisfactory, with a significant percentage remaining unaddressed, leading to continued accidents and fatalities. The persistence of black spots hinders effective prevention of future accidents. Moreover, the absence of a black spot management system further weakens the effectiveness of the efforts made to mitigate road hazards.

Delay in installation and use of advanced technologies such as Automatic Number Plate Recognition (ANPR) System with Speed Detection Cameras, lack in establishment of Automated Driving Testing Tracks have further weakened monitoring and enforcement mechanisms.

Overall, these shortcomings highlight systemic gaps in governance, planning and accountability that have impeded effective implementation of road safety measures.

Recommendations

The Government/Department may consider:

- 1. Ensure compliance to mandatory tri-stage audits for all new and existing roads through third-party agencies and rectify identified black spots within set timelines and conduct post-rectification reviews.*
- 2. Establishment/operationalization of automated driving test tracks in all licence issuing offices for transparent licence testing.*
- 3. Install ANPR with speed detection cameras on high-risk stretches integrated with e-challan systems to strengthen monitoring and enforcement mechanism.*
- 4. Adopt a multi-sectoral approach towards road safety, involving road owning government agencies, law enforcement authorities, and the public, as this is essential for reducing road accidents and fatalities.*
- 5. Adopt road safety measures such as appropriate road geometric design, functional and visible traffic control signage, traffic control devices, and strict enforcement of traffic rules. Severe penalties for over speeding, wrong-side driving, plying unauthorised vehicles on national highways, and unauthorised or wrong parking on roads should be strictly imposed.*

