

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
RAJYA SABHA
UNSTARRED QUESTION NO. 2521
ANSWERED ON 13.03.2026

ROB AND RUB IN KUSHINAGAR

2521 SHRI RATANJIT PRATAP NARAIN SINGH:

Will the Minister of RAILWAYS be pleased to state:

- (a) the status of the construction of Road Over Bridges (ROBs) and Road Under Bridges (RUBs) at the busy level crossings in the Kushinagar district;
- (b) the measures taken to eliminate manned level crossings;
- (c) the status of the installation of the 'Kavach' protection system on the routes passing through the region; and
- (d) the timeline for the completion of the sanctioned ROBs?

ANSWER

MINISTER OF RAILWAYS, INFORMATION & BROADCASTING AND
ELECTRONICS & INFORMATION TECHNOLOGY

(SHRI ASHWINI VAISHNAW)

(a) to (d): As on 01.04.2025, there are 16,499 Nos. of manned Level Crossings (MLCs) on Indian Railways including 2785 Nos. in the State of Uttar Pradesh. All Unmanned level crossings (UMLCs) on Broad Gauge (BG) network of Indian Railways have been eliminated by 31.01.2019.

Level Crossings (LCs) are eliminated either by providing Road over Bridges/ Road under Bridges (ROBs/ RUBs) in lieu of LCs or through direct closure (for low traffic LCs) or by diversion of road traffic to nearby ROB/RUB/LC depending upon the site conditions.

Sanctioning of works of Road over Bridge (ROB)/Road under Bridge (RUB) in lieu of Level crossings (LCs) is a continuous and dynamic process of Indian Railway. Such works are prioritised and taken up on the basis of its impact on safety in train operations, mobility of trains & impact for road users and feasibility etc.

No. of ROBs/ RUBs constructed on Indian Railways during the period 2004-14 vis a vis 2014-26 (Upto Jan'26) is as under:

| Period | ROBs/ RUBs constructed |
|-----------------------|---|
| 2004-14 | 4,148 Nos. |
| 2014-26 (Upto Jan'26) | 14,024 Nos. (including 1,702 Nos. of ROBs/ RUBs in the state of Uttar Pradesh) |

As on 01.02.2026, 4,802 Nos. ROBs/ RUBs are sanctioned at cost of ₹ 1,14,196 Cr on Indian Railways including 778 Nos. Road Over Bridge (ROB)/Road Under Bridge (RUB) are sanctioned at cost of ₹ 15,170 Cr in State of Uttar Pradesh which are at various stages of planning and execution.

As on 01.04.2025, there are 05 Nos. ROBs/RUBs in Kushinagar district and 72 Nos. LCs exist in Kushinagar District. Out of these, 06 Nos. LCs have been taken up for construction of ROB/RUB. Details are as under:

| S.No. | LC Details | Remarks |
|-------|---|---|
| 1 | LC No. 17 A on Gorakhpur-Paniahwa section | ROB has been commissioned. The work of construction of RUB has been taken up. The work is being executed by the MoRTH/NHAI. |
| 2 | LC No. 67 on Thawe-Kaptanganj section | GAD has been approved. Contract has been awarded. The work of construction of ROB at this LC has been taken up. |
| 3 | LC No. 58 on Thawe-Kaptanganj section | Box casting completed. The approach work of RUB at this LC has been taken up. |
| 4 | LC No. 61 on Thawe-Kaptanganj section | GAD has been approved. Contract has been awarded. The work of construction of RUB at this LC has been taken up. |
| 5 | LC No. 65 on Thawe-Kaptanganj section | GAD has been approved. Contract has been awarded. The work of construction of RUB at this LC has been taken up. |
| 6 | LC No. 68B on Thawe-Kaptanganj section | GAD has been approved. Contract has been awarded. The work of construction of RUB at this LC has been taken up. |

Additionally, the works of preparation of Technical Feasibility Report / Detailed Project Report (TFR / DPR) for the construction ROB/RUB in lieu of remaining LCs in Kushinagar District have been taken up. Further action depends on TFR/DPR.

Completion of any ROB/RUB work depends on various factors like, fixing of approach alignment, approval of General Arrangement Drawing (GAD), land acquisition, removal of encroachment, shifting of infringing utilities, statutory clearances from various authorities, law and order situation in the area of project / work sites, number of working months in a year for particular project / work sites due to climatic conditions etc. All these factors affect the completion time of the projects / works.

Further, Railways have taken following measures to expedite the progress of work:

- i. Joint survey with concerned State Govt./Road Owning Authority is done before finalizing the General Arrangement Drawing (GAD) to ensure smooth execution.
- ii. Periodic meetings of Railway & State Government officials are done to resolve various issues related to ROB/RUB works.
- iii. Standardization of superstructure drawings for various combinations of span, skewness and width of road on Railway portion has been done to avoid delays during the design approval. This has been issued in the form of compendium, which can be directly adopted for Road Over Bridge across Railway lines for expeditious planning.
- iv. ROB/RUB works are planned to be executed on a single entity basis by Railway wherever possible. In case any Road Owning authority/State Govt. wants then Railway may permit them to execute the work on a single entity basis.

KAVACH PROTECTION SYSTEM

1. Kavach is an indigenously developed Automatic Train Protection (ATP) system. Kavach is a highly technology intensive system, which requires safety certification of highest order (SIL-4).
2. Kavach aids the Loco Pilot in running of trains within specified speed limits by automatic application of brakes in case Loco Pilot fails to do so and also helps the trains to run safely during inclement weather.
3. The first field trials on the passenger trains were started in February 2016. Based on the experience gained and Independent Safety Assessment of the system by Independent Safety Assessor (ISA), three firms were approved in 2018-19, for supply of Kavach Ver 3.2.
4. Kavach was adopted as National ATP system in July, 2020.
5. Implementation of Kavach System involves following Key Activities:
 - a. Installation of Station Kavach at each and every station, block section.
 - b. Installation of RFID Tags throughout the track length.
 - c. Installation of telecom Towers throughout the section.
 - d. Laying of Optical Fibre Cable along the track.
 - e. Provision of Loco Kavach on each and every Locomotive running on Indian Railways.
6. Based on deployment of Kavach version 3.2 on 1465 RKm on South Central Railway and experience gained, further improvements were made. Finally, Kavach specification version 4.0 was approved by RDSO on 16.07.2024.

7. Kavach version 4.0 covers all the major features required for the diverse railway network. This is a significant milestone in safety for Indian Railways. Within a short period, IR has developed, tested and started deploying Automatic Train Protection System.
8. Major improvement in Version 4.0 includes increased Location Accuracy, Improved Information of Signal Aspects in bigger yards, Station to Station Kavach interface on OFC and Direct Interface to existing Electronic Interlocking System. With these improvements, Kavach Ver.4.0. is planned for large scale deployment over Indian Railways.
9. After extensive and elaborate trials, Kavach Version 4.0 has been successfully commissioned on 1452 Route Kilometres, covering the high density Delhi- Mumbai and Delhi-Howrah routes as below:

| SN | Section | Progress (Route Km) |
|------------|---|---------------------|
| (1) | Delhi-Mumbai route: | |
| i | Junction cabin – Palwal – Mathura –Nagda section | 667 |
| ii | Vadodara - Ahmedabad section | 96 |
| iii | Vadodara - Virar section | 336 |
| (2) | Delhi – Howrah route: | |
| i | Gaya Sarmatanr section | 93 |
| ii | Chota Ambana - Bardhaman – Howrah section | 260 |

10. Further, track side Kavach implementation work has been taken up on 24,427 RKM covering all GQ, GD, HDN and identified sections of Indian Railways.
11. Progress of key items of Kavach on High density routes including Delhi– Mumbai & Delhi– Howrah corridors as on 28.02.26 are as under:

| SN | Item | Progress |
|-----|--------------------------------|-------------|
| i | Laying of Optical Fibre Cable | 8570 Km |
| ii | Installation of Telecom Towers | 1100 Nos. |
| iii | Station Data Centre | 767 station |

| | | |
|----|--------------------------------------|-----------|
| iv | Installation of Track side equipment | 6776 RKm |
| v | Provision of Kavach in Loco | 4154 Nos. |

12. In addition, work for installation of Kavach in 8979 Locomotives and 1200 EMU/MEMU has been taken up.

Specialized training programmes on Kavach are being conducted at centralized training institutes of Indian Railways to impart training to all concerned officials. By now more than 55,000 technicians, operators and engineers have been trained on Kavach technology. This includes about 47,500 Loco Pilots & Assistant Loco Pilots. Courses have been designed in collaboration with IRASET.
