

GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT AND HIGHWAYS
RAJYA SABHA
UNSTARRED QUESTION NO-3629
ANSWERED ON-02/04/2025

CONSTRUCTION OF NATIONAL HIGHWAYS

3629. SMT. JEBI MATHER HISHAM

Will the Minister of ROAD TRANSPORT AND HIGHWAYS be pleased to state:

- (a) whether Government plans to release white paper on the quality of highways constructed during the last five years, if so, the details thereof;
- (b) whether Government plans to conduct quality audit of the NH 53 stretch, which recently earned a Guinness World Record for rapid construction, if so, the details thereof;
- (c) the steps taken to investigate incidents like Bundelkhand Expressway cave-in to ensure accountability and prevent recurrence;
- (d) whether Government has ensured that highway construction adheres to high-quality standards to support optimal road transport speed, the details thereof; and
- (e) measures taken to improve India's low road transport speed ranking, as highlighted in the IMF working paper?

ANSWER

THE MINISTER OF ROAD TRANSPORT AND HIGHWAYS

(SHRI NITIN JAIRAM GADKARI)

(a) to (e) The Government in Ministry of Road Transport & Highways is primarily responsible for development and maintenance of National Highways (NHs) including National Expressways (NEs).

All efforts are made to ensure that the National Highways (NHs) are constructed as per stipulated quality standards specified by the Government / Indian Roads Congress (IRC) specifications and codes. To ensure that highway construction adheres to stipulated quality standards, Consultants (Authority's Engineer/ Independent Engineers) are appointed by the executing agencies for day to day supervision of the works at site. Officials of executing

agencies such as National Highways Authority of India(NHAI), National Highways & Infrastructure Development Corporation Limited (NHIDCL), Border Roads Organization(BRO), Public Works Departments(PWDs)/ Road Construction Departments(RCDs)/ Corporations of State Governments/ Union Territories(UTs), the Project Implementation Units (PIUs) as well as Third Party Auditors also undertake inspections from time to time and ensure adherence of conformity of quality of the work done by the Concessionaire/ Contractors with stipulated requirements. Deficiencies, if any, observed during such examination / supervision are brought to the notice of the Concessionaires / Contractors for taking up necessary corrective measures. Actions against defaulting agencies are taken as per the provisions of the Contract agreement in case of any defaults.

Project-wise details of major deficiencies, including cave-in of pavements in NHs projects and action taken / penalties imposed (wherever applicable) from Financial Year (FY) 2019-20 to FY 2023-24 and provisionally for FY 2024-25 are annexed. Bundelkhand Expressway is a State Road and State-Government of Uttar Pradesh is responsible for its development and maintenance.

Construction was completed for 100 Kms 2-lane Bituminous Concrete (BC) in 100 Hours in the 4-laning work of Amravati- Chikli Section of NH-53. All necessary quality tests as per extant specifications and codes and provisions of the Concession Agreement were conducted by the concessionaire and witnessed by the Independent Engineer during the construction of the project of NH-53.

NH network length in the country has increased from 91,287 km in March, 2014 to 1,46,204 km at present. With increased budgetary allocation over the years, quality of roads has improved substantially. Length of 4 lane and above NH network has increased by 2.5 times from about 18,371 km in 2014 to about 48,430 km. National High Speed Corridors / Expressways in about 2,474 km length have already been operationalized. Proportion of less than 2-lane NHs has decreased from 30% to 9% of the total NH network. The above developments have increased logistics efficiency as well as improved the regional connectivity and accessibility to the NHs across the country.

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) to (e) OF RAJYA SABHA UNSTARRED QUESTION NO. 3629 ANSWERED ON 02.04.2025 ASKED BY SMT. JEBI MATHER HISHAM REGARDING CONSTRUCTION OF NATIONAL HIGHWAYS

Project-wise details of major deficiencies, including cave-in of pavements in NHs projects and action taken / penalties imposed (wherever applicable) from Financial Year (FY) 2019-20 to FY 2023-24 and provisionally for FY 2024-25:

State	S. No.	Name of the Project	Length (in Km.)	Cost (in Cr.)	Details of Major damages / defects	Action Taken
Arunachal Pradesh	1	Permanent solution to Slip Zones on Papu – Yupia – Hoj – Potin section of NH-713A & NH-13 at Km 31.000 (Hoj Market), Km 38.300 (Yabi Village), Km 39.000 (Waterfall), Km 39.700 (Appa Crusher) and Km 40.300 (Crusher Point) in the state of Arunachal Pradesh for the year 2021-22	--	46.00	RE wall Collapsed	Rectification of defective work initiated by the Contractor. Penalty of 5% of contract value imposed on Contractor.
Andhra Pradesh	2	Six-Laning of NH-71 from Renigunta (Design Km 0.000) to Naidupeta (Design Km 57.046) (Design Length – 57.046 Km) on Hybrid Annuity Mode in the State of Andhra Pradesh under Bharatmala Pariyojana	57.046	2237.99	Settlements in approaches of structures at few locations.	Concessionaire completed rectification of the defects at site.
	3	Six-laning of Vijayawada bypass from Chinna Autupalli (Design Ch.0+000) to Gollapudi (Design Ch. 30+000) in Vijayawada – Gundugolanu Section of NH-16 in the State of Andhra Pradesh under Bharatmala Pariyojana on Hybrid Annuity Mode	30	1581.24	Defects in the construction of RE wall.	Concessionaire commenced the rectification work based on recommendation/suggestion of RE wall Expert. Rs.10,99,235/- was recovered as damages from Concessionaire.

State	S. No.	Name of the Project	Length (in Km.)	Cost (in Cr.)	Details of Major damages / defects	Action Taken
	4	4 laning of Vijayawada-Machilipatnam section of NH-9 from Km. 0.000 to Km. 63.800 (approx. length 64.611 km) in the State of Andhra Pradesh on EPC mode under NHDP Phase III	64.611	740.70	(i) Surface undulations in flexible pavement on East Side Benz Circle Flyover (ii) HTMS	EPC Contractor has completed rectification of surface undulations as per the rectification methodology suggested by CRRI, New Delhi. Recovery amounting to Rs.3,57,92,366/- imposed on the EPC contractor as per provisions of Contract Agreement.
	5	Rehabilitation and Upgradation of NH-4 from Nalagampalli (Existing Km 171.590/ Design Km 172.000) to AP/Karnataka Border (Existing Km 216.912/ Design Km 219.687) to four lane with paved shoulder (Design Length = 47.687 km) under NHDP-IV in the State of Andhra Pradesh on EPC mode	47.687	1104.30	(i) Surface undulations in Rigid pavement in VUP approaches (ii) RE Wall bulging in VUP Approaches.	DLP Period was extended till the rectification of defects observed during the DLP. EPC Contractor has completed rectification in VUP approaches as per the methodology suggested by CRRI, New Delhi. Rectification of RE walls has been completed by Contractor as per the methodology suggested by IIT Tirupati.
Bihar	6	Four Laning of Simaria-Khagaria Section of NH-31 from Km. 206.050 to Km. 266.282 (Design Chainage) and (Existing Chainage Km. 209.945 to Km. 270.000 of NH-31) in the State of Bihar on EPC Mode	60.232	567.00	Issues reported by CRRI in quality of Concrete superstructure in bridge at Km 264.946	Repair works taken up by Contractor as recommended in CRRI report
	7	Rail cum Road Bridge across river Ganga at Munger Ghat	14.517	227.77	Potholes and water stagnation	The contractor has taken up actions for rectification of defects.
Chattishgarh	8	4-Laning of Simga-Sargaon Section of NH-200 (New NH-130) from Km 48+580 to Km 91+026	42.446	829.13	Cracks in Cement Concrete Panels	Action taken up for Panel Rectifications at the risk & cost of EPC Contractor.

State	S. No.	Name of the Project	Length (in Km.)	Cost (in Cr.)	Details of Major damages / defects	Action Taken
	9	4-Laning of Sargaon-Bilaspur Section of NH-200 (New NH-130) from Km 91+026 to Km 126+525 under EPC Mode	35.499	676.44	Crack in Cement Concrete Panels & RE Wall bulged at Km. 91, 96, 101, 102 & 106.	The EPC Contractor has commenced the rectification work at site.
	10	4/6 Laning of Raipur-Simga Section of NH-200 (New NH-30) from Km 0+000 to Km 48+580 section of Raipur-Bilaspur (Package-1) in the state of Chhattisgarh under NHDP IV on EPC Mode	48.58	1166.00	Cracks observed in PQC panels	Action taken up for replacement of PQC panels by EPC Contractor at his own cost.
Himachal Pradesh	11	Four Laning of Parwanoo- Solan Section NH-22 (New NH-05) from Km 67.000 to Km 106.139, under NHDP phase-III on EPC basis in the State of Himachal Pradesh.	39.139	748.77	Collapse of road stretch between km. 3.130 to 3.170 on the two-lane portion of the project highway (approach road to Tunnel) of Parwanoo-Solan section of NH 05.	Restoration work has been completed by EPC Contractor
Haryana	12	Flyover and Underpass at Hero Honda Chowk	1.4	138.07	spalling of concrete chunk from deck slab	Due to insolvency of the Contractor, NHAI terminated the Contract and assigned the work of maintenance to another agency at risk and cost of the original contractor. In May, 2024, certain portion of deck slab had spalled. An expert committee was formed to look into the reasons for the aforesaid spalling of concrete. NHAI has initiated actions for appointing specialized agency for structural safety audit.
	13	Delhi-Vadodara Expressway Pkg. 2	28.5	1094.00	Rutting	NHAI has imposed damages amounting to Rs. 40.55 Lakhs on the contractor for delayed maintenance. Process of rectification of rutting has been initiated and majority of the rutting has been rectified. Also IIT Kharagpur has been

State	S. No.	Name of the Project	Length (in Km.)	Cost (in Cr.)	Details of Major damages / defects	Action Taken
						engaged for detailed study and suggestions for permanent rectification of defects.
	14	Delhi-Vadodara Expressway Pkg. 3	31.8	780.88	Rutting	NHAI has imposed damages amounting to Rs. 35.90 Lakhs on the contractor for delayed maintenance. Process of rectification of rutting has been initiated and majority of the rutting has been rectified. Also IIT Kharagpur has been engaged for detailed study and suggestions for permanent rectification of defects.
Gujarat	15	Construction of six lane flyover/VUP including RE wall, service road and Drain, near Umbhel village on Bharuch-Surat Section of NH-48 (Old NH-80 at Ch of Km 258.858 identified as black spot ID no. GJ-02-54 in the State of Gujarat	0.9	26.76	Poor quality of works	Penalty has been invoked for non-fulfilment of contract obligations
Jharkhand	16	4 Laning of kutchery chowk to bijupara Secion of NH 75 from km 0.0 to km 34.00	34	235.00	PQC panel, Riding quality, toll plaza building.	Performance Bank Guarantee of Rs 11.79 Crores encashed for non-rectification of defects
Karnataka	17	Hospet-Bellary-Karnataka/AP Border from Km.280.080 to Km.375.450	95.37	870.00	Cracks are developed in PQC for 8.30 km.	Original Contract Terminated. New EPC Contractor is implementing the Balance works.
	18	4-laning of Hubli – Hospet section	143.721	1334.70	Cracks on PQC Pavement and widening of longitudinal joints on pavement	Contractor has initiated actions for rectification of damages.

State	S. No.	Name of the Project	Length (in Km.)	Cost (in Cr.)	Details of Major damages / defects	Action Taken
	19	4L of Addahole to Bantwal Section of NH-48 (Package-II)	48.485	1660.19	Cracks on PQC pavement observed during construction	Rectification works taken up by Contractor.
	20	4L of Addahole to Bantwal Section of NH-48 (Package-I)	15.13	544.02	Cracks on PQC pavement observed during construction	Rectification works taken up by Contractor.
	21	4L of Hassan to Maranahally Section of NH-75	45.14	701.00	Longitudinal air cracks observed on some panels of PQC during the construction	Rectification works taken up by Contractor.
Maharashtra	22	Bal. Works of Fagne (Km. 510.000) to Maharashtra/Gujarat Border (Km. 650.794) on NH-06 (New NH-53)	140.79	980.00	Damages observed in Slab of Major Bridge at Ch.547.344	Structure was Audited by VNIT Nagpur. As per the recommendation of VNIT, Nagpur, Contractor has taken up reconstruction of slab.
	23	6 laning of Pune-Satara section of NH-48 on BOT	140.35	1724.55	Poor maintenance (Pothole, cracks, rutting, choked drains, non-functioning of street lights etc.)	The tolling rights of the Concessionaire were suspended. Rectifications completed by NHAI.
	24	Balance work for 4-laning of Panvel to Indapur section from km.0.0 to km.42.3 of NH-66 - EPC	42.3	151.26	Panel cracking, poor riding quality, bumps, poor diversions etc.	Contractor has taken up rectification works.
	25	Balance work for 4-laning of Panvel to Indapur section from km.42.3 to km.84.6 of NH-66 - EPC	42.3	332.00	Panel cracking, poor riding quality, bumps, poor diversions etc.	Contractor has taken up rectification works.
	26	4-Lane Bridge across Varsova Creek and its approaches on Surat - Dahisar section of NH-48 on EPC	2.55	157.49	Poor quality of wearing coat over the bridge deck.	Contractor has taken up rectification works.
	27	O& M section of 4-laning of Vadape to Gonde section of NH-848 on BOT basis.	96.64	579.00	Poor maintenance (Potholes, cracks, rutting, choked drains, non-functioning of street lights etc.)	The tolling rights of the Concessionaire were suspended. NHAI completed the work at risk & cost of the Concessionaire.
	28	Bodhwad- Muktainagar - Barhanpur road Section - II Km. 44/760 Km.78/145.	33.385	178.26	Cracked panels	Contractor has initiated actions for rectification of damages. DLP period is extended by Six months.

State	S. No.	Name of the Project	Length (in Km.)	Cost (in Cr.)	Details of Major damages / defects	Action Taken
	29	Section -II Kolde to Khetia Road km.50+200 to 98+800	48.6	509.18	Cracked panels	Contractor has initiated actions for rectification of damages.
	30	Mehkar-Ajispur Road	35.836	230.20	Cracked panels	The Performance BG of Contractor is forfeited. Process initiated for rectification of damages.
	31	Bhokar-Sarsam	33	295.09	Cracked panels	Contractor has initiated actions for rectification of damages.
	32	Sillod-Fardapur	32.63	432.98	Cracked panels	Contractor has initiated actions for rectification of damages.
	33	Parbhani to Gangakhed	35.885	237.88(After COS 239.99)	Cracked panels	Contractor has executed the panel replacement / rectification works.
	34	Rehabilitation and Upgradation of 2 lane with paved shoulder / 4 laning configuration of Pal Phata – Phulambri – Khultabad section of NH752H from Km 137/758 to Km 105/700 (Design Chainage from Km 46/440 to Km 78/358) in the state of Maharashtra on EPC Mode	31.918	227.19	Cracks/distressed PQC panels were observed a few locations during Construction period	Rectification works taken up by EPC Contractor and same is near completion.
	35	Amdi - Saoner	39.58	396.91	Cracked panels	Contractor has initiated actions for rectification of damages.
	36	Up-gradation to Four Lane with Paved Shoulder configuration of the highway starting from existing km 88.400 (Savali Vihir) to km 163.400 (Start of Ahmednagar Bypass) (Design Length – 75.000 km) section of NH-160 in the State of Maharashtra under Bharatmala Pariyojana on EPC Mode.	75	418.20	Poor and inferior quality of work.	EPC Contract has been terminated.

State	S. No.	Name of the Project	Length (in Km.)	Cost (in Cr.)	Details of Major damages / defects	Action Taken
	37	Construction of (i) White Topping on the existing bituminous carriageway & service Road from km. 381.000 to Km. 502.000 (ii) VUP with service road at Delhi Darbar km. 499.150 (20m x 5.5m) (iii) VUP with service road at Pandurangwadi km. 501.250 (20m x 4.5m) (iv) LVUP with service road at Sativali km. 454.180 (12m x 4.0m) & (v) Safety measures on Surat-Dahisar Section of NH-48 in the State of Maharashtra on EPC mode Project.	121	553.00	Localized failures in the white topping pavement such as cracks, potholes, tyre marks etc	Contractor has initiated actions for rectification of damages.
Rajasthan	38	Delhi Vadodara Expressway NE-4 Pkg.06	31.16	931.00	Rutting, Raincuts, potholes & settlement	Penalty imposed on each contractor amounting to Rs. 50 Lakhs for non-rectification of defects in the stipulated time frame as per provision of contract agreement.
	39	Delhi Vadodara Expressway NE-4 Pkg.07	31.26	946.00		
	40	Delhi Vadodara Expressway NE-4 Pkg.08	33.05	880.11		
	41	Delhi Vadodara Expressway NE-4 Pkg.09	45.64	1258.10		
	42	Construction of 6-lane access-controlled Greenfield highway from km 28+70 to Km. 53+0 of Sangariya (near Chautala)-Rasisar (near Bikaner) section of NH-754K as a part of Amritsar-Jamnagar Economic Corridor in the State of Rajasthan under Bharatmala Pariyojana -Phase-I (AJ/SR-Package-2)	24.300	575.00	Deficiencies in riding quality and settlement at some locations observed	(i) Damage of Rs. 50.00 Lakhs imposed upon the Contractor. (ii) Two key personnel of Authority Engineer team were terminated due to poor supervision.
	43	Delhi-Vadodara Expressway Pkg. 4	36.9	997.11	Rutting & settlement of approach	Damages amounting to Rs. 1.06 Cr. imposed for delayed maintenance. Also, IIT Kharagpur has been engaged for detailed study for permanent rectification of defects.

State	S. No.	Name of the Project	Length (in Km.)	Cost (in Cr.)	Details of Major damages / defects	Action Taken
	44	Delhi-Vadodara Expressway Pkg. 5	36.14	947.00	Rutting, settlement of approach & bulging of RE wall	Damages amounting to Rs. 88.32 lakhs imposed for delayed maintenance. Bulging of RE wall has been rectified as per suggestions of CRRI. Majority of the rutting has been rectified. Further, in addition to above, IIT Kharagpur has been engaged for detailed study for permanent rectification of defects.
	45	Construction of 6-lane access controlled Greenfield highway from km 53+000 to Km. 88+000 of Sangariya (near Chautala)-Rasisar (near Bikaner) section of NH-754K as a part of Amritsar-Jamnagar Economic Corridor in the State of Rajasthan under Bharatmala Pariyojana-Phase-I (AJ/SR-Package-3)	35.000	504.89	Failure of the nose structure while launching of 83 mtr single span truss bridge	Penalty of Rs. 1.00 Cr. imposed and warning for debarment action for any future instances upon the Contractor was issued. Debarment of fabrication team and Designer team issued for the period of 02 years in NHAI works. Penalty of Rs. 20 Lakhs and warning for debarment action for any future instances upon the Authority Engineer. Debarment of Senior bridge Engineer deployed by the Authority Engineer issued for a period of 2 years in NHAI works.
	46	Delhi-Vadodara Greenfield Alignment (NH-148N) (Pkg-16) (Ch. 427.300 to Ch.452.420) [Major bridge over Takli river near Nayagaon Jageer village to Rajasthan/MP Border]	25.125	613.79	Stretch is operational w.e.f. 30.11.2023 and at some locations the settlements observed in approaches of structure	EPC Contractor has rectified damages.
	47	Construction of Nagaur Bypass from existing Km 166/260 to Km 180/500 on NH 65 in the state of Rajasthan on EPC mode	19.225	155.76	Uneven riding surface	The Contractor has laid a Bituminous Course over the Concrete Pavement for a stretch of 10.25 km.

State	S. No.	Name of the Project	Length (in Km.)	Cost (in Cr.)	Details of Major damages / defects	Action Taken
	48	Widening to four lane with paved shoulders from km 166.00 to km 172.200 on old NH-89 at Nagaur City in the State of Rajasthan on EPC mode.	6.2	18.90	Sag observed in camber of road	Rectification work taken up by the Contractor. Action initiated against Contractor as per provisions of Contract Agreement
Uttar Pradesh	49	Lucknow Ring Road Pkg-3A	14.618	292.07	Cracks in PQC Panel in length of 2.886 Km.	Contractor has initiated process for rectification of damages.
	50	Rehabilitation and Up-gradation from km. 285.000 to 326.000 of NH-76 (Kalapur - Lalta Road) to two lane with paved shoulder on EPC mode in the state of Uttar Pradesh	41	240.13	Cracks in rigid pavement.	Defect Liability Period has been extended till the rectification of defects observed during DLP. The Quality Auditor engaged by the Ministry has suggested methodology for rectification of defects.
	51	Rehabilitation and Up-gradation from km. 178.000 to 215.000 of NH-76 (Kabrai – Banda Road) to two lanes with paved shoulder on EPC mode in the state of Uttar Pradesh	37	215.16	Cracks in rigid pavement.	Defect Liability Period has been extended till the rectification of defects observed during DLP. The Quality Auditor engaged by the Ministry has suggested methodology for rectification of defects.
Uttar Pradesh & Uttarakhand	52	4L of Haridwar-Nagina section of NH-74	66.916	1659.12	PQC panel cracks	Contractor has initiated process for rectification of damages.
Uttar Pradesh & Uttarakhand	53	4L of Nagina-Kashipur section of NH-74	98.793	2535.54	PQC panel cracks, Potholes, Road signages, Rain Cuts etc.	Recoveries initiated from the Contractor as per Schedule-M of EPC contract agreement.
Uttarakhand	54	Reconstruction with geometric improvement of existing 2 lane/intermediate lane to 2 lane with paved shoulder configuration from existing km. 52.200 to km 92.880 of NH-125 in the State of Uttarakhand under EPC mode under improvement of NH connectivity to Chardham.	39.73	282.08	Quality issues observed during inspection by Chief Technical Examiner (CTE) of CVC	Rectification has been done by contractor. Action initiated against contractor & Authority's Engineer.

State	S. No.	Name of the Project	Length (in Km.)	Cost (in Cr.)	Details of Major damages / defects	Action Taken
	55	Construction, Operation and Maintenance of 2-Lane Bi-Directional Silkyara Bend Barkot Tunnel with escape passage including approaches on Dharasu-Yamunotri section between Ch. 25.400 Km and Ch. 51.000 Km falling along NH-134 (OLD NH-94) in the state of Uttarakhand	4.859	1383.78	Collapse at cavity in under construction Silkyara Tunnel.	Rectification measures taken up by the EPC contractors at its own cost. Actions as per the Investigation Committee Report initiated.
West Bengal	56	Construction of 4-Laning of Puruliya Bypass Section from Km. 84.030 to Km. 94.345 of NH-32 (length 10.315 Km) in the State of West Bengal on EPC Mode	10.315	172.50	Cracks have developed in the newly constructed PQC.	i) Rectification works initiated by Contractor. Amount of Rs. 20.00 Lakh withheld from Contractor's bill. ii) Key personal of AE has been debarred for a period of one year.
	57	Four laning with paved shoulders of NH-6 from Chichra to Kharagpur Km 185.150 to Km 134.400 including rehabilitation of existing four lane from Km 134.400 to Km 129.600 in the state of West Bengal	55.52	613.08	Cracks in PQC panels	Repaired at the Risk and Cost of EPC Contractor.
Andaman & Nicobar Islands	58	Rehabilitation of km 181.00 to Km 206.00 section in Andaman Trunk Road of NH-4 to Intermediate Lane with hard shoulder in the union Territory of Andaman & Nicobar islands (Total length 25.00 km) on EPC Mode" (Package-VII)	25	53.96	Distress, sinking of pavement at various locations.	Process initiated for undertaking repair works at risk and cost of the EPC Contractor.
	59	Construction of 4 Nos. of Minor Bridges at Km 21.717, Km 23.150, Km 88.300, Km 92.100 of NH- 223 (New NH-4) connecting South Andaman and Baratang Island in the Union Territory of Andaman & Nicobar Islands on EPC mode.	4 Minor Bridges	26.18	Punching in Deck Slab (LHS) of the minor bridge across BD Nallah at Km 88+300 and other quality issues including bad workmanship.	The EPC contractor has carried out the necessary rectifications at their own expense including replacement of slab as recommended by CRR-1 CSIR report. Action initiated against the Contractor for debarment as per provisions of Contract.
