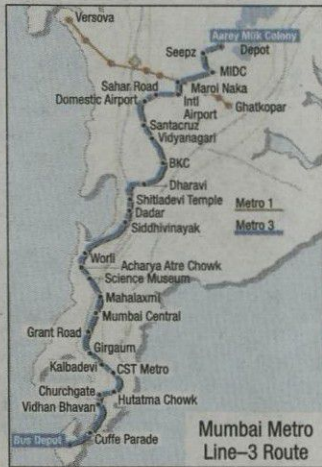


Tunnel Boring Machine

# The Biggest Infra Project Gathers Steam

Some December 2021 and Mumbaikars in the Financial Capital of the country are set to witness a new dawn - a dawn where they would be free from the daily hassles of commuting. It would see the flagging off the modern transport of the 21st century - Mumbai Metro Line - 3 (MML - 3), the 33.5Km. long corridor running along Colaba-Bandra-SEEPZ.

One of the unique features of the mass rapid transit system is that the entire length of the corridor will be underground. The new corridor will not only decongest the traffic situation in Greater Mumbai, but also will offer a totally comfortable, reliable and pleasurable trip hitherto not experienced by its harassed citizens.



It could be said that the city has not witnessed such a development so far in its long heritage-rich history. Being fully underground, the corridor did come across administrative, geological, technical and construction-related challenges as well as social and logistics challenges for Mumbai Metro Rail Corporation Limited (MMRC), the nodal agency responsible for the implementation of MML-3 project. It has been constituted as a joint

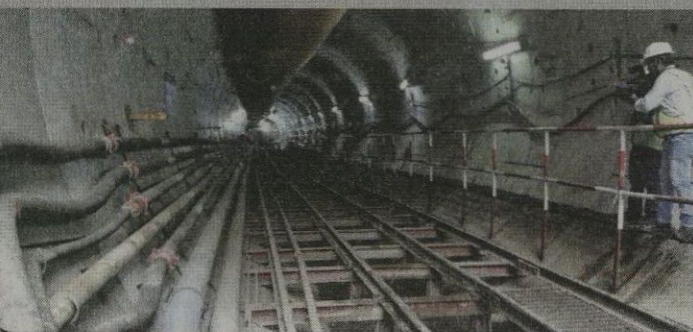
venture of the Government of India and the Government of Maharashtra on 50:50 sharing basis.

The high water table, geo strata comprising hard rock, congested areas with old and heritage structures, proximity of residential buildings, maze of underground utilities and traffic diversions - all posed

## A MILESTONE: Completes 5,100 metres of tunnel

In the first week of July, MMRC has successfully completed 5.1 kms of tunnel work of the total 33.5 kms. MMRC is confident and is literally burning the mid-night oil in executing the project to perfection. The tunnel lining work is carried out by lowering a Tunnel Boring Machine (TBM) into a shaft at a depth of 25-30m. With the project picking up pace, MMRC targets to bore on an average 700-800 metres per week, but progress will depend on geological conditions at different locations. Going forward, it is planning to deploy more TBMs to pace up the work of tunnelling for the mega project.

"We are positive about completing the project by December 2021", said Ashwini Bhide, Managing Director, MMRC



*'We make conscious efforts to engage with people for sharing information on the project'*

Mumbai Metro Line 3 is a part of Mumbai's most ambitious infrastructure development plan. Although city's importance as a financial capital of the country is increasing, the public transport network has not improved to match the pace of the city's growth, not only in terms of population growth but also growth in economic activity and business. Mumbai Metro Line 3, the 33.5 km long corridor is one of the key project to improve city's public transport scenario, thereby connecting the unconnected areas.

- Mumbai Metro Line 3 will provide reliable, sustainable and energy efficient rail network, along with safety and comfortability for commuters and will also lead to 50% reduction in travel time from Cuffe Parade to International Airport Terminal 2
- Once operational, it is expected to reduce 15% of the load from the suburban railways system by carrying around 17 lakhs commuters per day
- On the environmental front, the project is expected to reduce 4.5 lakhs vehicles on road per day, thereby saving approx. 2.5 lakhs litres of fuel per day i.e. about Rs. 550 crores per year The 33.5 km long corridor will connect six business districts which are currently unconnected from Suburban Railways. Line III will also connect 30 educational institutes, 30 recreational facilities, the domestic as well as international airport terminals
- It will also facilitate change over to the existing suburban trains at Churchgate, CSTM, Mumbai Central and Mahalakshmi
- This corridor expected to reduce the travel time 50% once operational aims to provide safe and comfortable travel to commuters
- With a special provision of 'Make in India' in this project it is going to boost economic development and employment generation.



ASHWINI BHIDE, IAS  
Managing Director

### What are the aspects that set it apart from the other metro projects in Mumbai?

Firstly the 33.5 kilometres long underground corridor itself distinguishes Metro Line 3 from the others. Secondly, this line will be catering to the congested parts of the city and the ridership we expect makes it different from other Metros. Thirdly, the line will provide hassle free connectivity to the unconnected areas by connecting six CBDs, including Fort, Cuffe Parade and BKC. It will also give access to almost 30-odd educational institutions, major religious and cultural institutions and hospitals. The project is a game-changer and will be instrumental in changing the Mumbai's current public transport scenario. Moreover 'The War Room' which is operational at Mantralaya under the leadership of Hon. Chief Minister Devendra Fadnavis has helped the project to get on fast track by expediting the interdepartmental

clearances which otherwise would have taken much longer time.

### What are the key challenges faced so far and how are you dealing with them?

The city is witnessing such a big scale infrastructure intervention for the first time in recent history. Being the first fully underground Metro corridor in the country, it poses number of administrative, geological, technical, civil construction and logistics challenges which a project of this, magnitude and stature is bound to face, but those challenges have been dealt with in an appropriate manner.





### How would you describe your approach towards managing such a crucial project and driving its imple-

mentation with the urgency required?

There are many groups in Mumbai today that are working on a variety of infrastructure projects. MMRC believes in a relationship-driven approach.

We are the most vocal and transparent organisation in terms of sharing information with the public. We are on social media, we have a very active and busy website, and we make conscious efforts to engage with people. We know that the project is extremely challenging and that it cannot be completed if we don't work in coordination.

A lot of expertise is gained in executing this project, especially through building the first fully underground metro corridor in India. The skill sets and knowledge that will give us means that we might possibly have a future on the consultancy side as well.

Environmental Benefits				
	DESCRIPTION	Year 2021	Year 2031	Year 2041
	Reduction in Vehicle Trips / Day	4,56,771	5,54,556	6,65,468
	Reduction in Fuel Consumptions -Petrol & Diesel (in l./day)	2,43,390	2,95,495	3,54,593
	Avg. Daily Money Savings due to Reduction in no. of Vehicle Trips (Rs. lakhs)	158.14	191.99	230.39
	Estimated Reduction In Co2 Emission (Tonnes/year) on an average from 2021 due to CDM Project	2,61,968		

5800 nos. of Trees to be Cut

1.26 Lakhs kg Increase in CO2

↑

Net Reduction in Co2 - 97.75 Lakhs kg

↓

99 Lakhs kg/Year Reduction in CO2

6.6 Lakhs Reduction in vehicle trips

**Estimated Reduction of 2.62 Lakhs tonnes/year of CO2 on an average due to Clean Development Mechanism project**

their own unique problems. Rehabilitation of more than 2,000 slum structures was no less a challenge than ensuring safety of old buildings and structures.

It should be said to the credit of MMRC that the team under MMRC chief Ashwini Bhide has

successfully tackled the hurdles and is executing the project without much delay throughout the length and breadth of the underground corridor by engaging with people in the most constructive and transparent way.

With full-scale operations of

MML-3, the city would witness significant reduction in traffic volumes and the local transit facility would get a boost.

The MML-3 would bring multiple benefits such as comfortable air conditioned travel for more than 16 lakh commuters daily, reduction in

travel time, reduction in air & noise pollution, improving safety and security of the citizens etc.

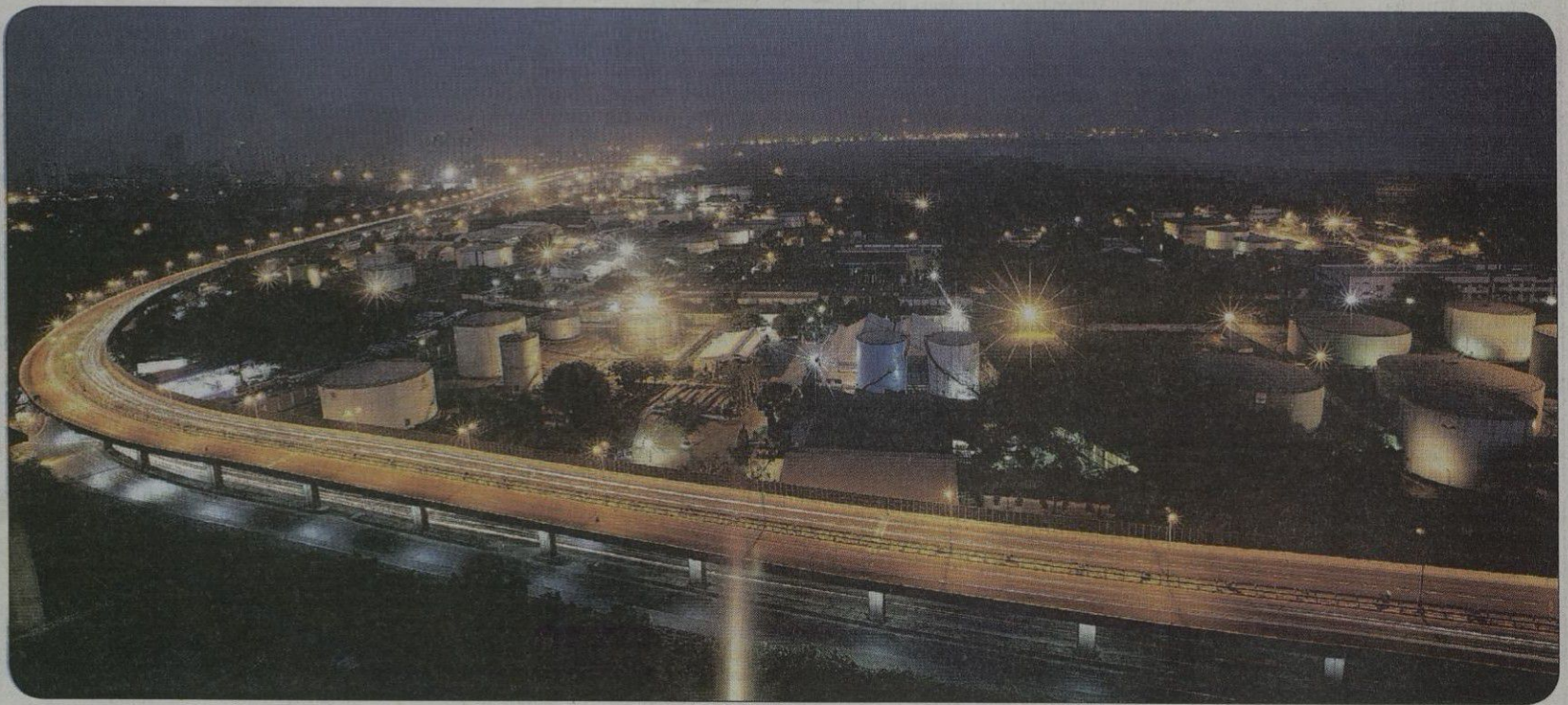
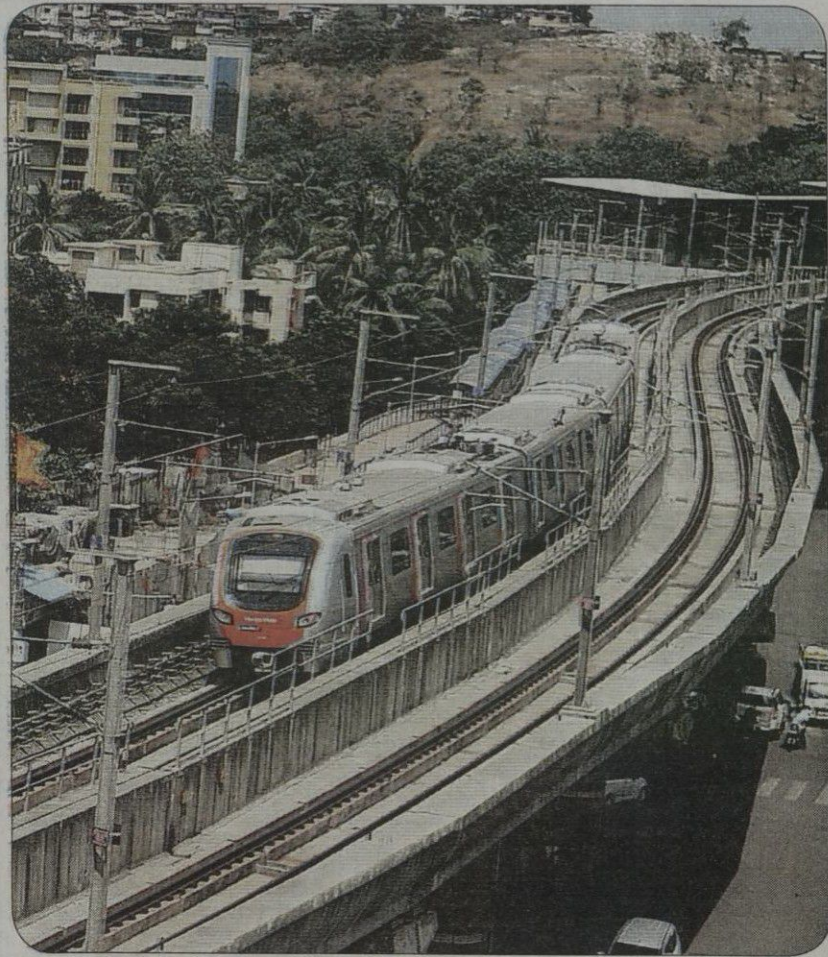
The fully underground corridor will have 27 stations out of which 26 will be underground and 1 at grade connecting six business districts, 30 educational

institutes, 30 recreational facilities and domestic as well as international airport terminals. The network will have five interchange points for suburban railway and one each for Monorail and 'Versova-Andheri-Ghatkopar' Metro-1.



IAS officer Ashwini Bhide has shattered many a glass ceiling with her intellect and confidence

# Turning obstacles into opportunities



Neil Pate  
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From building indigenous water conservancy check dams (Ashwini Bundharas) in Nagpur to putting people and politicians on the right track for the Mumbai Metro project, IAS officer Ashwini Bhide is a woman who has shattered many a glass ceiling with her intellect and confidence.

So, when the government thought of making a big infrastructure push to upgrade Mumbai's overburdened rail and road services, the gargantuan task was handed to none other than Bhide — a woman known to turn odds into opportunities!

The Mumbai Metro-3 project, a 33.5 km-long corridor, is India's longest and city's first fully underground corridor. It runs from Colaba to SEEPZ connecting many parts of the city. Once commissioned in 2021, it is expected to change the way Mumbaiers travel. The project has faced several challenges right from land requirement, environmental clearances, resettlement of project-affected people, and the latest noise pollution battle in the court. "I firmly believe that you will always find a solution if you engage with people and have a genuine dialogue with them. People want good infrastructure but some don't want the initial inconvenience caused by it. How can that be possible?" asks Bhide, who is now managing director of the MMRC.

Once Metro-3 is operational, more than six lakh vehicles daily will be off Mumbai roads. Apart from being an eco-friendly mass transport system, it will

also help save over 200 lakh litre of fuel per day. It may be prudent to mention here that globally, the public transport system density is six people per square metre; eight persons is considered to be dense. Now, cut to Mumbai where we have 14-17 people per square metre. This is the main reason why people are forced to travel in subhuman condition on trains and buses. Many end up dying. "Unless you have an alternative system, people have no choice. The reason why we need to have an efficient public transport system is good," says Bhide. When asked if it is feasible to make an underground Metro in Mumbai at such a huge expense, she promptly replies, "Yes", adding, "No project can start without a feasibility report."

Some people have raised concerns of flooding in the underground Metro tunnel, given the fact that Mumbai is on the coast and linear. Bhide, however, wants to put these doubts to rest and says, "All big cities in the world — London, Paris, Singapore have long underground metro tunnels. Tunneling is a 150-year old technology. In fact, London has almost 400-km long tunnels. I don't think there will be any flooding." The city's Metro network is planned in such a way that it actually enhances the utility of the existing suburban rail system, she claims, adding it will offer the last mile connectivity to any passenger to any corner of Mumbai.

## Connecting With People

As she sifts through a couple of files on



her table and sips on her green tea in her BKC office, Bhide shares that a 'humane approach' always helps when dealing with people, be it politicians, bureaucrats, protesters or colleagues. Needless to say, what keeps her going is the passion and the determination to provide good infrastructure to the financial capital of the country. "I am an Arts student. My first stint with urban infrastructure was when I was appointed at the Mumbai Metropolitan Regional Development Authority (MMRDA). I was looking at files when I had no engineering background. However, I did not hesitate to learn on the field. In fact, I still remember asking an engineer about a particular technical term they were using that I didn't understand. Through the years, I learnt that for any infra project, one needs excellent managerial skills and good co-ordination," she says.

Hailing from Sangli, the 1995 IAS topper always wanted to do something for the society — even as a rebellious 13-year-old. So while the rest of her classmates decided to pursue careers in engineering and medicine, she decided to carve a niche for herself in the male-dominated IAS. Small wonder then that in her illustrious two-decade career, Bhide has worked as chief executive officer in Zilla Parishad, additional divisional commissioner, joint secretary to Governor of Maharashtra, additional Metropolitan Commissioner in MMRDA and secretary in School Education and Sports. "I consider myself as a 'generalist' and 'foot soldier'. My stints in Ichalkarnji, Kolhapur, Sindhudurg and Nagpur helped me a lot. It gave me an insight into the issues that rural India faces," says Bhide, who has been in service for the past 23 years.

## Formative Years

Recollecting those stints, Bhide shares that Sindhudurg is a very disciplined and literate district. "People never shouted in the meetings there. They always let the other person complete his/her views. When I was transferred to Nagpur as the CEO of Zilla Parishad, the challenge before me was to look after the rural infrastructure development, women empowerment, education, primary health as well as animal health. There were initial hiccups, but I managed to complete the work there and bring a positive change," she says.

Till a few years ago, Bhide thought her job as the CEO was the most challenging one, but not until she was given the uphill task of implementing and executing the Metro-3 project. "Some times, people (politicians and public) can be difficult. They protest and take out morchas without even studying and understanding the real issue. But, if you know how to handle them, make them understand your point of view and the importance of a particular project in public interest, then half the battle is won," Bhide explains.

Not someone who will rest on her past laurels, Bhide was also the driving force behind the smooth execution of several infrastructure projects in the city — the 16.8-km Eastern Freeway, the Mumbai monorail and the city's first Metro from Versova to Ghatkopar.

Earlier, there was no direct east and west connectivity in Mumbai. Then, it

would take 70 minutes to travel from Ghatkopar to Versova, now, with the Metro, it has reduced to a mere 20 minutes. "People have stopped using their vehicles for daily commute and started using the Metro. It also eased the traffic congestion," she says.

## Against All Odds

Citing the challenges faced during the construction of the Eastern Freeway, she says today it has changed the face of city completely in terms of connectivity and seamless travel. Her contribution towards the resettlement and rehabilitation of more than 5,000 families affected by various MMRDA projects is considered a case study. "The entire stretch was dotted with encroachment, old warehouses and religious structures, etc. After going through the project plan and legal documents, I was convinced that it was doable only if we engaged with the local people and took them into confidence," she says.

When you give her credit for changing the 'impossible into possible', a modest Bhide smiles and says, "I think when we work in the government, we work to make India a better country, not to earn credit for the work we do."

For someone, who has quickly grasped the political power equations in the state and learnt how to steer clear of controversies and instead focus on the job in hand, Bhide has become the invincible go-to woman today in Maharashtra. One can see her at odd hours on the Metro-3 sites, interacting with the locals and inspecting the progress with her team members.

When asked if there was political pressure or politicians meddling in her work, she says politicians and bureaucrats are aware of their rights and limits. "In fact, we are very happy that the current government is taking such keen interest in improving the infrastructure of the city. The CM and his team is giving personal attention to all the infra projects. A team from the CM's office helps us in getting all the issues resolved. He is continuously encouraging us to take the project forward."

"Mine is a 24x7 job. Over the years I have learnt how to strike the right balance between my work and family life. My family has always understood that my job as an IAS officer in a metropolis like Mumbai is very demanding. During the Milan and Dahisar rail-overbridges, most of the work was being done at night. I used to be at the site from 11 pm to 3 am for days," says Bhide, an avid reader with a Master's in Literature.

Her husband, Satish Bhide too was a senior IAS bureaucrat, but he resigned from the services in 2011.

Ask her about the next plum posting and she signs off saying, "We don't have permanent positions in government jobs. So wherever duty calls."

