

GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT AND HIGHWAYS

RAJYA SABHA
UNSTARRED QUESTION NO - 1216
ANSWERED ON – 29/07/2026

**SAFETY AUDITS AND QUALITY COMPLIANCE OF MAJOR HIGHWAY
STRUCTURES**

1216. DR. LAXMIKANT BAJPAYEE:

Will the Minister of Road Transport and Highways be pleased to state:

- (a) the multi-tier inspection mechanism and independent proof-checking of major bridge/tunnel designs done through empanelled premium technical institutes in the country, the details thereof for the last five years;
- (b) the number of quality audits conducted in the last five years following instances of road or structural failures on newly built corridors and the details of findings; and
- (c) the details of penal actions taken against concessionaires found guilty of using substandard materials?

ANSWER

THE MINISTER OF ROAD TRANSPORT AND HIGHWAYS

(SHRI NITIN JAIRAM GADKARI)

(a) to (c) All efforts are made to ensure that the National Highways (NHs) are constructed as per stipulated quality standards specified in the Indian Roads Congress (IRC) specifications and codes. To ensure that highway construction adheres to stipulated quality standards, Consultants (Authority's Engineer/ Independent Engineers- AE/IE) are appointed by the executing agencies for day-to-day supervision of works at site. Officials of executing agencies undertake inspections from time to time and ensure adherence of conformity of quality of the work done by the Concessionaire/ Contractors with stipulated requirements. In addition, Third-Party Quality Auditors are deployed for independent quality audits of NH works on a case-to-case basis.

Reputed academic, research and other technical institutes are engaged on a case-to-case basis for proof-checking of designs at different stages of project implementation, including at Detailed Project Report (DPR) stage, construction stage etc. In particular, to address various issues/problems in DPRs of tunnels and for expert advice/ third party review during various phases of tunnel construction, in areas such as geological, geotechnical, and geophysical investigations, design, instrumentation and monitoring and safety audits, a collaborative framework has been established with academic institutions and government organizations [Geological Survey of India (GSI), National Institute of Rock Mechanics(NIRM), Central Soil & Materials Research Station (CSMRS), IITs, MIT Pune etc.] All proposals for long tunnel (length greater than 1.5 km) on NHs are technically reviewed by the Expert panels from time to time.

Academic/research/other technical organizations have been engaged for proof-checking of designs at various stages of NH projects in 79 nos. of projects in the last five years and current year.

The Government has implemented the following technology-based monitoring systems and initiatives for improvement of quality control systems of NHs works: -

i. Adoption of Automated & Intelligent /Machine-aided Construction (AI-MC) in NH projects;

ii. Assessments of road conditions through Network Survey Vehicle (NSV) mandated for all NHs and Expressway works at the time of completion and every six months thereafter, which is monitored through electronic platform. NSV system for road condition assessment has been revamped using analytics for enforcement of contractual provisions during Operation and Maintenance (O&M) through dedicated central cell;

iii. Operationalization of a centralized system called NHA One App for Monitoring and rectification of highway defects which enables geo-tagging of defects along with photographs;

iv. Analysis of High-Resolution Imagery collected from Drone Surveys in Drone Analytics Monitoring System (DAMS) integrated with Artificial Intelligence/ Machine Learning algorithms for periodic evaluation of progress and quality of ongoing NHs works from time to time;

v. Deployment of Mobile Quality Control Vans (MQCVs) equipped with Non-Destructive Testing Equipment on pilot basis in four States, namely in Gujarat, Rajasthan, Odisha and Karnataka, for diagnostic assessment of overall health and quality of works from time to time during project implementation phases.

State / Union Territory (UT) – wise details of projects involving the collapse or major structural failure on NHs including on bridges and due to sub-standard quality of materials, and action taken against Contractors/ Concessionaires/ AE/IE etc. during the last five years and current year is annexed. Action against defaulting agencies have been taken as per the provisions of the Contract/ Concession agreement in case of deficiencies/ damages, such as termination of contract agreement, levying of penalties/ liquidated damages, debarment/ blacklisting, declaring as non-performers etc.

Annexure

ANNEXURE REFERRED TO IN REPLY TO PART (a) TO (c) OF RAJYA SABHA UNSTARRED QUESTION NO. 1216 ANSWERED ON 29.07.2026 ASKED BY DR. LAXMIKANT BAJPAYEE REGARDING SAFETY AUDITS AND QUALITY COMPLIANCE OF MAJOR HIGHWAY STRUCTURES

State / Union Territory (UT) – wise details of projects involving the collapse or major structural failure on NHs including on bridges and due to sub-standard quality of materials, and action taken against Contractors/ Concessionaires/ AE/IE etc. during the last five years and current year:

State / UT	Projects involving the collapse or major structural failure on NHs			
	Year	No. of projects	Penalty Imposed	Other penal action
Andhra Pradesh	2021	1	Rs. 40.00 lakh on IE Rs. 3.0 Cr on contractor	
Arunachal Pradesh	2024	1	5% of Contract value on Contractor	
Bihar	2022	2		Key personnel of Contractor and AE/IE suspended
	2023	2	Rs. 25 Cr on Contractor	Key personnel of Contractor and AE/IE suspended
	2024	1		Key personnel of Contractor suspended
Himachal Pradesh	2022	1		Rectification done at Contractors own cost
Haryana	2021	1	Rs. 6.67 cr on Contractor & Rs. 20 Lakhs on AE	Contractor and AE blacklisted for 3 months
	2024	2	Total Rs. 90 lakhs on Contractors	Rectification done at Contractors own cost
Jammu & Kashmir	2022	1	1% of project cost on EPC Contractor	Contractor blacklisted
Gujarat	2025	1	Rs. 2.80 cr. on Contractor	
Karnataka	2024	1		Contractor debarred for 1 month
	2025	1		Rectification done at Contractors own cost

State / UT	Projects involving the collapse or major structural failure on NHs			
	Year	No. of projects	Penalty Imposed	Other penal action
Kerala	2024	1		Rectification done at Contractors own cost
	2025	7	Total Rs. 31.245 Cr on Contractors and Rs. 5 lakhs on IE	Key personnel of Contractor and AE/IE suspended in 1 project Contractor and AE/IE debarred in 2 projects
Madhya Pradesh	2025	2	Rs. 119 Cr on Contractor	
Maharashtra	2021	1		Debarment of Contractor for 9 months
	2024	4	Rs. 3.94 Cr in total on Contractors Penalty of Rs. 20 lakhs on AE	Key Personnel of Contractor and AE suspended in 2 nos. projects
	2026	2	Rs. 75 lakhs on Contractor and Rs. 12.50 lakhs on AE	
Telangana	2022	1	Rs. 134.78 Cr on Contractor	
Tamil Nadu	2021	1	Rs. 3.0 Cr on Contractor	
	2023	1		Rectification done at Contractors own cost
	2025	1	Rs. 7.21 cr on contractors & Rs. 5 lakhs on IE	
Uttar Pradesh	2026	3		Termination of Contractor in 1 project
Uttarakhand	2023	1		Rectification done at Contractors own cost
West Bengal	2024	2	Rs. 4.19 Cr on Contractors & Rs. 5 lakhs on AE/IE	
	2026	1		Toll has been suspended, Key Personnel of IE and Concessionaire suspended
Odisha	2022	1		Keep personnel of AE/IE and Contractor suspended
	2023	1	Rs. 5.30 Cr on Contractor and Rs. 25 lakhs on IE	Debarment of DPR consultant for 1 year
Assam	2024	1		Contractor debarred for 4 months
Meghalaya	2025	1	Rs. 20 lakhs on Contractor	

State / UT	Projects involving the collapse or major structural failure on NHs			
	Year	No. of projects	Penalty Imposed	Other penal action
Delhi	2023	1		Rectification done at Contractors own cost
