



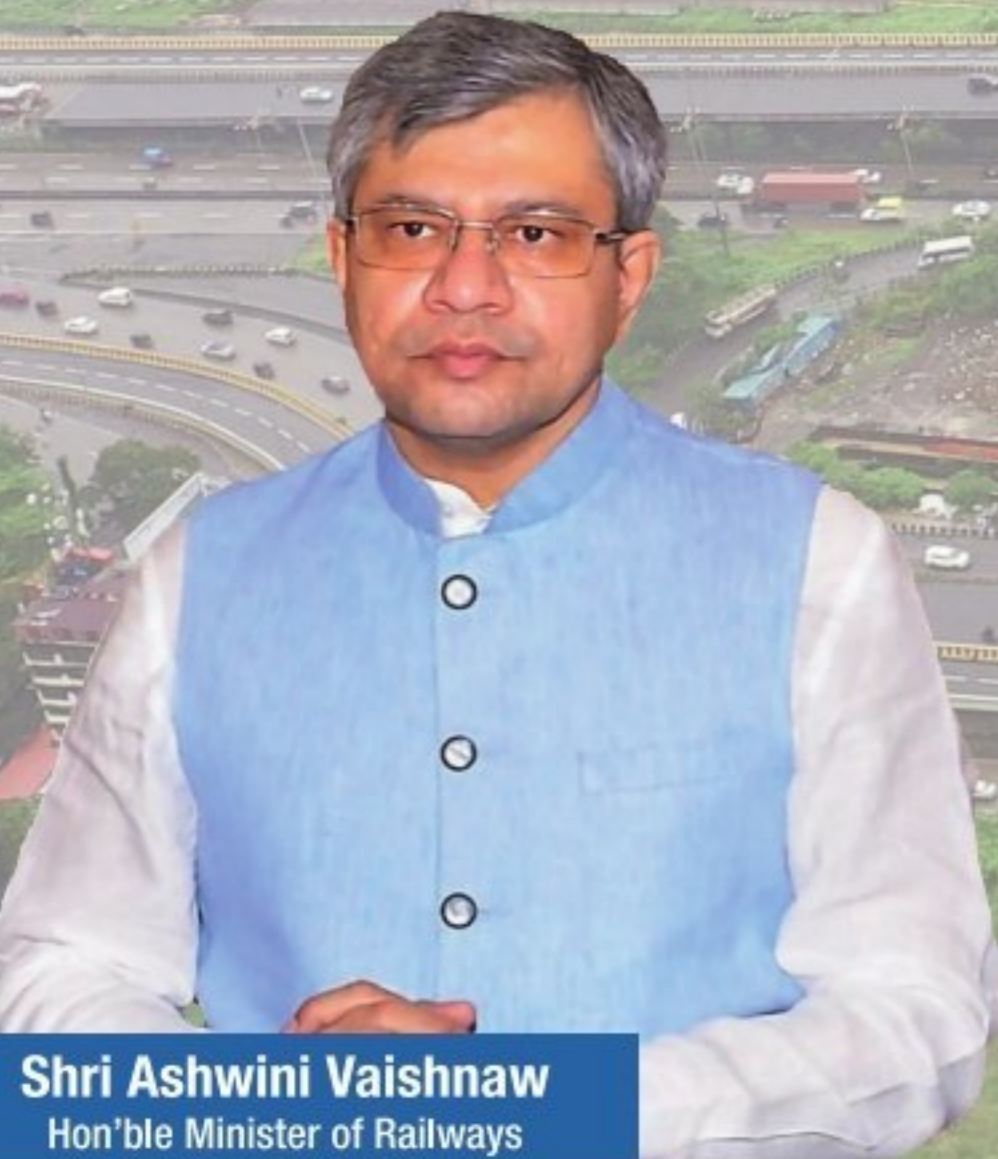
BOOSTING MAHARASHTRA'S RAIL INFRASTRUCTURE

AN INDUSTRY CONNECT INITIATIVE

On the right track: MahaRail's impact on Maharashtra's Rail Infrastructure

Maharashtra Rail Infrastructure Development Corporation Limited, a joint venture between the Government of Maharashtra and the Ministry of Railways, is dedicated to accelerating railway projects to improve connectivity across Maharashtra and its neighbouring states, enhancing transportation and supporting sustainable growth

Maharashtra Rail Infrastructure Development Corporation (MRIDC)—popularly known as MahaRail—was established in 2018 to implement rail lines and rail-way-related projects quickly and provide seamless connectivity between Maharashtra's cities, industrial zones, and neighbouring states. MahaRail plays an important role in developing Maharashtra's Rail infrastructure. The organisation is executing several such projects rapidly to modernise and expand the state's Rail network, improve connectivity, and promote sustainable development.



Shri Ashwini Vaishnaw
Hon'ble Minister of Railways



Shri Narendra Modi
Hon'ble Prime Minister of India



MahaRail leads the way

Maharashtra Rail Infrastructure Development Corporation Ltd (MRIDC), also known as MahaRail, is a joint venture of the Government of Maharashtra and the Ministry of Railways, established to boost the Rail Infrastructure projects in the state of Maharashtra by providing critical connectivity and capacity enhancement.

The establishment goal of MahaRail is to construct new Rail Line projects that involve state government funding as well as MahaRail-developed initiatives. MahaRail aims to strengthen the Railway Infrastructure by identify-

ing the traffic potential of different regions of the state including rail connectivity to the neighbouring states and identifying economically viable projects and implementing them with fast-track construction and commissioning.

MahaRail has embarked on its journey of enhancing the Railway Infrastructure across the state by starting with the implementation of gauge conversion work between Nagpur (Itwari) and Nagbhid (116 kms). The main aim of this project is to expedite the coal movement from the coal mines and reduce congestion on the existing route. MahaRail has conceptualised

the Pune-Nashik High-Speed Rail Line, the first of its kind on Broad Gauge in India. With an operating speed potential of 250 KMPH, with fully indigenous technology, it will offer the world's most cost-effective High-Speed Rail solution, fully integrated with Indian Railways. Other more innovative projects are underway.

With a vision to eliminate Level Crossings in Maharashtra, MahaRail is implementing about 200 Road Over Bridges (ROBs), Road Under Bridges (RUBs), and Limited Height Subways (LHSs) across the state. These projects are funded by various authorities such as the

Ministry of Railway (MoR), Ministry of Road Transport and Highways (MoRTH), Public Works Department (PWD), Municipal Corporation of Greater Mumbai (MCGM), Mumbai Metropolitan Region Development Authority (MMRDA), and Kalyan Dombivli Municipal Corporation (KDMC).

MahaRail has been also entrusted with the responsibility of the reconstruction of old British-era bridges in Mumbai by MCGM. In the most bustling areas of Mumbai, MahaRail is constructing state-of-the-art cable-stayed bridges with uninterrupted traffic movement.

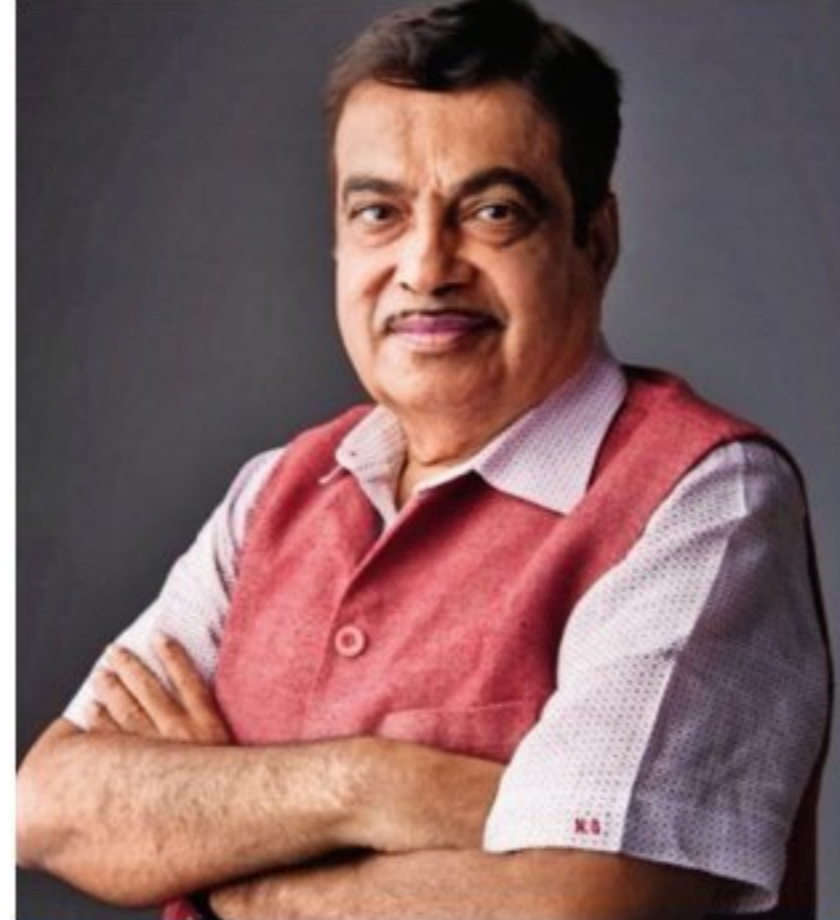
MahaRail made significant strides in 2023, completing 24 Road Over Bridges across Maharashtra. The organisation is not only progressing rapidly but also planning further developments, including Cable-Stayed Road Over Bridges in Mumbai and, in an impressive feat, the reconstruction of century-old British-era bridges—all without disrupting traffic. This strategic approach is expected to greatly improve transportation across Maharashtra, reduce accidents at railway crossings, and save passengers' time.



Shri Eknath Shinde
Hon'ble Chief Minister of Maharashtra

MahaRail is executing projects at a rapid pace and planning further for the construction of new projects in Maharashtra in order to boost railway infrastructure

Over the years, numerous accidents have occurred at railway crossings across the country. The safety of road passengers is a top priority for the government. The construction of new Road Over Bridges (ROBs) is a crucial step in eliminating accidents at railway crossings and enhancing the transportation system in the state. In the first phase of this initiative, 20 ROBs are being constructed under the Setubandhan Yojana, funded by the Central Road Infrastructure Fund (CRIF). Due to MahaRail's commitment to quality, the Union Ministry of Road Transport and Highways (MoRTH) has entrusted this important project to the organisation.



Shri Nitin Gadkari
Hon'ble Minister of Road, Transport and Highways, Government of India

SIGNIFICANCE OF MAHARAIL

- In-house teams for planning, contracting, designing, surveys, and execution of all projects.
- Only state government PSU in the infrastructure sector to have received a patent for its invention 'A CONCRETE CRASH BARRIER WITH INTEGRATED UTILITY DUCT'.
- Fifteen drawings prepared by MahaRail are recognised by RDSO for disseminating good practices in planning of the Road Over Bridges (ROBs) and launching operations.
- Completed and commissioned 24 ROBs in a short span of two to three years.
- Implementation of Rail Line project using advanced technology. Track linking is being done using the New Track Construction Machine for Gauge Conversion of Nagpur (Itwari) Nagbhid project.
- All ROBs in the state have remote-controlled LED theme lighting showcasing various lighting patterns. Waterproofing measures for all Limited Height Subways (LHSs) and Road Under Bridges (RUBs) across the state allowing water seepage during monsoon season.



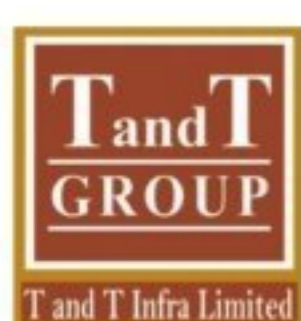
Shri Devendra Fadnavis
Hon'ble Deputy Chief Minister of Maharashtra

I am pleased to share that MahaRail, which I established during my tenure as Chief Minister of Maharashtra, is operating at full capacity while upholding high standards. I commend MahaRail's Managing Director, Shri Rajesh Kumar Jaiswal, and his team for their outstanding performance. The Road Over Bridges (ROBs) are meticulously designed and built to high standards within the specified timelines. I'm excited to announce that MahaRail is currently constructing approximately 50 ROBs in Vidarbha. I would like to express my gratitude to Indian Railways, the Government of Maharashtra, the Public Works Department (PWD), the Urban Development Department, and the Ministry of Road Transport and Highways (MoRTH) for entrusting MahaRail with these important projects.



Shri Ajit Dada Pawar
Hon'ble Deputy Chief Minister of Maharashtra

MahaRail has been playing a crucial role in enhancing Maharashtra's Rail infrastructure by executing several projects with precision and dedication. The development of new railway lines, flyovers, subways, and other related infrastructure is not only improving travel convenience but also contributing to the state's economic growth. Their projects, including the upcoming ROBs (Road Over Bridges) in Baramati, reflect the organisation's commitment to improving connectivity and safety across the state. I am confident that MahaRail will continue to drive progress and innovation in Maharashtra's rail sector, ensuring rapid and efficient execution of all entrusted projects. The addition of five more ROB projects in Baramati highlights our focus on addressing the infrastructure needs of the people and bringing about positive transformation in the region.





CABLE-STAYED ROAD OVER BRIDGES

Sr. No.	ROB/RUB	Length	Railway Zone	Completion date
Mumbai City				
1	6 Lane, Reay Road Cable-Stayed ROB	585 mtrs	Central Railway	Cable-stayed ROB is at the completion stage
2	4 Lane, Byculla Cable-Stayed ROB	916 mtrs	Central Railway	May 2025
3	6 Lane Twin Cable-Stayed ROB, Dadar	911 mtrs	Western Railway and Central Railway	First bridge by 30th July 2025 Second bridge: Within 365 days after completion of the first bridge
4	6 Lane Twin Cable-Stayed ROB, Ghatkopar	1,500 mtrs	Central Railway	-
Nagpur City				
5	Ajni Twin Cable-Stayed ROB, Nagpur	274 mtrs	Central Railway	First bridge by May 2025 financial year Second bridge: Within 365 days after completion of the first bridge

MahaRail has planned to construct most of these bridges without disturbing ongoing traffic on existing bridges, thus avoiding inconvenience to the citizens.

In most cases, during the construction of these bridges in the first phase, construction of one bridge of the twin cable-stayed bridge will be completed without disturbing the traffic movement on the existing bridge. After the first phase is completed, the traffic will be diverted to the new cable-stayed road over bridge and the existing old bridge will be demolished and a new cable-stayed bridge will be constructed at the same place. MahaRail has planned to renovate these bridges as state-of-the-art cable-stayed bridges.

ROB/RUB projects by MahaRail

MahaRail is the only corporation in the state that has been entrusted with the construction of around 200 ROB/RUBs/LHSs across Maharashtra. These projects are funded by various authorities like the Ministry of Railways (MoR), Ministry of Road Transport and Highways (MoRTH), Public Works Department (PWD), Urban Development Department (UDD) of Maharashtra, Municipal Corporation of Greater Mumbai (MCGM), Mumbai Metropolitan Region Development Authority (MMRDA), Kalyan Dombivli Municipal Corporation (KDMC), etc.

MahaRail has completed and commissioned 24 ROB/RUBs in districts like Nagpur, Chandrapur, Jalgaon, Dhule, Nashik, Mumbai, Thane, Satara, Sangli, Kolhapur, Hingoli, etc., in Maharashtra within

a very short span of its inception, which is a significant achievement. Construction of ROB/RUBs at Level Crossings is indeed a very challenging task. Taking railway blocks from time to time to launch the steel girders without disrupting the railway line services, getting approvals and coordination from various departments such as the Public Works Department, Revenue and Land Department, Forest Department, local authorities, etc., with minimum land acquisition, construction activities within ROW (Right of Way), shifting of utilities, etc., is a very time-consuming process. Other agencies take an average of five to ten years to construct an ROB, but MahaRail has constructed the ROB in a very short span of two to three years using

state-of-the-art technology and excellent planning—all carried out efficiently. MahaRail has also been entrusted with the challenging task of rebuilding more than 100-year-old British-era bridges by MCGM. Construction work is in progress on the Dadar Tilak ROB, Reay Road ROB, Byculla ROB, and Ghatkopar ROB. MahaRail is rebuilding these bridges as state-of-the-art Cable-Stayed Bridges without causing any disruption to the ongoing traffic.

In addition, MMRDA and KDMC have also awarded the construction of Prabhadevi (Elphinstone) ROB, Sewri ROB, and Titwala ROB. These ROB/RUBs will ease traffic congestion in the area and provide convenience to commuters.

MahaRail is also undertaking the important task of replacing the

British-era Ajni Bridge in Nagpur with a new Cable-Stayed Bridge. This project is a state-of-the-art bridge featuring a beautiful design and advanced engineering, being constructed at a prime location in Nagpur. Apart from this, MahaRail is also constructing a ROB at Mominpura and four RUBs in Central and East Nagpur under the Central Road Infrastructure Fund Scheme of the Ministry of Road Transport and Highways (MoRTH).

MahaRail is also implementing five flyovers in Nagpur city which are funded by the UDD department of the Government of Maharashtra.

Waterproofing measures for the Road Under Bridge (RUB)/Low Height Subway (LHS)

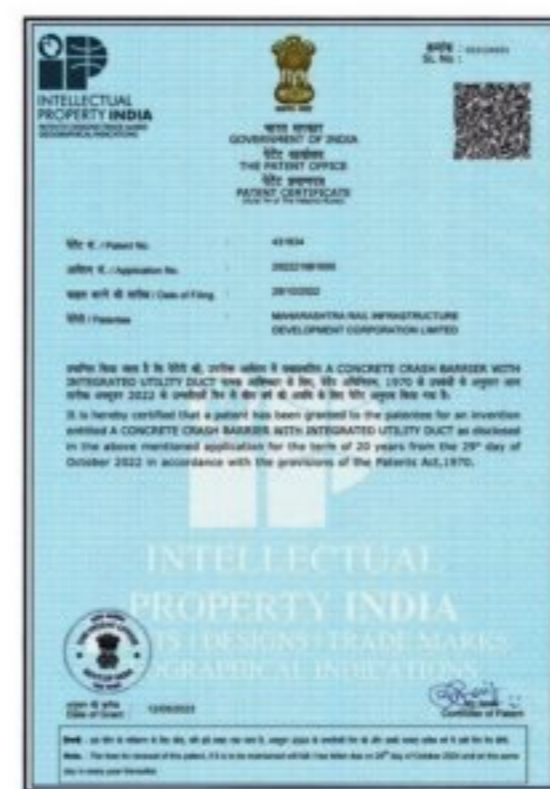
MahaRail is implementing Road

Under Bridge (RUB)/Low Height Subway (LHS) at 54 locations in various districts of Maharashtra. The RUB and LHS are equipped with a sump tank and an automated pump to address any minor water seepages. To ensure optimal protection, the approach ramps are covered with a roof, and advanced waterproofing systems are applied to both the approaches and the box structure. These measures are designed to effectively prevent water ingress into the RUB/LHS.

The execution of these LHSs is distinct and consistent throughout the state. The seepage system and optimal protection to the ramp are supplied to all the LHS regardless of its location, i.e., distant regions in the interior portions of the state or big cities.

MahaRail's achievements

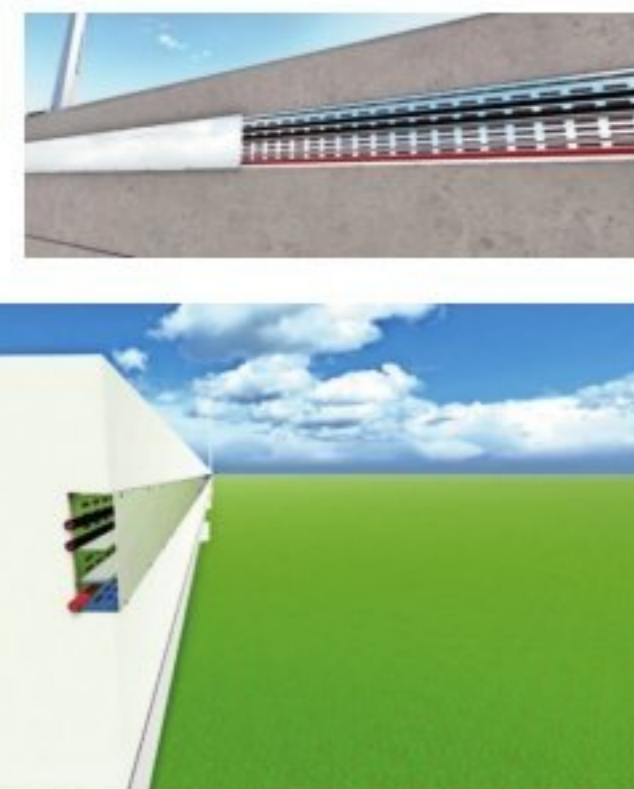
MahaRail received a patent for its invention (Patent no. 431634)



MahaRail has received a patent for its invention called 'A CONCRETE CRASH BARRIER WITH INTEGRATED UTILITY DUCT'. MahaRail has developed a separate cable duct for utilities that pass through ducts in the crash barriers of ROB/RUBs. The advantage of this method is that it ensures all the cables remain within the duct without being exposed to the outside elements.

Research Design and Standard Organisation (RDSO) has issued a compendium:

Research Design and Standard Organisation (RDSO) has issued a Compendium in the form of 'RDSO Report No. BS-132' to disseminate good practices in planning ROB/RUBs, launching operations, and creating a repository of drawings in use. The entire range of ROB drawings published by RDSO in the compendium includes 15 drawings of MRIDC, exclusively designed by the expert in-house team of MRIDC. This signifies an extraordinary feat for MRIDC.



24 ROB/RUBs opened for traffic by MahaRail in the year 2023

MahaRail is bridging transport gaps by making Maharashtra Railway Fatak Free

To ease traffic congestion at various Level Crossings across the State and in view of making the state 'Railway Fatak Free', the Public Works Department (PWD)

of the Government of Maharashtra and Ministry of Railway (MoR) has entrusted MahaRail to construct Road Over Bridges (ROBs)/Road Under Bridges (RUBs)/Limited

Height Subways (LHSs). MahaRail has completed construction of 24 ROB/RUBs across Maharashtra which are commissioned and opened for vehicular traffic.

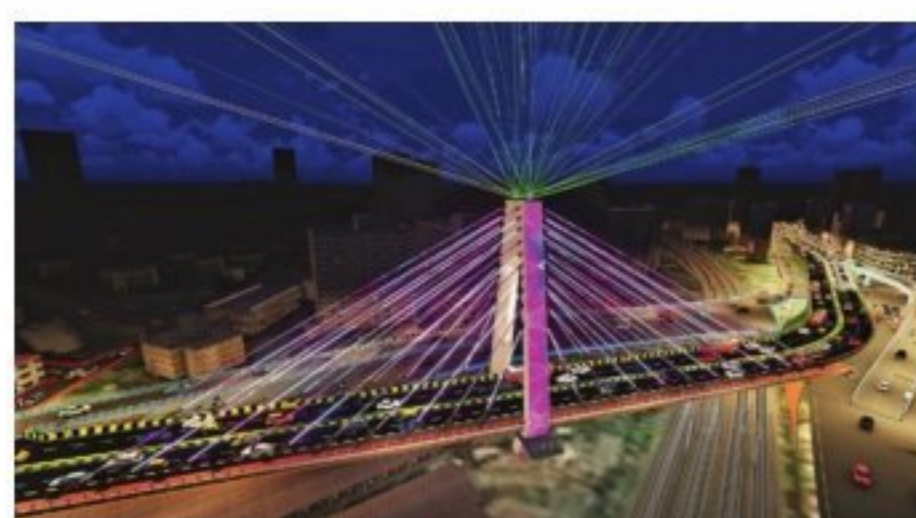
On 15th April 2023, the inauguration ceremony of six ROB/RUBs took place in Nagpur, marking a significant milestone in connectivity for the Vidarbha region. Similarly,

on 4th June 2023, nine ROB/RUBs were inaugurated across Maharashtra from Pune and on 17th December 2023, another nine more ROB/RUBs were inaugurated from Nagpur. MahaRail's

dedication and commitment to excellence are clearly visible as the company has successfully executed these infrastructure projects, ensuring the safety and convenience

of commuters. The construction of these ROB/RUBs was meticulously planned and executed, adhering to the highest standards of quality, durability, and safety.

Salient features of ROB/RUB/LHS:



1. LED theme lighting for beautification of ROB/RUBs

To enhance the aesthetic appeal of the bridges and neighbouring areas, MahaRail has installed colourful theme-based LED lighting on bridges.

- Remote-controlled architectural LED lightings placed on all ROB/RUBs of MahaRail.
- Theme-based lighting on the cable-stayed bridge, that will showcase thousands of different patterns, and public service messages for special occasions.
- Multi-coloured lighting on the entire bridge during special days like Independence Day, Republic Day, Navratri, Diwali, and many more.



2. Integrated Four Coat Epoxy Paint system

MRIDC is using an integrated four-coat paint system developed by the Central Electro Chemical Research Institute (CECRI) at all exposed concrete surfaces of ROB/RUBs. MahaRail has developed identical and unique design patterns and a logo for all ROB/RUBs in Maharashtra.

- Application of integrated four-coat epoxy paint system:
- First coat of epoxy polyamide primer coat.
 - Second coat of epoxy micaceous iron oxide undercoat.
 - Third coat of epoxy polyamide finished coat.
 - Fourth coat of polyurethane topcoat.



3. Wearing Coat at RCC Deck and Approach Portion

Ensuring the best riding quality of the road by using the latest techniques to construct ROB/RUBs in Maharashtra. To protect the structural concrete of the bridge deck/approach road from damage caused by moving vehicles or rainwater, MahaRail is applying the best quality paint at the RCC deck and approaching portions of the ROB/RUBs.

- To create a smooth and even surface.
- To protect against the wear and tear of the structure due to traffic.
- To reduce wear and tear of vehicle tyres.
- To get improved riding quality.
- To ensure it has long-term durability.



4. Crash Barrier with Integrated Cable Ducts

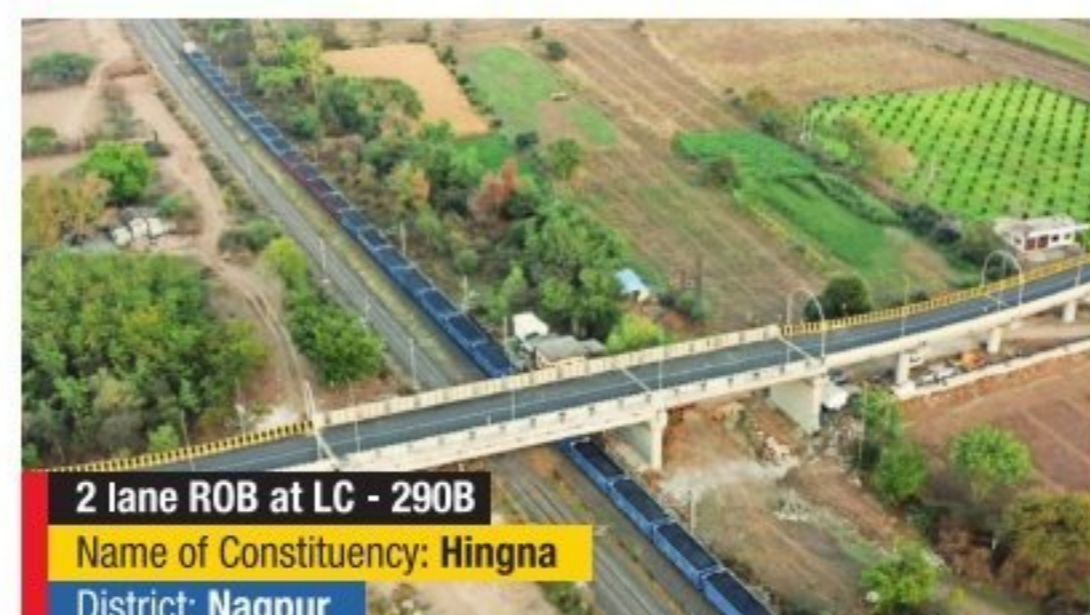
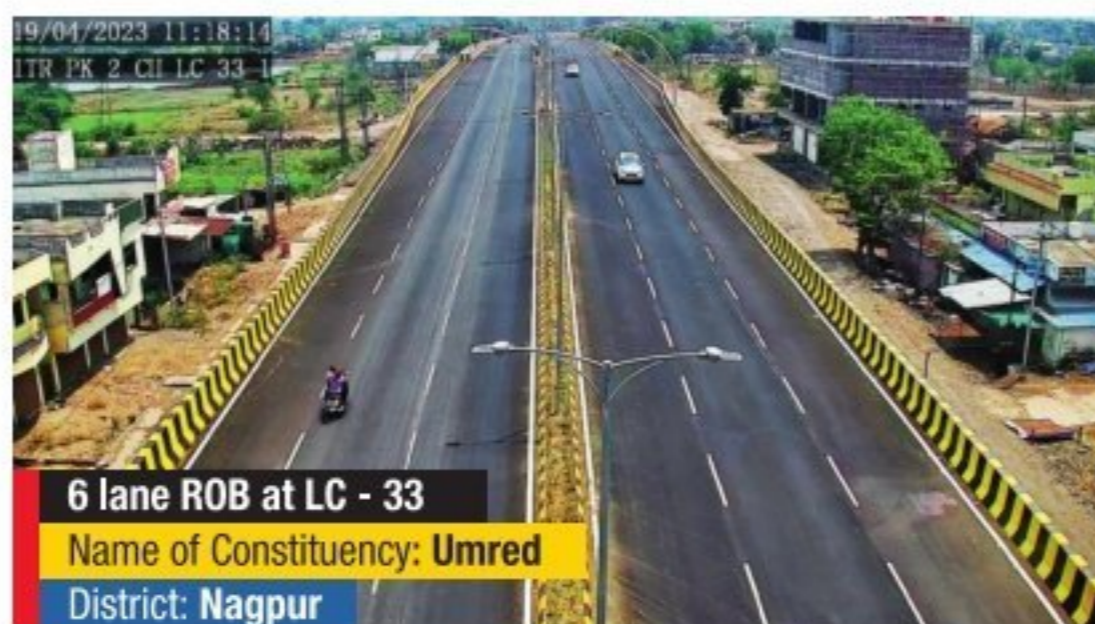
Many utility lines typically run over bridges, including electrical lines, telephone lines, etc. These wires can be harmful and cause fatal accidents. To prevent this, MahaRail has introduced a separate cable duct within the crash barriers of ROB/RUBs for the distribution of cables.

- MahaRail is installing a separate cable duct for utilities which passes through ducts in the crash barriers of ROB/RUBs.
- This will ensure that all electric cables remain in the duct without being exposed outside.
- MahaRail has received a patent for its invention called 'A CONCRETE CRASH BARRIER WITH INTEGRATED UTILITY DUCT' (Patent No. 431634).

Inauguration function in Nagpur on 15th April 2023



STATE-OF-THE-ART ROB/RUBS FOR ROBUST CONNECTIVITY





RAIL LINE PROJECTS

Pune-Nashik High-Speed Rail Project

A high-speed double-electrified Rail line project between Pune and Nashik has been conceptualised with a Detailed Project Report (DPR) by MahaRail for the development and implementation of the first-ever High-Speed Rail Line project on Broad Gauge in the country. The Pune-Nashik high-speed Rail line project is the first of its kind in the country, developed by MahaRail, with an operating speed of 250 KMPH on Broad Gauge. The per kilometre cost of this project is one-third of similar High-Speed Rail Line projects worldwide. This project is an excellent example of the 'Make in India' and 'Atmanirbhar Bharat' initiatives.

This is the only high-speed train with fully indigenous technology. It represents a technological revolution due to its lowest cost in the world and full integration with the Broad-Gauge system of Indian Railways. It fulfils a 25-year-old, long-pending demand of local farmers and industries in Maharashtra. Once completed, the project will reduce the travel time between Pune and Nashik from the current six hours by road to one and a half hours by high-speed trains, thus significantly boosting passenger and freight movements. The approved funding pattern of this project is 40 per cent equity and 60 per cent debt. The Government of Maharashtra has approved a contribution of equity up to 40 per cent, including any increase in cost. In other words, it is a fully State Government-funded High-Speed Rail line project on the Broad-Gauge system, the first in the country.

The detailed project report prepared by Ma-

haRail for this special project on Broad Gauge has been approved by the Government of Maharashtra and the Ministry of Railways. It has also been appreciated by NITI Aayog and the Ministry of Finance in the expanded board meeting. The proposal is currently awaiting approval from the Cabinet Committee on Economic Affairs (CCEA), pending since July 2022.

MahaRail has already completed preliminary works, including a significant extent of land acquisition. Proposals for forest, government, defence, and FCI land transfers are already at an advanced stage of approval. Geotechnical work and ROW marking have been completed, and the design work is nearly finished.

MahaRail conducted research and development, created designs, and conceptualised this pilot project (Pune-Nashik high-speed Rail line project). These designs could be patented, allowing MahaRail to earn royalties from their replication in other national and international projects.

MahaRail has robust in-house capabilities, enabling it to effectively manage complex rail projects from conception to completion. Upon receiving CCEA approval, MahaRail will expedite the implementation of this long-awaited project, addressing a demand that has persisted for the past 25 years and ensuring timely completion for the benefit of the people of Maharashtra.

This high-speed Rail line project is not just a step forward for the state, but it also marks a milestone for the entire nation, reinforcing India's position as a leader in cost-effective high-speed rail technology.

Gauge Conversion Of The Itawari-Nagbhid Rail Line

Transforming Rail network for efficient connectivity under Uni-Gauge Policy for the development of Vidharbha

The corporation embarked on its journey of enhancing the Rail Infrastructure across the state by starting the implementation of gauge conversion work between Nagpur (Itwari) and Nagbhid (116 kms). The main aim of this project is to expedite the coal movement from the coal mines and reduce congestion on the existing route.

MahaRail has started the work of gauge conversion in the Nagpur region. Out of the 628 kms Narrow-Gauge network under Nagpur division of Southeast Central Railway, only Nagpur (Itwari)-Nagbhid was pending conversion. Therefore, this project aims to convert the existing Narrow Gauge to Broad Gauge and to reduce the congestion on existing routes.

Umred Division in Nagpur is a heritage conservation area known for its sanctuaries, natural forest resources, and historical significance linked to coal mining. Sites such as Tadoba, Gosikhurd and Ambhora Shrine surround this area, whereas soybeans, chillies, and cotton are considered major crops. Therefore, various industries based on tourism, large-scale industries, small-scale industries, and agriculture will get a boost and revival due to the Broad-Gauge Railway service.

Nagpur (Itwari) and Nagbhid were linked directly by a Narrow-Gauge Railway network via Umred and by two Broad-Gauge Railway networks via Wardha and Gondia. However, Nagpur-Wardha and Nagpur-Gondia routes are saturated and overutilised. This project is highly viable and is in demand because the coal rake movement time will be reduced from 22 hours to 4 hours. It will be of immense benefit to MAHAGENCO in the procurement of coal from Western Coalfields Limited (WCL) mines located in Umred and Chandrapur districts near Nagpur, which is close to various thermal power plants in the Nagpur region. The major plants that will benefit are Koradi Thermal Power Station (KTPS), Khaperkheda Thermal Power Station (KPKD), Adani Power Maharashtra Ltd, Tirora (APML, Tirora), and Mauda Super Thermal Power Station (or NTPC Mauda). The converted Broad-Gauge Line will be in operation for goods as well as passenger trains with a lot of environmental and financial benefits.

The Indian Railways has adopted the Uni-gauge Policy i.e., to operate railways on only Broad-Gauge Lines across the country. The Gauge Conversion will improve speed and efficiency by eliminating manual failure. MahaRail has adopted the latest Track Laying Technology which is fully mechanised. This track linking is being done by the New Track Construction (NTC) machine. This helps for speedy construction and

provides quality. The corporation is committed to completing this project in the Financial Year 2024-25. The Final Location Survey (FLS) was completed and MRIDC started the work for Gauge Conversion in March 2022.

The Ministry of Railways (MOR), along with the Government of Maharashtra (GOM), assigned the gauge conversion project to MahaRail. The estimated cost was Rs 1,400 crore, which was accepted by the MOR. The GOM has also approved Rs 280 crores as the state's contribution towards this project.

Significance and importance of this project:

This is the fastest progressing Gauge Conversion project in the country. The main aim of this project is to convert the existing Narrow Gauge to Broad Gauge to speed up the coal movement from the coal mines of WCL Chandrapur and Umred area to KTPS (Koradi Thermal Power Station), APML (Adani Power Maharashtra Ltd.) Tirora and NTPC (National Thermal Power Corporation) Mouda/Chacher and to reduce the congestion on existing routes.

Land acquisition

The in-house survey team carries out geotechnical surveys, drone surveys, joint measurement surveys for Rail Line projects. As land acquisition is a critical activity in implementing the infrastructure projects, MahaRail has designed Rail Line alignment within the available ROW of railways to eliminate land acquisition. With this exercise, MahaRail saves a lot of time and cost towards execution of its projects.

Construction of station building, platforms, terminal buildings

MahaRail has designed state-of-the-art station buildings and terminal stations along the Nagpur (Itwari) - Nagbhid Railway Line Project. These station buildings have a provision of corporate offices, extensive parking lots, restrooms, Railway Quarters and ramps for specially-abled people. All station buildings are equipped with sustainable power supply to meet the power requirements.

Signalling/telecommunications network and Railway electrification

For safe and efficient train operation, modern signalling systems such as Multi Aspect Colour Light Signalling (MACLS), Panel Interlocking (PI), Route Relay Interlocking (RRI), Electric Interlocking (EI), Automatic Block Signalling, Block Proving by Axle Counter, etc. are being implemented across Rail Line Projects.

The corporation indulges in complete start-to-end implementation of the project such as pre-construction activities, shifting of underground utilities, and other activities including liaising with various government bodies.



Rajesh Kumar Jaiswal
Managing Director of MahaRail

Maharashtra Rail Infrastructure Development Corporation (MRIDC) was established with the aim of boosting railway infrastructure in Maharashtra. Historically, when a PSU is formed through a joint venture or Special Purpose Vehicle (SPV), specific projects are assigned to an organisation before the managing director is appointed. However, when I took charge at MahaRail, there were no such projects assigned.

As the managing director of this young organisation, without having any set-up in place before I took charge, I am proud that I have been able to establish a workforce of 500 employees across Maharashtra and worked on several policies that have helped the organisation maintain processes that enable work to be executed seamlessly. For example, today, all project planning, including DPR preparations, geotechnical work, design and drawing, and contracting, is done in-house at MahaRail, which helps us execute projects at a fast pace. This is why MahaRail has been able to complete and commission 24 ROB's in a short span of 2 to 3 years, which is remarkable when compared to industry standards.

MahaRail is also implementing the reconstruction of British-era bridges in Mumbai. The planning ensures that, for most of these bridges, there is no hindrance to ongoing traffic on the existing bridges while the new bridge is being constructed, providing great relief to Mumbaiers from traffic congestion during construction. MahaRail has installed remote-controlled architectural LED lighting on all commissioned ROB's across the state. Additionally, on the Cable-Stayed Bridges in Mumbai, state-of-the-art theme LED lighting is being provided.

MahaRail has conceptualised and prepared a Detailed Project Report (DPR) for the Pune-Nashik High-Speed Rail Line project on Broad Gauge (the existing gauge system of Indian Railways), which is a unique concept and has been planned for the first time in Indian Railways. MahaRail has conducted research and development, created designs, and planned this pilot project with the help of in-house teams as well as high-speed design experts from Europe. This project has been approved by the Government of Maharashtra and appreciated

by the Ministry of Railways, NITI Aayog, and the Ministry of Finance during the Expanded Board meeting of the Ministry of Railways. However, approval from the Cabinet Committee on Economic Affairs (CCEA) is still awaited.

The approved funding pattern for this project is 40 per cent equity and 60 per cent debt. The Government of Maharashtra has approved contributing equity up to 40 per cent, including any cost increases. In other words, this is a fully State Government-funded High-Speed Rail Line project on the Broad Gauge system—the first of its kind in the country.

If this pilot project is approved by CCEA, MahaRail will be able to complete it in three years. This will be an example of 'Make in India' and 'Atmanirbhar Bharat' in the field of running high-speed trains on a Broad-Gauge system with speeds of up to 250 KMPH. The per kilometre cost of this project is one-third of the cost of high-speed projects worldwide. With the start of the Pune-Nashik high-speed project on broad gauge, which is low-cost and will use indigenous technology, many such projects could be implemented across India using the same technology. It would also be highly beneficial for Indian Railways, as it would allow high-speed trains to be integrated with the existing Broad-Gauge system throughout the country.

At present, MahaRail is also executing the Nagpur (Itwari)-Nagbhid Gauge Conversion project using modern technology, such as a New Track Construction machine (NTC), which has accelerated project completion. The speed potential throughout the project has been designed by MahaRail for 160 KMPH. We are also establishing the Gati Shakti Cargo Terminal at Umred for the rapid movement of coal in Maharashtra's mineral-rich Vidharbha region. This project will be completed in the financial year 2024-25.

I would like to express my sincere gratitude to our stakeholders, including the Central and State Governments, the Ministry of Railways, MoRTH, MMRDA, MCGM, KDMC, and other regulatory authorities/agencies, for their unwavering support and trust in our organisation. It is through our collective partnership and collaboration that we can achieve our objectives and commitments.

Inauguration function in Pune on 4th June 2023



Lighting of the Lamp at the Pune event



Inauguration and bhoomi puja ceremony in Pune on 04/06/2023



Speech by Hon. Chief Minister of Maharashtra Shri Eknath Shinde at the Pune event

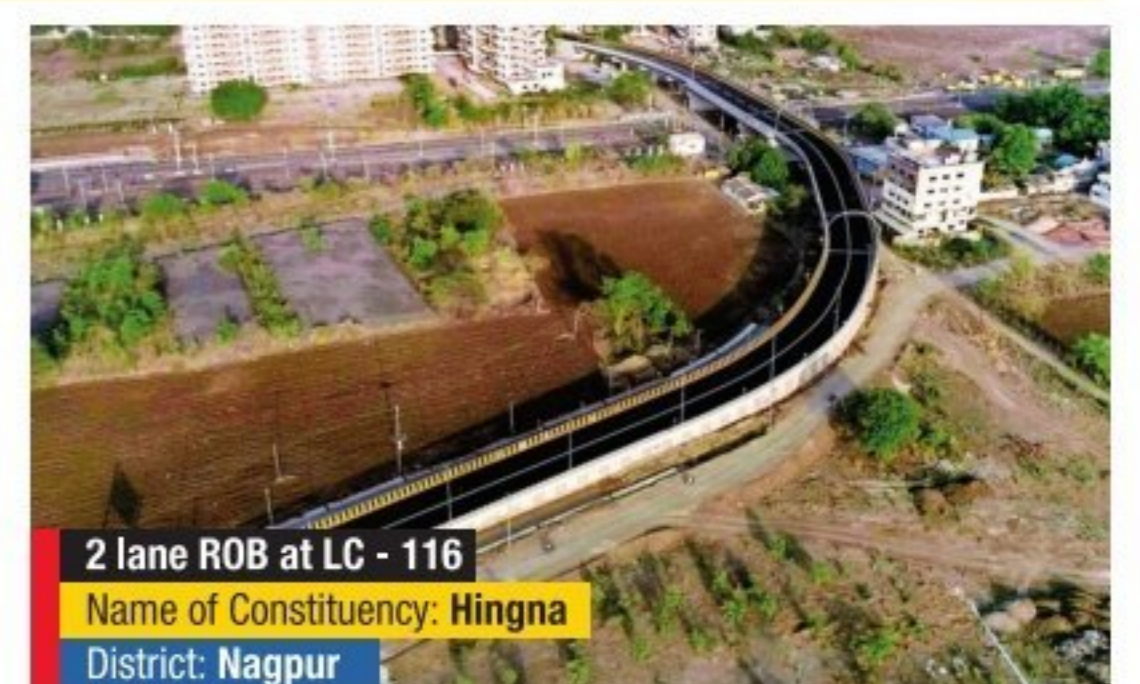
ROBs: THE PATHWAYS TO PROGRESS



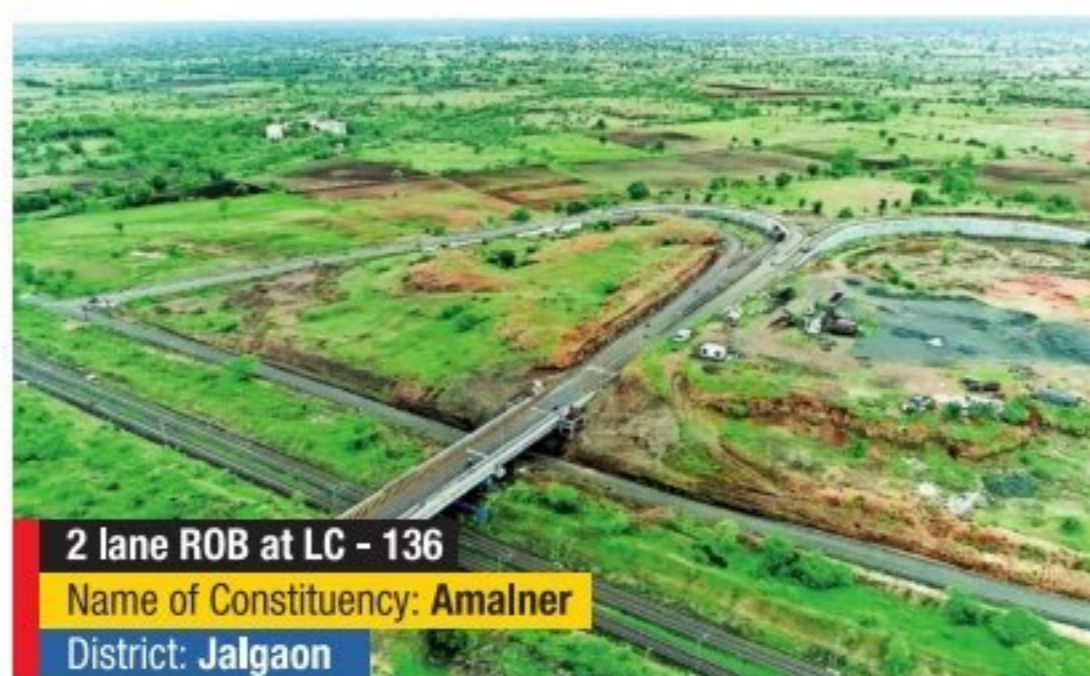
2 lane ROB at LC - 111
Name of Constituency: Hingna
District: Nagpur



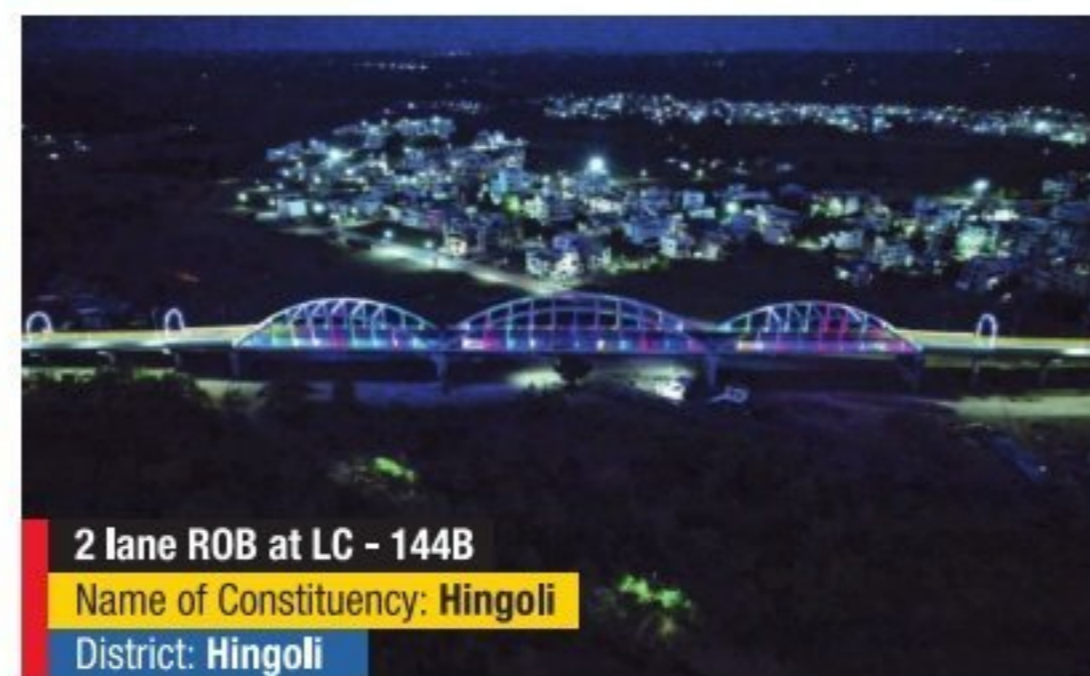
2 lane ROB at LC - 112-A
Name of Constituency: Sindkheda
District: Dhule



2 lane ROB at LC - 116
Name of Constituency: Hingna
District: Nagpur



2 lane ROB at LC - 136
Name of Constituency: Amalner
District: Jalgaon



2 lane ROB at LC - 144B
Name of Constituency: Hingoli
District: Hingoli



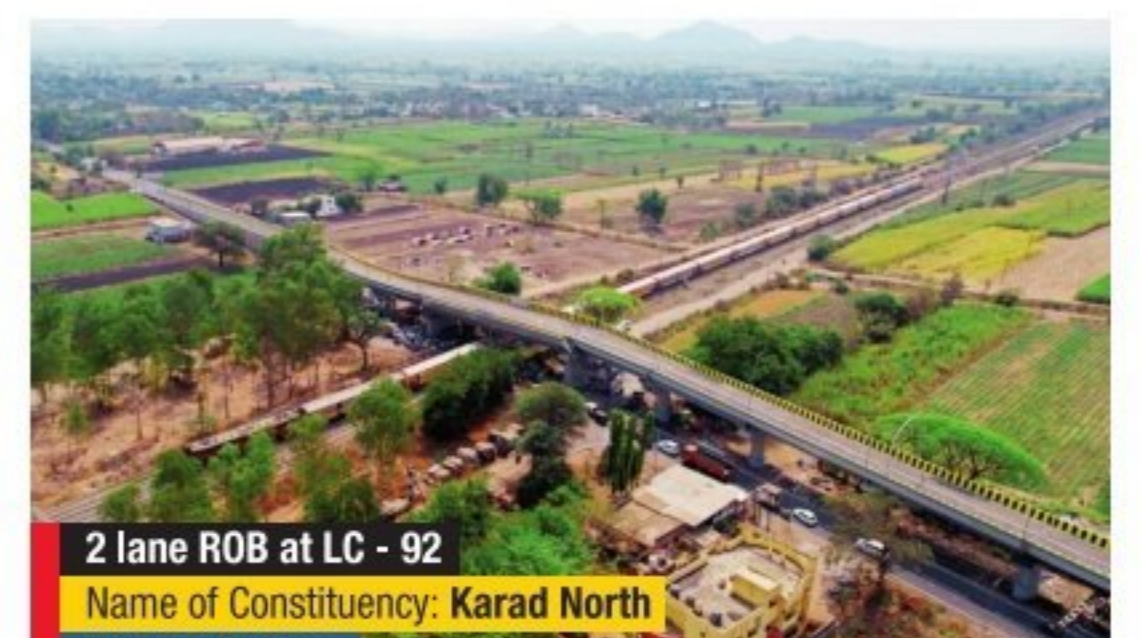
2 lane ROB at LC - 20
Name of Constituency: Hatkanangale
District: Kolhapur



2 lane ROB at LC - 34
Name of Constituency: Umred
District: Nagpur



2 lane ROB at LC - 81
Name of Constituency: Karad North
District: Satara



2 lane ROB at LC - 92
Name of Constituency: Karad North
District: Satara





Gati Shakti Terminal at Umred



Gati Shakti Terminal at Umred

Gati Shakti Terminal is being developed by MahaRail for transporting coal from Umred coal mines to Koradi and Adani power plants. This terminal will ensure the smooth supply of coal to MAHAGENCO, Koradi, Adani plant at Kachewadi, and NTPC.

- About 4 to 5 rakes of coal can be loaded daily from Gati Shakti Terminal.
- This terminal will be operational by November 2024. The coal rake movement will be reduced to 4 hours, which is 22 hours presently.
- The WCL will benefit by utilising their proposed enhanced mining capacity thus helping Southeast Central Railway to earn additional revenue.



ITWARI STATION BUILDING (SOUTH ENTRY) CONSTRUCTION BY MAHARAIL

As a part of the Nagpur-Itwari-Nagbhid Gauge Conversion Project, a new station building is being constructed at Itwari. This development is integral to transforming the Itwari Station into a modern multi-modal hub. MahaRail has developed a south entry along with all passenger amenities, capable of receiving and dispatching all mail, express, and passenger trains. A total of five stations will be covered from Itwari to Umred (including Dighori, Kuhi, and Bamhani of 52 kms).



Wildlife Mitigation Structure

WILDLIFE MITIGATION STRUCTURES

Gauge Conversion of Itwari - Nagbhid Rail Line project passes through eco-sensitive zones and corridors of Umred Karhandla and Paoni Wildlife Sanctuary. The Wildlife Institute of India has suggested mitigations for the conservation of wildlife in this region. The region between Itwari and Nagbhid is surrounded by wildlife sanctuaries such as Pench, Bor, Navegaon Nagzia in the north of Umred and Umred - Karhandla and Paoni, along with Tadoba - Andhari to the south of Umred.

Several animals such as tigers, gaur, and various species of antelopes are found in these sanctuaries. Tigers have their corridor as they travel from Pench to Tadoba through Umred Karhandla and Paoni Wildlife Sanctuary. MahaRail is implementing mitigation structures allowing free movement of railway traffic between Umred to Nagbhid without causing hindrance to the habitat of these animals. There are viaducts, bridges, and RCC boxes at various segments between Umred to Nagbhid for the free movement of wildlife.

KEY ASPECTS OF THE STATION BUILDING UNDER CONSTRUCTION

Modern Design and Facilities

The new station building is being designed with a focus on passenger convenience and modern amenities. It will feature spacious waiting areas, advanced ticketing systems, and improved sanitation facilities. The design incorporates elements that ensure ease of movement and accessibility for all passengers, including those with disabilities.

Sustainable Construction

The construction of the station building emphasises sustainability, with the incorporation of green building practices. This includes energy-efficient lighting, rain-water harvesting systems, and the use of eco-friendly materials. The station is being developed to minimise its environmental footprint while providing a comfortable and efficient environment for travellers.

Passenger Safety and Security

The building will be equipped with state-of-the-art safety and security systems, including surveillance cameras, fire safety measures, and clear signage. These enhancements aim to ensure a secure and safe environment for all users of the station.

Integration with Multimodal Transport

The station building is being constructed to seamlessly integrate with various modes of transportation. This will include easy access to road transport, potential future metro services, and smooth transitions for passengers transferring between different transportation modes.

Commercial and Retail Spaces

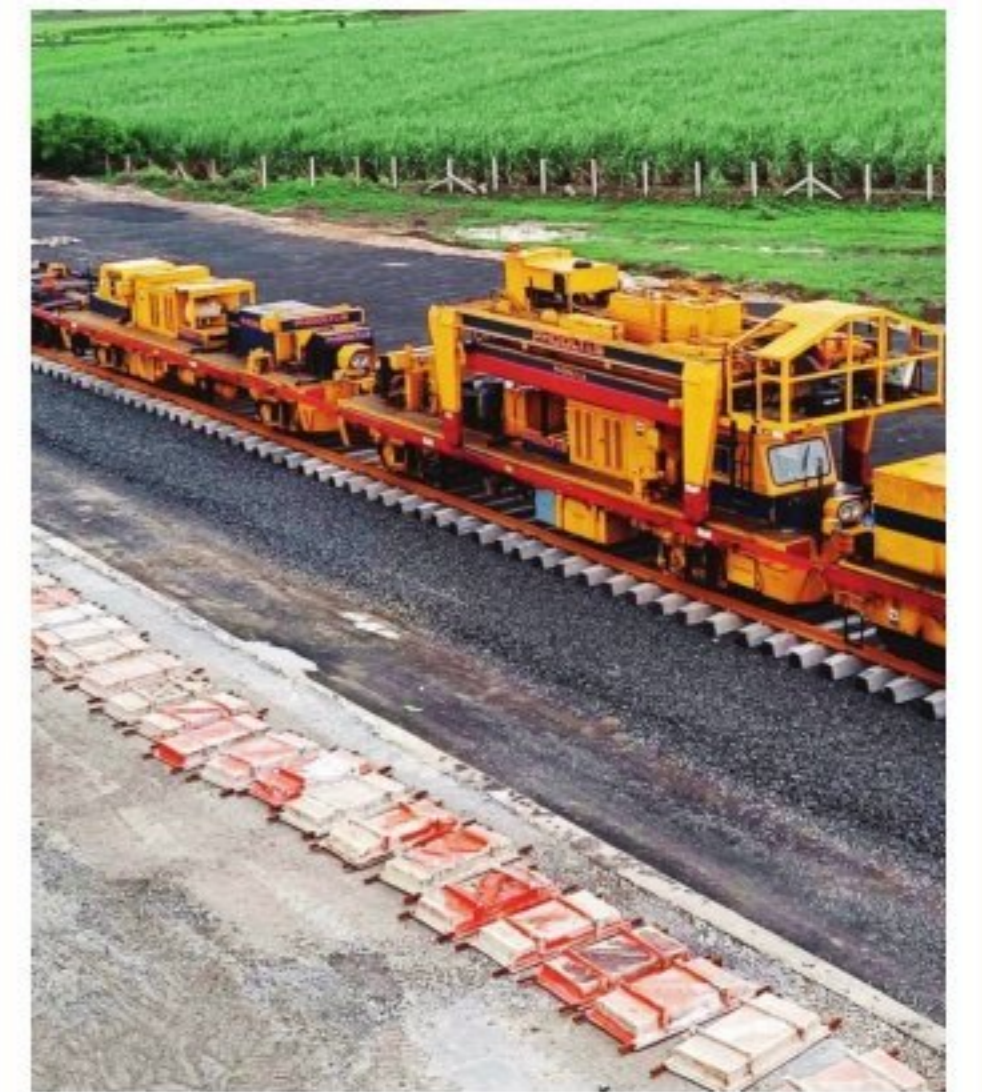
The new station building will also house commercial and retail spaces, offering passengers a variety of shopping and dining options. This is part of the broader effort to make the station a vibrant and bustling hub, contributing to the local economy.

Enhanced Connectivity

The construction is also focused on improving connectivity within the station and its surroundings. The new infrastructure will include pedestrian pathways, overbridges, and underpasses, ensuring that passengers can move easily and safely around the station premises.

The construction of the new Itwari station building by MahaRail is a key element of the Broad-Gauge Conversion project, aimed at enhancing the overall functionality, aesthetics, and efficiency of the station. This development is set to play a pivotal role in the economic and social upliftment of the region by providing world-class transportation infrastructure.

MahaRail implementing mechanised track construction by using New Track Construction (NTC) Machine



To complete the Nagpur (Itwari) - Nagbhid Gauge Conversion work by FY 2024-25, MRIDC deployed state-of-the-art NTC machines for track-laying works. MahaRail is the only corporation in Maharashtra to utilise these advanced machines for the process. With the saving of manpower and time, the work of the mechanised track line has picked up speed in the last few months.

Significance

- The NTC machine installs new tracks on a prepared roadbed through continuous operation, allowing for the mechanised laying of new sleepers and rails within the track.
- This machine is capable of laying 1.5 kilometres of track per day, significantly enhancing productivity, safety, efficiency, and quality.
- It is versatile and can be used with concrete, pre-plated wood, or steel ties, and offers an efficient and effective means of laying new tracks.
- The NTC machine brings substantial ease and efficiency to track construction by integrating logistical arrangements for mechanised handling, movement, and transportation of heavy track components.

The inauguration ceremony in Nagpur on 17th December 2023 to unveil 9 ROB's



PAVING THE ROAD TO GROWTH WITH ROB'S

