GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

LOK SABHA
STARRED QUESTION NO. 358
TO BE ANSWERED ON 12.08.2026

REVIEW OF CAPACITY ENHANCEMENT ON MANGALURU RAIL CORRIDORS

***358. SHRI CAPTAIN BRIJESH CHOWTA:**

Will the Minister of RAILWAYS be pleased to state:

(a) whether the Government has reviewed capacity enhancement on Mangaluru rail corridors and if so, the details thereof including current projects and operational status thereof, section-wise and station-wise;

(b) the details of the sanctioned cost, physical/financial progress, traffic/passenger data and target dates;

(c) the details of the capacity, safety, staffing, land or inter-zonal bottlenecks and the authority holding each action; and

(d) the details of the approval and completion roadmap of these projects along with firm milestones?

ANSWER

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

(SHRI ASHWINI VAISHNAW)

(a) to (d): A Statement is laid on the Table of the House.

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STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) OF STARRED QUESTION NO.358 TO BE ANSWERED ON 12.08.2026 IN LOK SABHA

(a) to (d): To enhance the capacity and strengthen the railway network in Mangaluru, following surveys have been sanctioned:

S.N	Project	Status
1	Mangaluru - Shoranur 3rd Line (307 Km)	Field Location Survey (FLS) has been sanctioned for preparation of Detailed Project Report (DPR). Field Survey work has been completed.
2	Mangaluru – Sringeri - Shivamogga New line (332 Km)	FLS has been sanctioned for preparation of DPR.
3	Mangaluru - Hassan Doubling (247 Km)	FLS has been sanctioned for preparation of DPR.

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 depend upon appraisals and approvals by various stakeholders.

To augment the yard capacity, the following works have been sanctioned in Mangaluru area:-

SN	Name of Works	Cost (₹ in Crores)
1	Provision of additional Coaching stabling line with coach watering facility at Bunder near Mangalore Central.	7.58
2	Provision of 02 No. of new full length platform lines at Mangalore Central.	23.46
3	Yard remodeling work at Mangalore Central with provision of 01 No. of new stabling line and extension of 01 No. of Platform.	15.41

Karnataka:-

Railway Budget:-

Budget allocation in the recent years has increased significantly. Budget allocation for infrastructure projects and safety works, falling fully/partly in the State of Karnataka is as under:

Period	Outlay
2009-14	₹835 crore/year
2026-27	₹7,748 crore (more than 9 times)

Track Construction:-

The details of constructing new track falling fully/partly in the State of Karnataka is as under:

Period	New track Commissioned	Average commissioning of new tracks
2009-14	565 Km	113 Km/year
2014-26	1,769 Km	147.4 Km/year

Projects sanctioned:-

As on 01.04.2026, 25 projects (15 new lines and 10 doubling) of 2,935 km length, costing ₹49,272 crore falling fully/partly in Karnataka are sanctioned. The summary is as under:-

Category	No of sanctioned Projects	Total Length (in Km)	Length Commissioned upto Mar'26 (Km)	Exp upto Mar'26 (₹ in cr.)
New Line	15	2,034	445	8,836
Doubling/ Multitracking	10	901	301	4,562
Total	25	2,935	746	13,398

Recently Completed Projects:-

Details of some of the recently completed projects falling fully/partly in Karnataka are as under:

S. No.	Project	Cost (₹ in Crores)
1	Kottur-Harihar new line (65 km)	468
2	Hassan-Bangalore new line (167 km)	1,290
3	Bidar-Gulbarga new line (110 km)	1,543
4	Shivani - Hosadurga Road doubling (10 km)	50
5	Shivani-Birur doubling (29 km)	143
6	Hosadurga-Chikjajur doubling (29 km)	260
7	Ramanagram - Mysore patch doubling (94 km)	998
8	Yelahanka – Chennasadra doubling (13 km)	108
9	Yeshwantpur - Yelahanka doubling (12 km)	95
10	Netrawati - Mangalore Central doubling (2 km)	28
11	Kankanadi - Panambur doubling (19 km)	350
12	Arsikere-Tumkur doubling (96 km)	758
13	Yelahanka - Penukonda doubling (123 km)	1,104
14	Daund-Gulbarga doubling (225 km)	3,182
15	Hubli-Chikjajur doubling (190 km)	1,850
16	Hotgi-Gadag doubling (284 km)	2,459
17	Pune-Miraj-Londa doubling (466 km)	6,464
18	Jokkate-Thokur doubling (2 km)	102

Ongoing Projects:-

Details of some of the projects falling fully/partly in Karnataka which have been taken up are as under:

S No.	Project	Cost (₹ in Crores)
1.	Munirabad-Mahabubnagar new line (247 km)	3,978
2.	Kadur - Sakleshpur new line (68 km)	908
3.	Rayadurg - Tumkur new line (207 km)	4,565
4.	Bagalkot - Kudachi new line (142 km)	1,694
5.	Tumkur - Devangere new line (182 km)	2,142
6.	Marikuppam - Kuppam new line (24 km)	518
7.	Gadag - Wadi new line (257 km)	3,668
8.	Shimoga - Ranebennur new line (96 km)	994
9.	Hassan - Belur new line (32 km)	749

10.	Dharwad -Belgaum new line (73 km)	927
11.	Hospet - Hubli - Londa - Tinaighat - Vasco - de - Gama doubling (312 km)	4,730
12.	Baiyyapanahalli - Hosur doubling (48 km)	1,160
13.	Yeshwanthpur- Channasandra doubling (22 km)	684
14.	Ballari-Chikjajur doubling (185 km)	3,342
15.	Secunderabad - Wadi 3rd & 4th line (173 km)	5,012
16.	Bellary - Hosapete 3rd & 4th line (65 km)	2,372
17.	Guntakal-Wadi 3rd & 4th line (230 km)	4,758

Details of some major projects which are delayed due to land acquisition are as under:-

S No.	Project	Total Land required (in ha)	Land acquired (in ha)	Balance Land to be acquired (in ha)
1	Shimoga–Rannebennur new line (96 km)	559	283	276
2	Belgaum–Dharwad new line (73 km)	581	0	581
3	Shimoga– Harihar new line (79 km)	488	0	488
4	Whitefield-Kolar new line (53 km)	337	0	337
5	Hassan-Belur new line (32 km)	206	0	206

Summary of the status of land acquisition in Karnataka is as under:-

Total Land required for Projects in Karnataka	10,123 ha
Land Acquired	6,134 ha (61%)
Balance Land to be acquired	3,989 ha (39%)

Government of India is geared up to execute projects, however success depends upon the support of Government of Karnataka.

Sanction of any railway project depends upon many parameters/factors which include the following:

- **Anticipated traffic projections and remunerativeness of the proposed route**
- **First and last mile connectivity provided by the project**
- **Connection of missing links and providing additional route**
- **Augmentation of congested/saturated lines**
- **Demands raised by State Governments/Central Ministries/Public representatives**
- **Railway's own operational requirements**
- **Socio-economic considerations**
- **Overall availability of funds**

Railway Infrastructure projects enable socio-economic development of the region including:

- **Better integration of the region with other parts of the country**
- **Faster movement of goods and services**
- **Improving logistics efficiency**
- **Enhance line capacity**
- **Increase in direct and indirect employment opportunities for the people of the region**
- **Reduces operational bottlenecks**
- **Development of tourism industry and increase in industrial activities in the region.**

Completion of Railway project/s depends on various factors which include the following:

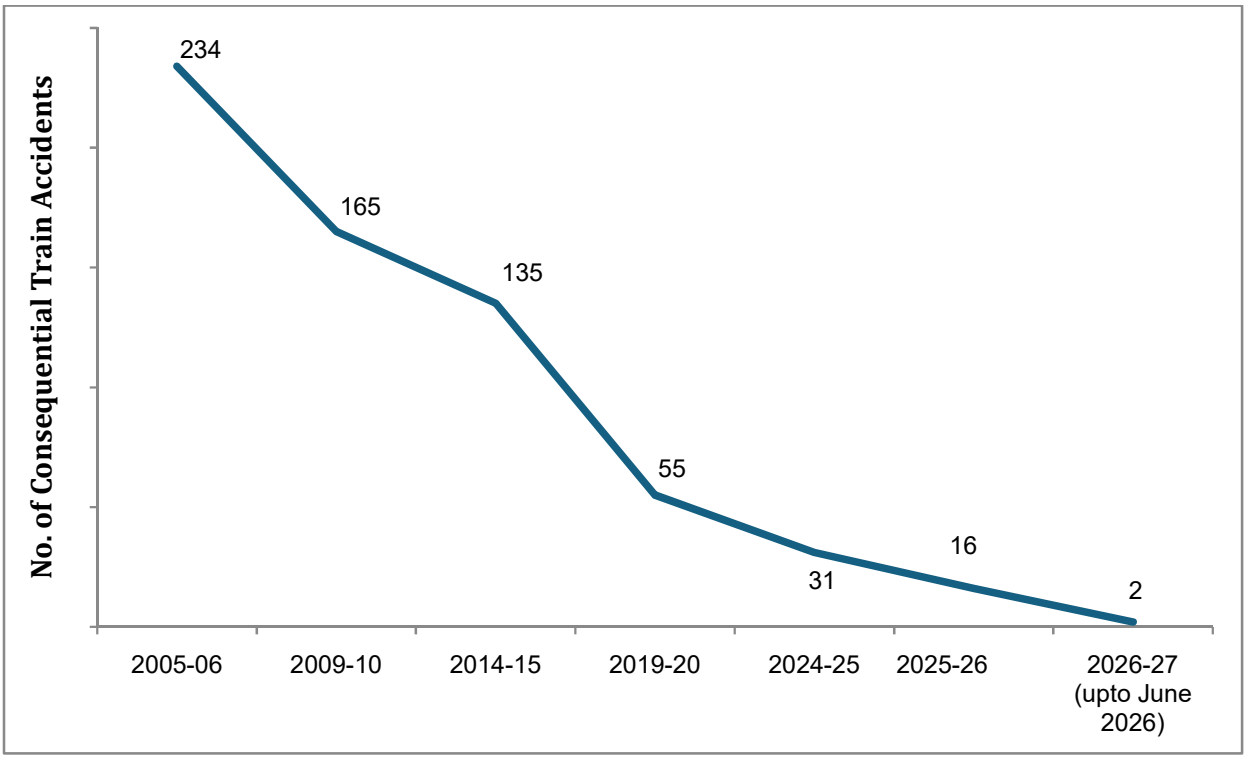
- **Land acquisition by State Government**
- **Forest clearance**
- **Shifting of infringing utilities**
- **Statutory clearances from various authorities**
- **Geological and topographical conditions of area**

- **Law and order situation in the area of project site**
- **Number of working months in a year for particular project site etc.**

All these factors affect the completion time and cost of the project/s.

Safety:

Safety is accorded the highest priority on Indian Railways. As a consequence of various safety measures taken over the years, there has been a steep decline in the number of accidents.



Number of Consequential Train Accidents has reduced as shown in the table below:-

Year	Consequential Accidents
2014-15	135
2025-26	16 (88% lesser)
2026-27 (Up to June 2026)	2

Another important index showing improvement in safety in train operations is Consequential Accident Index, the details of which are as under:-

Consequential Accident Index:-

Year	Accident Index
2014-15	0.11
2025-26	0.01 (91% lesser)

This index measures number of consequential accidents as a ratio of total running kilometers of all trains.

Accident Index = No. of consequential accidents

No. of trains X million kilometers run

The various safety measures taken to enhance safety in train operations are as under:-

1. On Indian Railways, the expenditure on Safety related activities has increased over the years as under:-

Year	Expenditure/Budget on Safety related activities (₹ in Cr.)
2013-14	39,200
2022-23	87,336
2023-24	1,01,662
2024-25	1,14,022
2025-26	1,17,693
2026-27	1,20,389

2. Electrical/Electronic Interlocking Systems with centralized operation of points and signals have been provided at 6,671 stations up to 30.06.2026 to reduce accidents due to human failure.

3. Interlocking of Level Crossing (LC) Gates has been provided at 10,395 Level Crossing Gates up to 30.06.2026 for enhancing safety at LC Gates.

4. Complete Track Circuiting of stations to enhance safety by verification of track occupancy by electrical means has been provided at 6,671 stations up to 30.06.2026.

5. **Detailed instructions on issues related with safety of Signalling, e.g. mandatory correspondence check, alteration work protocol, preparation of completion drawing, etc. have been issued.**
6. **System of disconnection and reconnection for S&T equipment as per protocol has been re-emphasized.**
7. **All locomotives are equipped with Vigilance Control Devices (VCD) to improve alertness of Loco Pilots.**
8. **Retro-reflective sigma boards are provided on the mast which is located two OHE masts prior to the signals in electrified territories to alert the crew about the signal ahead when visibility is low due to foggy weather.**
9. **A GPS based Fog Safety Device (FSD) is provided to loco pilots in fog affected areas which enables loco pilots to know the distance of the approaching landmarks like signals, level crossing gates, etc.**
10. **Modern track structure consisting of 60kg, 90 Ultimate Tensile Strength (UTS) rails, Prestressed Concrete Sleeper (PSC) Normal/Wide base sleepers with elastic fastening, fan shaped layout turnout on PSC sleepers, Steel Channel/H-beam Sleepers on girder bridges is used while carrying out primary track renewals.**
11. **Mechanisation of track laying activity through use of track machines like PQRS, TRT, T-28 etc. to reduce human errors.**
12. **Maximizing supply of 130m/260m long rail panels for increasing progress of rail renewal and avoiding welding of joints, thereby improving safety.**
13. **Ultrasonic Flaw Detection (USFD) testing of rails to detect flaws and timely removal of defective rails.**
14. **Laying of longer rails, minimizing the use of Alumino Thermic Welding and adoption of better welding technology for rails i.e., Flash Butt Welding.**

15. Monitoring of track geometry by OMS (Oscillation Monitoring System) and TRC (Track Recording Cars).
16. Patrolling of railway tracks to look out for weld/rail fractures.
17. The use of Thick Web Switches and Weldable CMS Crossing in turnout renewal works.
18. Inspections at regular intervals are carried out to monitor and educate staff for observance of safe practices.
19. Web based online monitoring system of track assets viz. Track database and decision support system has been adopted to decide rationalized maintenance requirement and optimize inputs.
20. Detailed instructions on issues related with safety of Track, e.g. integrated block, corridor block, worksite safety, monsoon precautions, etc. have been issued.
21. Preventive maintenance of railway assets (Coaches & Wagons) is undertaken to ensure safe train operations.
22. Replacement of conventional ICF design coaches with LHB design coaches is being done.
23. All unmanned level crossings (UMLCs) on Broad Gauge (BG) route have been eliminated by January 2019.
24. Safety of Railway Bridges is ensured through regular inspection of Bridges. The requirement of repair/rehabilitation of Bridges is taken up based upon the conditions assessed during these inspections.
25. Indian Railways has displayed Statutory “Fire Notices” for widespread passenger information in all coaches. Fire posters are provided in every coach so as to educate and alert passengers regarding various Do’s and Don’ts to prevent fire. These include messages regarding not carrying any inflammable material, explosives, prohibition of smoking inside the coaches, penalties etc.
26. Production Units are providing Fire detection and suppression system in newly manufactured Power Cars and Pantry Cars, Fire and Smoke

detection system in newly manufactured coaches. Progressive fitment of the same in existing coaches is also underway by Zonal Railways in a phased manner.

27. Regular counselling and training of staff is undertaken.

28. Concept of Rolling Block introduced in Indian Railways (Open Lines) General Rules vide Gazette notification dated 30.11.2023, wherein work of integrated maintenance/ repair/replacement of assets is planned up to 52 weeks in advance on rolling basis and executed as per plan.

The details of the Safety related works related to better maintenance practices, Technological improvements, better infrastructure and rolling stock etc. undertaken by Railways are tabulated below:-

S. No.	Item	2004-05 to 2013-14	2014-15 to 2025-26	2014-26 Vs. 2004-14
	Technological Improvements			
1.	Use of high-quality rails(60 Kg) (Km)	57,450 Km	1.63 Lakh Km	More than 2.8 times
2.	Longer Rail Panels (260m) (Km)	9,917 Km	87,219 Km	Nearly 9 times
3.	Electronic Interlocking (Stations)	837 Stations	3,691 Stations	More than 4 times
4.	Fog Pass Safety Devices (Nos.)	As on 31.03.14: 90 Nos.	As on 31.03.26: 31,693 Nos.	352 times
5.	Thick Web Switches (Nos.)	Nil	35,971 Nos.	
	Better Maintenance Practices			
1.	Primary Rail Renewal (Track Km)	32,260 Km	57,583 Km	1.78 times
2.	USFD (Ultra Sonic Flaw detection) Testing of Welds	₹ 79.43 Lakh	₹ 2.25 Crore	More than 2.8 times

	(Nos.)			
3.	Weld failures (Nos.)	In 2013-14: 3,699 Nos.	In 2025-26: 272 Nos.	93 % reduction
4.	Rail fractures (Nos.)	In 2013-14: 2,548 Nos.	In 2025-26: 208 Nos.	92% reduction
	Better Infrastructure and Rolling Stock			
1.	New Track KM added (Track Km)	14,985 Km	36,429 Km	Almost 2.5 times
2.	Flyovers (RoBs)/Underpasses (RUBs) (Nos.)	4,148 Nos.	14,362 Nos.	More than 3 times
3.	Unmanned Level crossings (Nos.) on BG	As on 31.03.14: 8,948	As on 31.03.26:Nil (All eliminated by 31.01.19)	Removed
4.	Manufacture of LHB Coaches (Nos.)	2,337 Nos.	49,366 Nos.	More than 21 times

Implementation of Kavach:-

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 2,633 Route Kilometres as on 31.07.2026, covering the high density Delhi- Mumbai and Delhi-Howrah routes as below:-

S. No.	Section	Progress (Route Km)
(1)	Delhi– Mumbai route: 1,423 Rkm	
I	Tilak Bridge – Junction cabin – Palwal – Mathura – Kota – Nagda – Ratlam – Vadodra – Virar Section	1,327
ii	Vadodara – Ahmedabad Section	96
(2)	Delhi – Howrah route: 1,210 Rkm	
i.	Chipyana – Tundla – Kanpur – Subedarganj Section	563
ii.	Kanpur – Lucknow Section	71
iii.	Mirzapur – DDU (Excluding) Section	64

iv.	DDU(FOC) – Bhabua Road Section	50
v.	Sasaram – Pheser Section	43
vi.	Gaya – Sarmatarn – Nimiaghat Section	159
vii	Chota Ambana – Bardhaman – Howrah Section	260

10. In addition, track side Kavach implementation work is being taken up on 21,794 RKM covering all GQ, GD, HDN and identified sections of Indian Railways. Also, Kavach work has been sanctioned in the Shoranpur-Mangaluru Central (308 Rkm) section of Southern Railway. Further, Kavach has been planned in Mangaluru Central- Mangaluru Jn-Padil-Thokur and Jokatte-Panambur (28 Rkm) sections of Southern Railway, passing through Mangaluru area.

11. The total progress of key items of Kavach on Indian Railway sections are as under:-

S. No.	Item	Progress
i	Laying of Optical Fibre Cable	11,547 Km
ii	Installation of Telecom Towers	1,721 Nos.
iii	Station Data Centre	1,009 Station
iv	Installation of Track side equipment	7,726 RKm
v	Provision of Kavach in Loco	6,290 Nos.

12. In addition, work for installation of Kavach in 7,190 Locomotives and 1,200 EMU/MEMU has been taken up.

13. 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 94,000 technicians, operators and engineers have been trained on Kavach technology. This includes about 57,000 Loco Pilots & Assistant Loco Pilots. Courses have been designed in collaboration with IRISET.

14. The funds utilized on Kavach works so far up to Jun'26 are ₹3,875 Crore. The allocation of funds during the year 2026-27 is ₹2,066 Crore. Kavach work is going at good pace in the entire country. Requisite funds are made available as per the progress of works.

15. **The cost for provision of Track Side including Station equipment of Kavach is approximately ₹50 Lakhs/Km and cost for provision of Kavach equipment on locomotives is approximately ₹ 80 Lakh/Loco.**

Amrit Bharat Stations:-

Ministry of Railways has launched Amrit Bharat Station Scheme for redevelopment of stations with a long-term approach.

The scheme involves preparation of master plans and their implementation in phases to improve the stations of Indian Railways. The master planning, keeping in view the necessity of each station, includes:

- **Improvement of access to station and circulating areas**
- **Integration of station with both sides of city**
- **Improvement of station building**
- **Improvement of waiting halls, toilets, sitting arrangement, water booths**
- **Provision of wider foot over bridge/subway to commensurate with passenger traffic**
- **Provision of lifts/escalators/ramps**
- **Improvement of platform surface and provision of platform shelter**
- **Provision of kiosks for local products through schemes like 'One Station One Product'**
- **Parking development**
- **Amenities for Divyangjans**
- **Better passenger information systems**
- **Provision of air concourse, executive lounges, Multimodal integration, landscaping, etc.**

The scheme also envisages sustainable and environment friendly solutions etc. as per necessity, phasing and feasibility and creation of city centre at the station in the long term.

So far, 1,340 stations have been identified for development under this scheme, out of which, 61 stations including Mangalore Junction and Mangalore Central stations, are located in Karnataka. The names of stations identified for development under Amrit Bharat Station Scheme in Karnataka are as following:-

State	No. of Stations	Names of Stations
Karnataka	61	Almatti, Alnavar, Arsikere Junction, Badami, Bagalkot, Ballary, Bangalore Cantt., Bangarpet, Bantawala, Belagavi, Bidar, Chamaraja Nagar, Channapatna, Channasandra, Chikkamagaluru, Chikodi Road, Chitradurga, Davangere, Dharwad, Dodballapur, Gadag, Gangapur Road, Gangavathi, Ghataprabha, Gokak Road, Gubbi, Harihar, Hassan, Hosapete, Kalaburagi Jn., Kengeri, Koppal, Krantivira Sangolli Rayanna (Bengaluru), Krishnarajapuram, Malleswaram, Malur, Mandya, Mangalore Central, Mangalore Jn, Munirabad, Mysuru Jn (Mysore), Raichur Jn, Ramanagaram, Ranibennur, Raybag, Sagar Jambagaru, Sakleshpur, Shahabad, Shivamogga Town, Shravanabelgola, Shree Siddharoodha Swamiji Hubballi Jn, Subramanya Road, Talguppa, Tiptur, Tumakuru, Udupi, Vijayapura, Wadi, Whitefield, Yadgir, Yesvantpur

Completed stations of Karnataka:

Development works at railway stations under Amrit Bharat Station Scheme have been taken up at a good pace. Details of stations completed in Karnataka are as under:-

State	No. of Stations	Name of Stations
Karnataka	12	Alnavar, Badami, Bagalkot, Bantawala, Dharwad, Gadag, Gokak Road, Hosapete, Koppal, Munirabad, Ranibennur, Subramanya Road

The activities for development at other stations have also been taken up at good pace and progress of some of the stations is as given below:

Stations of Karnataka:

- **Mangalore Junction station: The works of widening of station approach road, improvement of circulating area including parking, improvement of station building including porch, booking office, platform shelter, new waiting hall with toilet, improvement of platform surface at platform no. 1, lighting, installation of Coach Indication Board and parcel office have been completed. The work for 6 m wide foot over bridge has been taken up.**

- **Mangalore Central is under master planning stage. Master planning is an iterative process requiring optimization and, the timeframe and other details for such optimization cannot be indicated at this stage.**

- **Bangalore Cantonment station: The works of new diversion road at South side, new electrical substation and new 5 m wide foot over bridge have been completed. The works of new station building at**

South side, new station building at North side, improvement of platform surface, air concourse, 12 m wide foot over bridge, new basement at South side, new overhead tank at North and South side have been taken up.

- **Yesvantpur station: The works of new elevated road at East side, new arrival and departure plaza at East side, new multi level car parking at East side, new electrical substation, new overhead tank and new sewage treatment plant at East side have been completed. The works of new station building at West side, new air concourse, platform shelter, lift, escalator, new elevated road at West side, new arrival and departure plaza at West side have been taken up.**

- **Sakleshpur station: The works of extension of station building at main entry, new entrance porch at main entry, platform shelter, new waiting hall, new toilet, new booking office, improvement of circulating area at main entry and parking at main entry have been completed. The works of improvement of platform surface, signages, amenities for Divyangjan and lift have been taken up.**

- **Arsikere Junction station: The works of new waiting hall, new parcel office, improvement of circulating area and parking at main entry have been completed. The works of new station building at main entry, new entrance porch at main entry, platform shelter, new booking office, new dormitory, new retiring room, lift, escalator and 12 m wide foot over bridge have been taken up.**

Further, development / redevelopment / upgradation / modernisation of stations on Indian Railways is a continuous and ongoing process and works in this regard are undertaken as per requirement, subject to inter-se priority and availability of funds. Development / redevelopment /

upgradation / modernisation of a station is carried out based on category of station/condition/traffic handled etc.

Development / upgradation / modernisation of stations including under Amrit Bharat Station Scheme is generally funded under Plan Head-53 'Customer Amenities'. The details of allocation and expenditure under Plan Head-53 are maintained Zonal Railway-wise and not station-wise or state-wise. Karnataka is covered under the jurisdiction of five railway zones, namely, Central Railway, South Coast Railway Southern Railway, South Central Railway, and South Western Railway. For these zones, an allocation of ₹ 3,244 crore has been made for the current financial year, 2026-27, out of which an expenditure of ₹ 1,588 crore (up to June, 2026) has been incurred so far.

Development / Upgradation of railway stations is a complex in nature involving safety of passengers & trains and requires various statutory clearances such as tree cutting, heritage, fire clearance, airport clearance etc. These stations are in operation since long, so brownfield work challenges are being faced, such as shifting of utilities (involving water/sewage lines, optical fibre cables, gas pipelines, power/signal cables, etc.), infringements, operation of trains without hindering passenger movement, speed restrictions due to works carried out in close proximity of the tracks and near to high voltage power lines, etc. and these factors affect the progress of work and completion time.

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