

DPR Survey Sanctioned for 7 Projects with 160 kmph High-Speed Potential in Kerala

130+ kmph Sectional Speed Tracks Grow Nearly 4 Times in 11 Years Across India, Expanding from 5,036 km to 23,477 km and Now Covering 22.2% of Total Network

High-Speed and Safety Upgrades Achieved Through Modern Rails, Mechanized Maintenance, Advanced Track Monitoring System, Automatic Block Signalling and Complete Track Circuiting

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To augment & improve the railway network in Kerala, the following surveys have been sanctioned for preparation of Detailed Project Report (DPR) for higher speed potential of 160 kmph:

S. No.	Route	Length (Km)
1	Shoranur-Mangalore 3rd & 4th Line	307
2	Coimbatore-Shoranur 3 rd & 4 th line	99
3	Shoranur – Ernakulam 3 rd Line	106
4	Ernakulam-Kayankulam 3rd line (via Kottayam)	115
5	Kayankulam-Thiruvananthapuram 3rd Line	105
6	Thiruvananthapuram-Nagercoil 3rd Line	71
7	Turavur-Ambalappuzha Doubling	46

After firming up of Detailed Project Report (DPR), sanctioning of project requires consultation with various stake-holders including State Governments and necessary approvals viz. appraisal of NITI Aayog, Ministry of Finance etc. As sanctioning of projects is a continuous and dynamic process, exact timelines cannot be fixed.

Government of Kerala is currently working on a semi-high speed line named a Silver Line. The DPR of Silver Line (Thiruvananthapuram–Kasaragod) project was prepared by Kerala Rail Development Corporation Limited (KRDC), a Joint Venture Company of State Government of Kerala and Ministry of Railways. KRDC has been advised to revise the DPR in line with latest technical standards, such as adoption of broad gauge for integration with the Indian Railways network, flatter ruling gradient, proper drainage scheme for yards and sections, provision of Kavach, 2×25 kV electrification and taking environmental safeguards during construction & operation and integration with existing rail network etc.

However, Govt. of Kerala is insisting to consider Silver Line Project as stand alone project.

Upgradation and improvement of railway tracks and signalling on Indian Railways to increase the speed potential have been carried out in a big way during last 11 years. Improvement of track infrastructure is a continuous and ongoing process over Indian Railways. The following measures are being taken by Indian Railways to upgrade railway tracks, signalling etc.:

- i. Modern track structure consisting of 60kg, 90 Ultimate Tensile Strength (UTS) rails, Wider and heavier Pre-stressed Concrete Sleepers (PSC) with elastic fastening, fan-shaped layout turnout on PSC sleepers and H-beam Sleepers on girder bridges are being used while carrying out primary track renewals.
- ii. The Thick Web Switches and Weldable CMS Crossings are being used in turnout renewal works.
- iii. Supply of 260m long rail panels have been increased to avoid welding of joints, thereby improving safety and riding quality.
- iv. Thick Web Switch Expansion Joints are being used in place of earlier Conventional/Improved SEJs.
- v. Adoption of better welding technology for rails i.e. Flash Butt Welding.
- vi. Adoption of mechanized system for track maintenance using high output plain tampers and points & crossing tampers for improved maintainability & reliability of track.
- vii. Deployment of state-of-the-art modern machines including Rail Grinding Machines to further improve asset reliability.
- viii. Mechanisation of track laying activities through use of track machines like PQRS, TRT, T-28 etc.
- ix. Use of advanced Phased Array technology of testing of rail and welds.
- x. Deployment of Integrated Track Monitoring Systems (ITMS) and Oscillation Monitoring System (OMS) for comprehensive health assessment to ascertain optimal maintenance requirements.
- xi. Using web enabled Track Management System (TMS) for integration and data analytics of the track inspection records received through various sources to enable precise maintenance inputs.
- xii. Electrical/Electronic Interlocking Systems with centralized operation of points and signals in place of old mechanical signalling have been provided at 6660 stations as on 31.12.2025.
- xiii. Interlocking of Level Crossing Gates (LC) has been provided at 10097 Level Crossing Gates upto 31.12.2025 for enhancing safety at LC Gate.
- xiv. Axle counters for automatic clearance of Block Section, BPAC (Block Proving Axle Counter) are provided to ensure complete arrival of train without manual intervention before granting line clear to receive next train and to reduce human element. These systems have been provided on 6142 Block Sections up to 31.12.2025.

- xv. Automatic Block Signalling (ABS) that enhances line capacity within existing track infrastructure has been provided at 6625 Route km upto 31.12.2025.
- xvi. Indian Railways has also gone for implementation of indigenously developed Automatic Train Protection (ATP) system which required safety certification of highest order. Kavach has also been adopted as a National AT system in July 2020. After extensive and elaborate trials, Kavach version 4.0 has been successfully commissioned on 1297 Route Kilometres, covering the high density Delhi - Mumbai and Delhi - Howrah routes. On the Delhi - Mumbai route Kavachver 4.0 has been commissioned on Junction cabin - Palwal - Mathura - Nagda section (667 Rkm) & Ahmedabad - Vadodara - Virar section (432 Rkm) and on the Delhi - Howrah route on Gaya - Saramatan (93 Rkm) and Bardhaman - Howrah section (105 Rkm).
- xvii. Complete Track Circuiting of stations to enhance safety by verification of track occupancy by electrical means has been provided at 6,665 stations up to 31.12.2025.
- xviii. All unmanned level crossings (UMLCs) on Broad Gauge (BG) route have been eliminated by January 2019.

As a result of above measures, there has been significant increase in speed potential of the tracks. The details of speed potential of railway tracks during 2013-14 vis-a-vis 2025-26 are as under:

Sectional Speed (kmph)	2013-14		2025-26 (up to Jan'26)	
	Track Km	%	Track Km	%
130 & above	5,036	6.3	23,477	22.2
110 - 130	26,409	33.3	61,711	58.4
< 110	47,897	60.4	20,484	19.4
Total	79,342	100	1,05,672	100

On Indian Railways, the average speed of the train services is dependent inter alia on the Maximum Permissible Speed (MPS) of the sections, track structure, geometry along the route including gradients and curves, topographical conditions, number of stoppages enroute, line capacity utilisation of sections, maintenance works in the section etc. Accordingly, the train services have been charted at the Maximum Permissible Speed of the respective sections over which the trains are being operated. Further, speeding-up of train services is an on-going process on Indian Railways.

This information was provided by the Union Minister for Railways, Information & Broadcasting and Electronics & Information Technology, Shri Ashwini Vaishnaw, in a reply to questions in Rajya Sabha today.

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