

# MAHARASHTRA METRO RAIL CORPORATION LIMITED



# COMPREHENSIVE MOBILITY PLAN (CMP) for NAGPUR METROPOLITAN REGION

#### **STAKEHOLDERS CONSULTATION**

27 July 2025



#### **STAKEHOLDERS INVOLVED**



S No.	Name of the Stakeholder
1	Maharashtra Metro Rail Corporation Limited
2	District Administration
3	Police Department
4	Nagpur Municipal Corporation (NMC)
5	Smart City Project, Nagpur Municipal Corporation
6	Nagpur Metropolitan Region Development Authority (NMRDA)
7	Regional Transport Officer, Nagpur
8	Town Planning and Valuation Department, Nagpur

S No.	Name of the Stakeholder
9	National Highways Authority of India (NHAI)
10	Public Works Department (PWD)
11	Maharashtra State Road Development Corporation (MSRDC)
12	Maharashtra State Road Transport Corporation (MSRTC)
13	Central & South East Central Railway
14	Maharashtra Airport Development Company (MADC)
15	Nagpur Improvement Trust (NIT)
16	Zilla Parishad Nagpur



#### PRESENTATION STRUCTURE



**Study Progress** 

**CMP 2018** 

Aims & Objectives

**Study Area Characteristics** 

Scope and Methodology

**Primary Traffic & Travel Survey** 

**Travel Demand Modelling & Forecasting** 

**Transport Infrastructure Proposals** 

**Block Cost Estimates** 

Way Forward



## **STUDY PROGRESS**



SN	Item/Deliverable	Date
1	Final Inception Report	6 <sup>th</sup> May 2024
2	Final Interim Report	24 <sup>th</sup> Dec 2024
3	Presentation to Stakeholders on Interim Report for Suggestions/Recommendations	13 <sup>th</sup> Jan 2025
4	Submission of Draft CMP Report	11 <sup>th</sup> Mar 2025
5	Presentation to Stakeholders on Draft CMP Report for Suggestions/Recommendations	9 <sup>th</sup> May 2025



## **CMP FOR NAGPUR 2018**



SN	Proposal	Current Status
1	High Capacity MRTS Corridors: 7 Corridors	Implemented on 6 Corridors, except Vasudev Nagar to Dattawadi
2	Medium Capacity MRTS Corridors: 5 Corridors	Not Taken Up
3	Bus Augmentation: 2068 buses required by 2021	Presently around 436 buses in operation
4	Bus Terminal and Depot: 9 Locations	Implemented on 5 locations
5	Multi-Modal Hub: 8 locations	Implemented on 5 locations
6	Intelligent Transport System for buses	Implemented
7	Road Network: 12 ring and radials	Implemented
8	Rail Over Bridge across outer ring road	Implemented
9	Footpaths: 664 km	Footpaths present on 347 km
10	Cycle Track: On 9 roads	Implemented on Amravati Road, Rahate Colony, West High Court Road
11	Public Bike Sharing Scheme	Not operational
12	Pedestrian Zones: 4 locations	Not taken up
13	Parking: 5 Locations	Implemented on 3 locations
14	Junction Improvement: 9 locations	Implemented



#### **AIMS & OBJECTIVES**

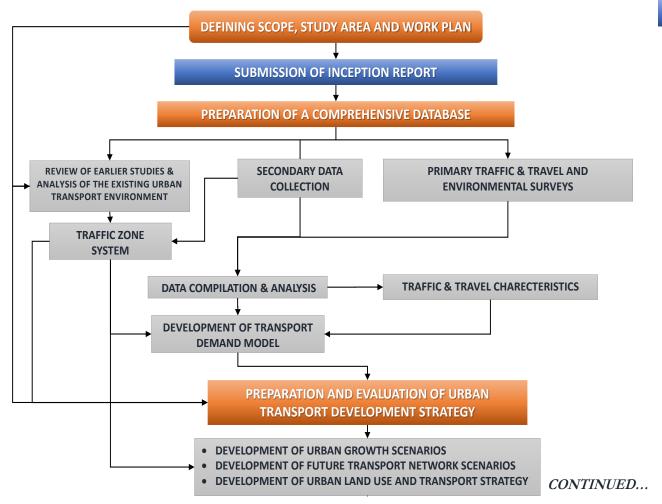


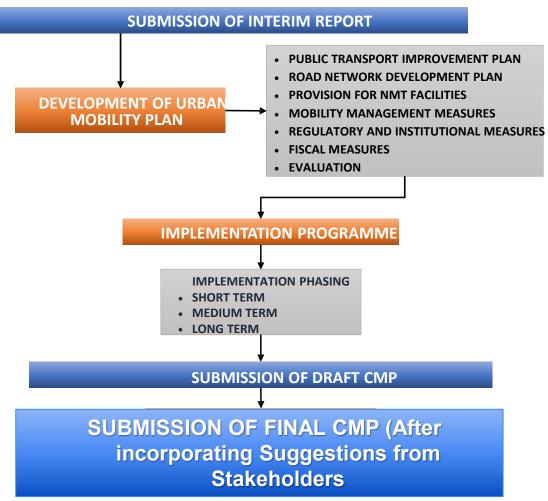
- Study aims to update the Comprehensive Mobility Plan for Nagpur Metropolitan Region as per the MoHUA Guidelines
- To provide, promote and ensure safe, economic & efficient movement of all modes and ensure most appropriate, sustainable and cost-effective implementation program
- To formulate short-term (up to 5 years), medium term (5-10 years) and long term (more than 10 years) proposals for desirable urban development



#### STUDY METHODOLOGY









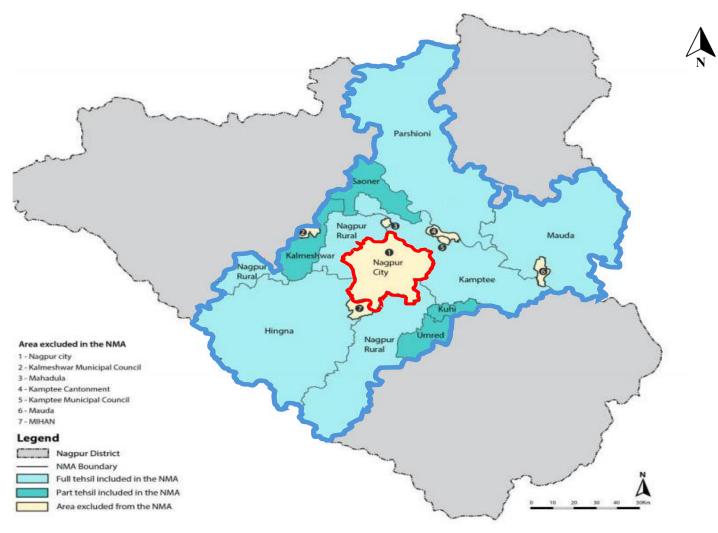
#### **STUDY AREA**



- ➤ Third largest city after Mumbai & Pune, serves as State's winter capital
- ➤ Study Area about 3780 sq. km.
- ➤ Population 2024

NMC - 29.5 Lakh

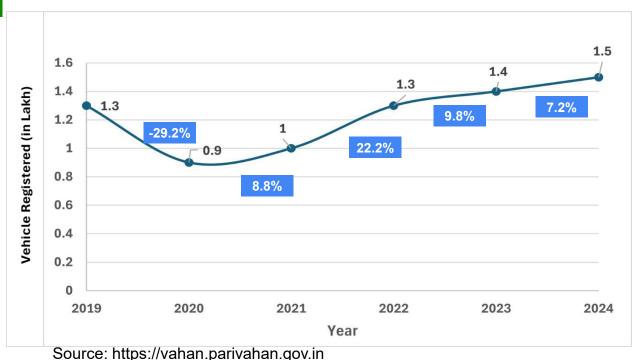
NMA - 43.7 Lakh

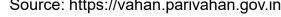




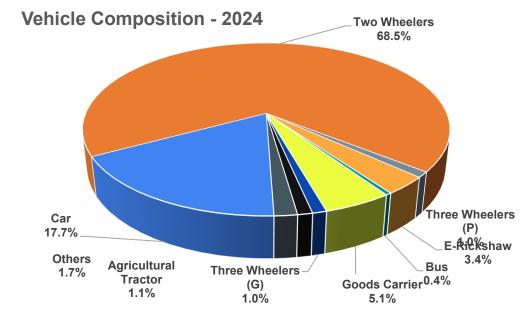
#### **VEHICLE REGISTRATION TREND**

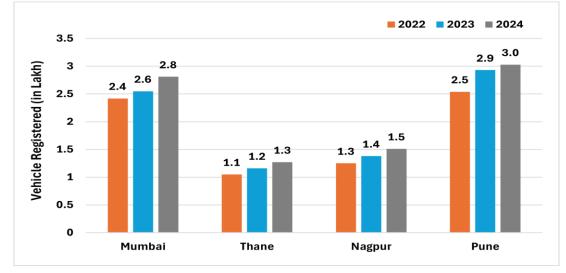






- Average share of registered two wheelers is highest at about 68.5% in 2024.
- 17.7% of the registered vehicles in Nagpur are cars.
- Share of E-Rickshaw increased from 0.6% in 2019 to 3.4% in 2024. However, share of Auto Rickshaw decreased from 1.6% in 2019 to 1.0% in 2024.
- Out of total, about 11% are electric vehicles.



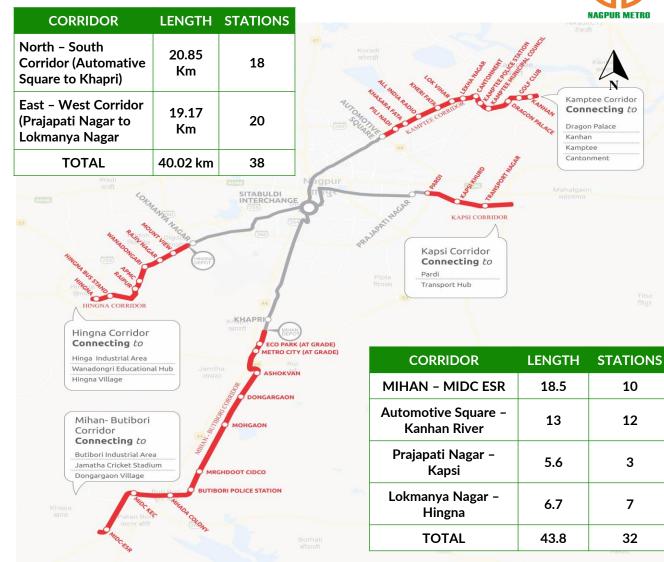




#### **EXISTING PT & IPT SYSTEM**

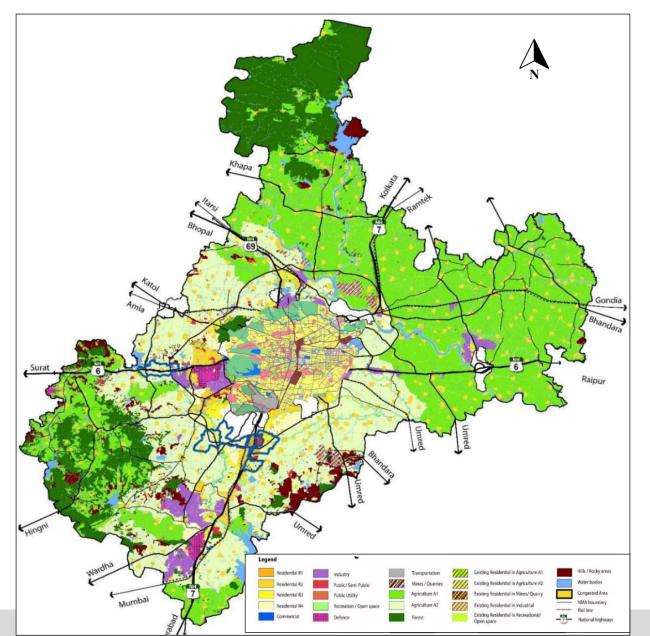
HET HETT

- ➤ Metro: Maha Metro operates MRTS with 40.02 Km network with 38 stations and 2 Depots.
- City Bus Services: Nagpur Municipal Corporation operates about 432 diesel/ CNG buses and 230 electric buses throughout the city. Out of total 662 Buses about 436 Buses are in operation. About 400 electric buses are expected to add in the fleet soon.
- ▶ IPT: Many shared autos operating from prime locations such as Nagpur Railway Station, Medical Chowk, Ajni Railway Station, Ganesh Peth, Sitabuldi, Lokmanya Nagar, Cotton Market etc.



## PROPOSED LANDUSE FOR NAGPUR METROPOLITAN AREA





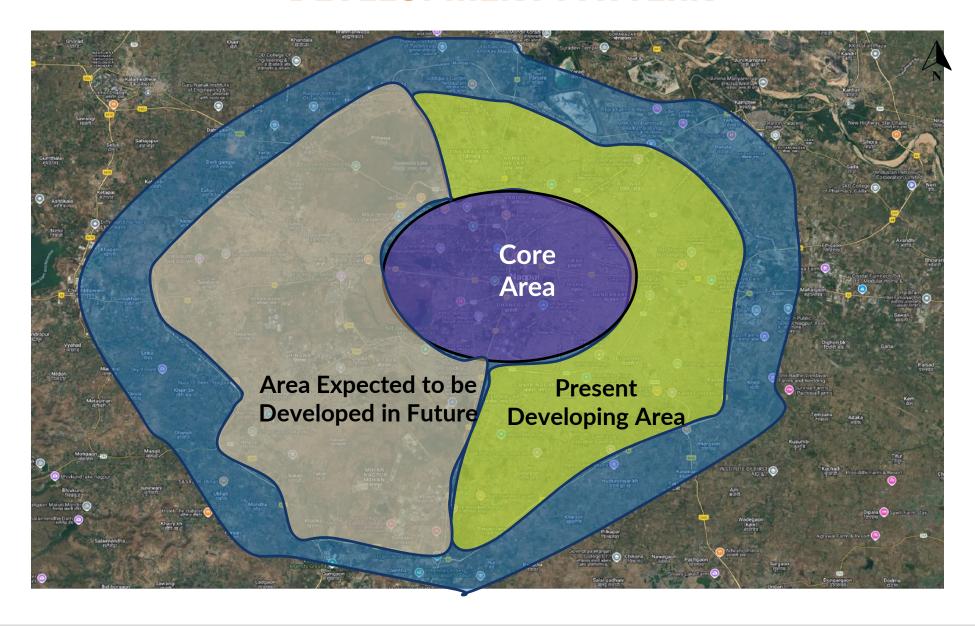
#### Proposed Landuse for Nagpur City, 2021

SN	Landuca	% of To	tal Area
SIN	Land use	2021	2031
1	Residential	30.8	32.2
2	Commercial	2.3	3.2
3	Industrial	2.3	3.7
4	Public Purpose	10.6	10.6
5	Public Utility	0.7	0.7
6	Roads	8.1	8.3
7	Railways	4	4.1
8	Airport	4.6	4.6
9	Garden	5.8	6
	Total	69.1	73.4
10	Agriculture Land	26.5	22.3
11	Water Bodies & Nallahs	2.1	2.1
12	Drainage & Sewage Disposal	0.6	0.6
13	Cattle Stable & Dairy Farm	1	1
14	Compost Depot	0.6	0.6
	Total	30.9	26.6



#### **DEVELOPMENT PATTERN**









#### **MAJOR TRAFFIC ISSUES**



Vendors on Carriageway Near Sitabuldi Chowk



Blocked Footpath due to hoardings near Zero Mile Junction



Lack of Pedestrian Facilities near Sitabuldi Market



On street parking near Gokulpeth Chowk



Unorganised Autorickshaw Stand Near Jhansi Rani Chowk



Stray Cattle on Roads at Dharampeth



## **PRIMARY TRAFFIC SURVEYS**



SN	Surveys	Quantity	Guidelines
1	Road Network Inventory Survey	650 km	IRC:86-2018, IRC:73-2023,
2	Speed & Delay Surveys	650 km	IRC SP 19- 2001
3	Classified Traffic Volume Counts, Occupancy Surveys at Mid- Blocks, Screen Lines and Junctions	26 Mid-blocks/Screen lines 21 Junctions	IRC:108-2015,
4	Classified Traffic Volume Count (CVC), Occupancy and Origin Destination (OD) Survey at Outer Cordon Locations	10 Outer Cordon Locations	IRC:102-2015,
5	Bus/Rail/Airport Terminal Passenger boarding + Alighting and OD Surveys	3 Bus Terminal 4 Rail Terminal	
6	Goods Terminal Surveys	1 Truck terminal	MoHUA Guidelines 2017
7	Bus Stops/Auto Stand/IPT Stop/ Metro Station (Boarding & Alighting) along with OD Survey	30 Locations	
8	Pedestrian Surveys (along & across)	15 Locations	MoHUA Guidelines 2017 IRC:103-2022
9	Parking Surveys	10 Locations	MoHUA Guidelines 2017 IRC:SP:12-2015
10	NMT Opinion Surveys	200 Samples	
11	Vehicle Survey at Petrol Pump	1000 Samples	MoHUA Guidelines 2017
12	Household Survey & User Opinion	5,000 households	



#### **PRIMARY TRAFFIC SURVEYS**





TVC SURVEY (INTERSECTION)



OUTER CORDEN OD SURVEY



BUS TERMINAL SURVEY



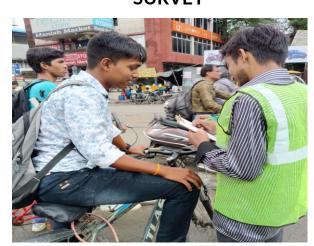
RAIL TERMINAL SURVEY



**RNI SURVEY** 



HOUSEHOLD SURVEY



**NMT SURVEY** 



FUEL STATION SURVEY



#### **MAJOR INPUTS TO TRAVEL DEMAND MODEL**



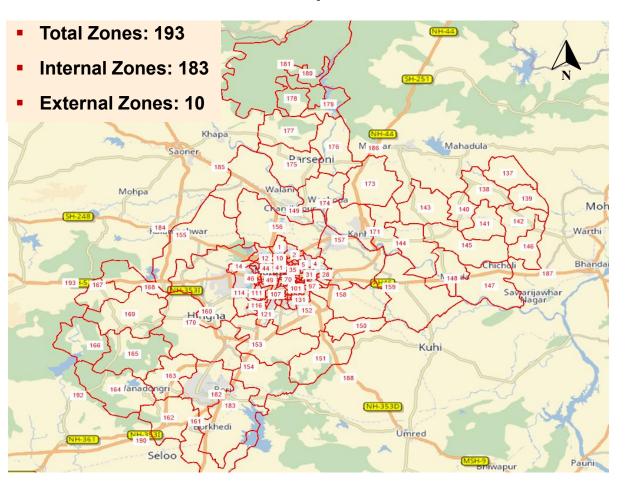
- Delineation of study area into smaller traffic zones, road and public transport networks along with their attributes
- Population and employment (existing and proposed at traffic zone level)
- Various transport systems along with their capacity, headways and speed etc.
- Intermodal integration facilities available and time required for passengers to interchange from one mode to another including walk time



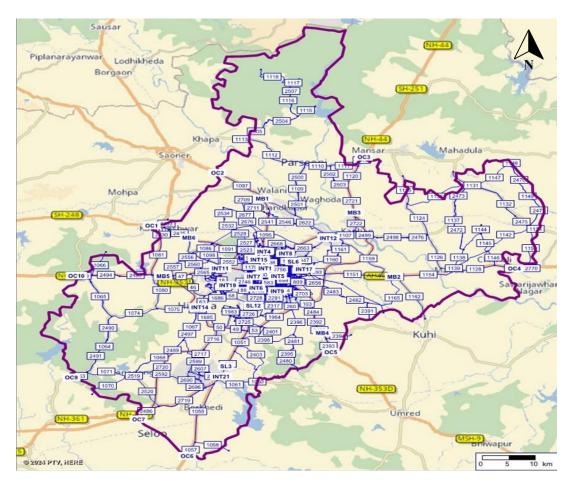
#### **ZONING SYSTEM & CODED ROAD NETWORK**



#### **Traffic Analysis Zones**



#### **Coded Road Network**

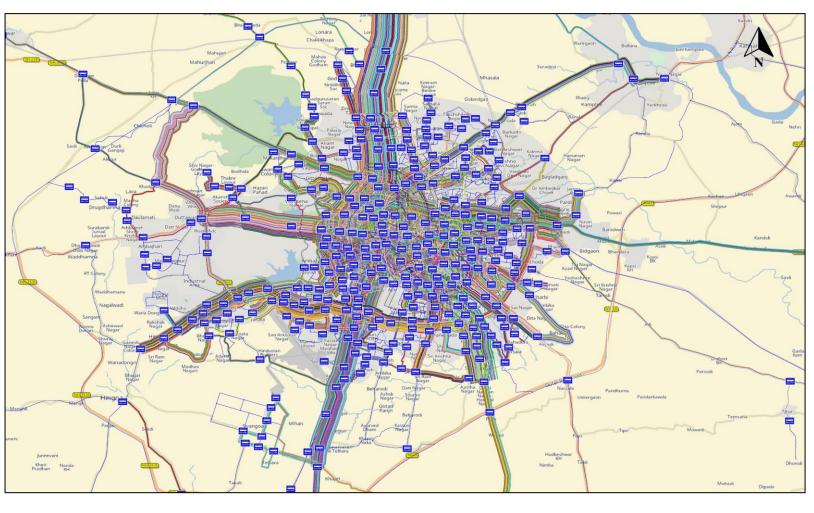




#### **CODED PUBLIC TRANSPORT NETWORK**



- NMC currently operates city bus services on approx. 125 routes, covering major areas of the city and surrounding localities
- It serves about more than 1000 stops



#### **SOCIO-ECONOMIC PROJECTIONS**

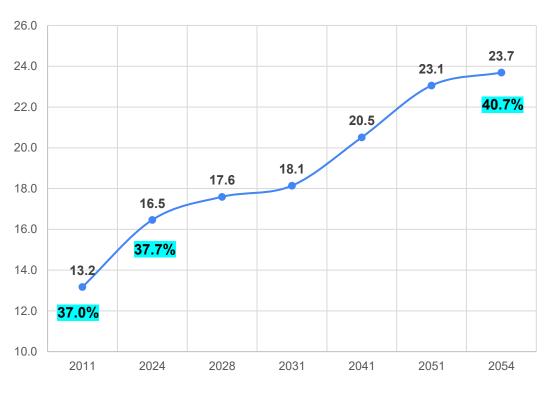


#### **Population Forecast (In Lakh)**



Years	2011	2024	2028	2031	2041	2051	2054
Municipal Corporation	24.1	29.5	30.6	31.4	34.1	36.6	37.4
Rest of Study Area (outside city)	11.6	14.2	14.9	15.5	17.5	20.0	20.8
Total	35.6	43.7	45.5	46.9	51.7	56.7	58.2

#### **Employment Forecast (In Lakh)**



Year	2011	2024	2028	2031	2041	2051	2054
Employment	13.2	16.47	18.54	18.15	20.51	23.05	23.68

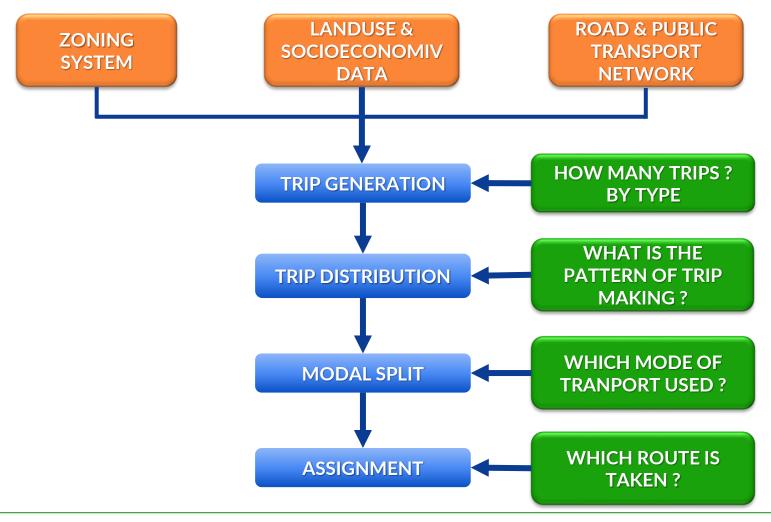
Source: Census 2011 & Past Trends

Source: Census 2011 & City Development Plan 2041



#### TRANSPORT DEMAND MODEL STRUCTURE





VISUM SOFTWARE USED FOR TRANSPORT DEMAND MODELING AND FORECASTING



## **MAJOR TRAVEL CORRIDORS IN STUDY AREA – 2054**



62.1		Section	Maximum Peak Hour Passenger	
SN	Road name	From	То	Trips on Road Links in 2054
1	NH 47 - Koradi Road	Kasturchand Park Metro Station	Mankapur Chowk	72748
2	NH 53 - Surat Kolkata	Prajapati Nagar	Nagpur Junction Railway	67029
	Highway	тајаран туадаг	Station	0,02,
3	Kamptee Road	Automative Square	Kamptee	64988
4	Wardha Road NH-47	Chhatrapati Square	Variety Chowk	64534
5	Wardha Road	Variety Chowk	RBI Square	63018
6	Kamptee Road	Kasturchand Park Metro Station	Automative Square	61011
7	Amravati Road	T-point Wadi	Variety Chowk	59834
8	Bhandara Road	Prajapati Nagar	Mauda	52224
9	Wardha Road NH-47	Chhatrapati Square	Outer Ring Road Junction	51384
10	Chhindwara Road (NH-47)	Prajapati Nagar	Bokhara Road, Koradi Naka	35410
11	Mankapur Ring Road	Prajapati Nagar	Automative Square	30699
12	Katol Bypass Road(SH-260)	Mankapur Chowk	Katol Naka Chowk	29376
13	Chhindwara Road (NH-47)	Koradi Naka	Koradi	27340
14	Mankapur Ring Road	Dighori Chowk	Prajapati Nagar	26578
15	Hingna Road	Jhansi Rani Square	Hingana T-Point	26232
16	Mankapur Ring Road	Chhatrapati Square	Dighori Chowk	23200
17	Mankapur Ring Road	Chhatrapati Square	Hingna T-Point	21225



#### TRANSPORT INFRASTRUCTURE PROPOSALS



#### The key proposals of Comprehensive Mobility Plan include:

Public Transport
Improvement Plan –
Improving accessibility
and service quality.

Road Network
Improvement Plan –
Enhancing connectivity
and reducing congestion.

Junction Geometrics
Improvement and Traffic
Circulation Plan –
Streamlining vehicular
and pedestrian
movements.

Parking Management
Measures – Optimizing
space utilization and
reducing parking-related
issues.

Non-Motorized
Transport (NMT) Facility
Improvement Plan –
Promoting sustainable
and eco-friendly
mobility.



#### PROPOSED MASS RAPID TRANSIT CORRIDORS

महा मेट्रो

- High-capacity and medium capacity demand corridors identified on basis of parameters like population, employment and activity centres to be served by the MRT system
- Two High-Capacity corridors (36.5 km) have been identified in CMP Phase 1.

	PROPOSED HIGH CAPACITY MASS RAPID TRANSIT CORRIDORS							
SN	Corridors	Length (Km)	CMP Phase					
1	Mankapur Chowk to Rachana Junction on Inner Ring	25.0	51					
	Road		Phase - 1					
2	Sitabuldi to Koradi	11.5						

• Seven Medium-Capacity corridors have been identified; 2 in Phase 1 and 5 in Phase 2 (total length about 73.0 km)

	PROPOSED MEDIUM CAPACITY MASS RAPID TRANSIT CORRIDORS						
SN	Corridors	Length (Km)	CMP Phase				
1	Agrasen Chowk to Forest Check Naka via Dighori Chowk	8.5	Phase 1				
2	Wadi to Sitabuldi	8.1	(16.6 Km)				
3	Chhaoni T Point to Fetri via Katol Naka	11.0					
4	Mankapur Chowk to Vasudev Nagar via Katol Naka, Wadi	14.6					
5	Variety Chowk to Wela Harichandra via Medical Chowk & Manewada Chowk	13.7	Phase 2 (56.4 Km)				
6	Wadi to Wanadonngari via Surabardi	9.8					
7	Mankapur chowk to Lonare via Godhani	7.3					



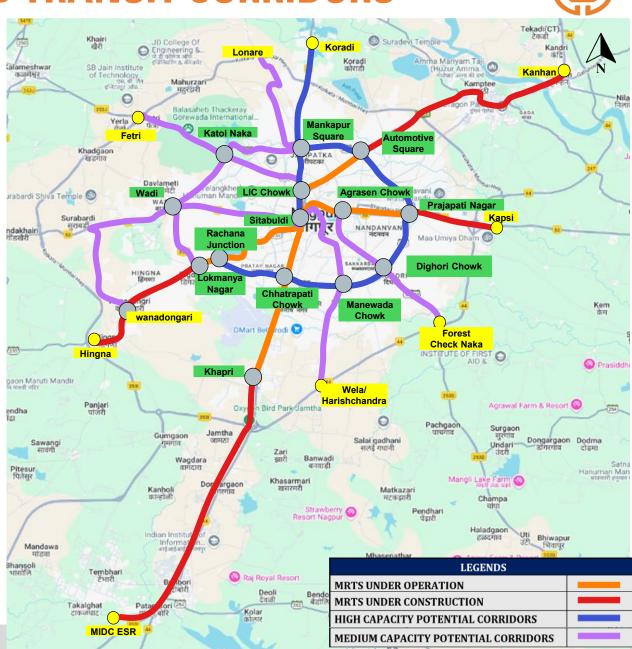


#### PROPOSED MASS RAPID TRANSIT CORRIDORS



 Expected daily ridership and maximum PHPDT at High Capacity Corridors

Corridor Details		Maxi	mum PH	PDT	Daily Ridership (in Lakh)		
		2031	2041	2054	2031	2041	2054
Operational/ expected to	1. Kanhan - Automative Square -MIHAN - MIDC ESR	12400	16800	21900	2.14	2.83	3.90
be operational	2. Kapsi -Prajapati Nagar - Lokmanya Nagar -Hingna	11250	15300	20300	1.92	2.65	3.75
Proposed High Capacity MRTS Corridors in CMP Ph 1	3. Mankapur Chowk to Rachana Junction on Inner Ring Road	9700	12300	15900	1.59	2.10	2.85
	4. Sitabuldi to Koradi	5600	8050	11800	0.65	0.91	1.47



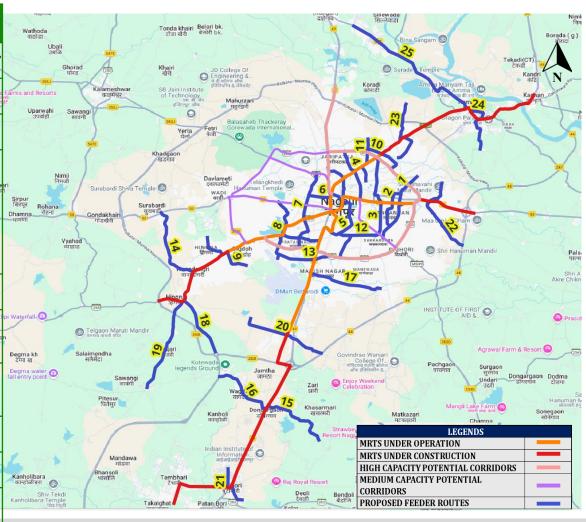


#### **PROPOSED FEEDER ROUTES**



- Feeder services are essential for the Metro network for convenient and quick transfer of passengers.
- To connect the trip generation & attraction areas and to improve last mile connectivity, 25 feeder routes have been proposed.

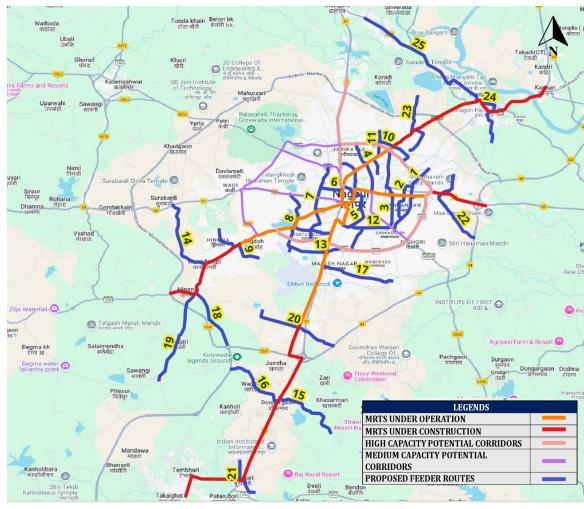
Route No.	Route	Metro Stations Served	Length (km)	Areas Covered
1	Kalmana Bhaji Market to Shitla Chowk	Vaishnodevi Sq	6.8	Kalmana, Vardhman Nagar, Garoba Maidan, Nandanvan, Ishvar Nagar
2	Sudarshan Chowk to Kadari Chowk	Dr. Ambedkar Chowk	3.7	Satnami Nagar, Shashtri Nagar, Ahmed Raja Chowk
3	Itwari Railway Station to Bande Plot Chowk	Telephone Exchnage	7	Lakadganj, Mangalwari, Old Bagadganj
4	Jariptka Police St. to Agrsen Chowk	Agrasen Chowk	4.5	Jaripatka, Bezenbagh, Kamal Chowk
5	Tajuddin Chowk to Shatabdi Chowk	Nagpur Railway Station, Kadbi Chowk	10.8	Byramji Town, Mescobagh, Motibagh, Railway Sttaion, Cotton Market, Gandhisagar Lake, Ganeshpeth, Medical Chowk, Gulmohar Colony, Rameshwari, Bhagwan Nagar
6	PWD Office to Nagpur Junction	Kasturchand	3.4	CBI Colony, Civil Lines, Kasturchand Park, Mohanpura
7	Old Katol Naka to Pratapnagar Chowk	Shankar Nagar	7.2	Seminary Hills, High Court, Tilak Nagar, Gokulpeth, Khare Town, Dharampeth,Shankar
8	Futala Chowk to Pannase Layout	Subhash Nagar	5.7	Nagpur University, Verma Layout, Ambazari, Trimutree Nagar, Swavlami Nagar
9	Priyadarshini College to MIDC Hingna	Lokmanya Nagar	5.1	MIDC Hingna, Nidoh Village, Raisoni College, Priyadarshini College
10	Nari Road to Ita Bhatti Chowk	Automotive Chowk	3.4	Kabir Nagar, Pawan Nagar, NIT Colony
11	GTB Nagar to Bunkar Colony	Nari Road	4	GTB Nagar, Bank Colony, Teka Naka, Balabhaupeth, Bunkar Colony



## **PROPOSED FEEDER ROUTES**



Route No.	Route	Metro Stations Served	Lengt h (km)	Areas Covered
12		Ajni Square, Rahate Colony	9.1	VNIT, Kotwal Nagar, Vivekanand Nagar, Ajni Railway Station, Medical College
13	Vinobha Gram Society to Narendra Nagar chowk	Jaiprakash nagar	4.1	Swavalambi Nagar.Sahakar Nagar,Swami Narayan Math,Chatrapati Nagar ,Narendra Nagar
15	Mangrul to Ghuti	Dongargaon	6.2	Panjari,Sukli
14	Takiya to Wanadongari	Wanadongari	6.8	Waddhamna,Nagalwadi,Matoshri Nagar
16	Gumagaon to Dongargaon	Dongargaon	5.5	Dhanoli,wagdara, Wainganga College of Engineering
17	Pipla to Chandpur Road	Jaiprakash nagar	5.9	Padmavati Nagar,Manish Nagar
18	Khadka to Hingana Tahsil	Hingana bus station	5.3	Sukali
19	Amgaon to Hingna Bus Stand	Hingna Bus Stand	8.2	Deoli,Panjari,Ukhali,Mondha
20	Mihan to Panjari farm	Khapri	7	Telhara,Dahegaon,AIIMS Nagpur,Khapri
21	,	Butibori Police Station	3.7	Bori,Shikshak Colony,Butibori Polish statonCIDCO Colony
22	Tarodi to Bharatwada	Pardi metro	7.2	Bidgaon,Nageshwar Nagar,Ambe Nagar,Bhandewadi Halt,Navin Nagar,Paradi Metro,Shiv Sakti Nagar,Shyam nagar
23	Kawatha to Ekta Nagar	Khasara Fata	6.2	Mhasala,Khasala,Shiv Kripa Nagar,Bhilgaon,PiliNadi
24	GHorpad to Valmili Mandir	Kamptee Municipal Council	4.9	Yeshodhara Nagar,Ravidas Nagar,Kamtee Railway Station,Kamptee Polytechnic,Shiv Panchayat Nagar,Manappuram
25	Chandkpur to Kamptee Cant	Cantonment	12.3	khaparkheda,Chandkapur,Chicholi,Gorabaja r,Bhanegaon,Waregaon





#### **BUS ROUTE RATIONALIZATION PLAN**



- Nagpur Municipal Corporation currently operates city bus services on approximately 125 routes.
- To enhance the overall public transportation network, reduce congestion, and ensure seamless connectivity, 10 overlapping bus routes have been identified to be rationalized into a wellcoordinated feeder system.

SN	Route No	Route Name		
1	312	Koradi Depot to Kamptee		
2	35	Pardi to YCCE College		
3	61	Panchsheel Square to Butibori MIDC Gate		
4	304	Sitabuldi to Ita Bhatti Square (Binaki)		
5	322	Godhani to Bodhala (Fetri Godown)		
6	329	Yashodhara Nagar (Shivaji Chowk) to Bada Taj Bagh		
7	59	Sitabuldi to Amar Nagar		
8	277	Sitabuldi to Asoli (Haldiram)		
9	90	Gorewada Water Tank to Gandhibagh		
10	70	Vishwakarma Nagar to CGO Jilha Feri		

 Based on projected population, about 1750 city buses are required by 2054.



Year	2024	2028	2031	2041	2051	2054
No. of buses required	1310	1364	1406	1550	1700	1746

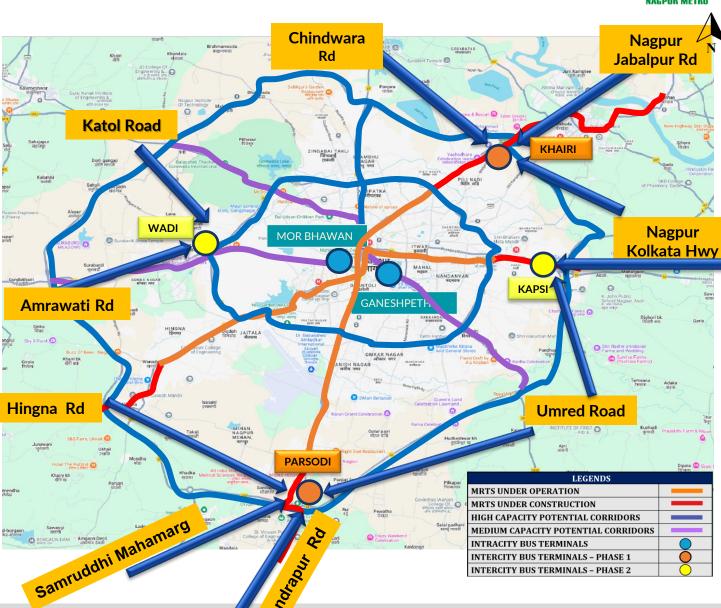


#### **BUS TERMINAL IMPROVEMENT PLAN**



- Presently, Ganeshpeth serves intercity passengers and Mor Bhawan serves intracity passengers along with few intercity bus operations.
- It is proposed to redevelop Ganeshpeth and Mor Bhawan terminals dedicatedly for intracity bus travel.
- To alleviate the movement of intercity bus traffic within the city, four new direction-wise bus terminals are being proposed to be developed at Parsodi & Khairi in Phase 1 and Wadi & Kapsi in Phase 2.
- Passengers will board/alight at these terminals and use the Public Transportation to reach their destinations within the city.

SN	Bus Terminal Location	Phase			
Red	evelopment/ Improvement of Existing	g Bus Terminals			
1	Mor Bhawan	Phase – 1			
2	Ganeshpeth	Pilase - 1			
New	New Intercity Bus Terminal				
3	<u>Parsodi</u>	Phase - 1			
4	Khairi	Phase - 1			
5	Wadi	Phase – 2			
6	Kapsi	Pilase - Z			



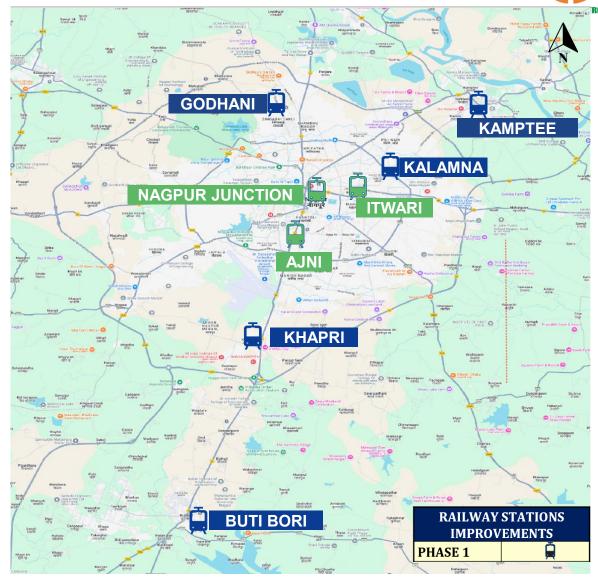


#### **CONNECTIVITY IMPROVEMENT TO RAILWAY STATIONS**



- Improvement of road connectivity from the main road to railway station with better roads and street lighting
- Removal of on-street parking from the access roads
- Provision of demarcated PT/IPT bays
- Redesign of parking spaces with all infrastructure facilities
- Provision of passenger facilities such as shelters, seating arrangements, drinking water and toilet facilities

RAILWAY STATIONS IMPROVEMENT AND PHASING					
SN	Railway Station	CMP Phase			
1	Godhani				
2	Kalamna				
3	Buti Bori	Phase-1			
4	Khapri	]			
5	Kamptee				





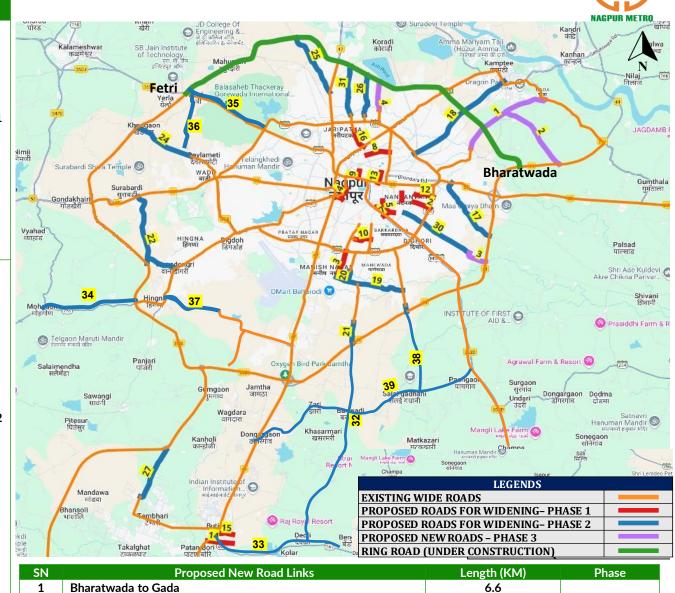
#### **ROAD NETWORK IMPROVEMENT PLAN**

**Ghorpad to Lihigaon** 

Pandhurna to Ring Road

Pili Nadi to ORR near Koradi Ash Pond

SN	Name of Road	Existing Lane	Widening Lane	Length (km)	Phase
1	Wathoda Road from Middle RR to IRR	2	4	1.2	
2	Shatabdi Nagar Chowk to Ambedkar Chowk	2	4	1.9	1
3	Anand Talkies Chowk to Manas Chowk	2	4	0.4	1
4	Bhola Ganesh Chowk to Sangam Talkies Road	2	4	0.7	
5	Reshimbagh Ground to Nandanvan Main Road	2	4	1.3	
6	Sakkardhara Flyover to Tiranga Square	2	4	0.4	1
7	Kamal Chowk to Itwari Station Road	2	4	1.6	Phase :
8	Mominpura Chowk to Bhagwaghar Chowk	2	4	0.5	i ilase .
9	Bhagwan Nagar Road	2	4	1.2	(16.2
_	KDK College Chowk to Old Bagadganj Road	2	4	0.5	<del>- </del>
			-		Km)
	Wathoda Road Bhim Chowk to IRR	2	4	1.3	-
	Mirchi Bazar Chowk to Chitroli Squire	2	4	0.8	-
	Butibori Bus Stand to Butibori Railway Station	2	4	1.7	-
	NH 44 Govt. ITI to Buti Bori	2	4	1.1	_
	Indora Chowk to Bhim Chowk on Nara Road	2	4	1.3	_
16	Munje Chowk to Humpyard Road along the drain	1	2	0.3	
17	Bhandara Road from Navin Nagar to Outer RR via	2	4	5.1	
1,	Bhandewadi		7	5.1	
18	Old Kamptee Road	2	4	8.2	
19	Besa Pipla Road	2	4	4.9	
	Besa Road	2	4	0.8	
21		2	4	1.5	1
22	Sangam Road from Takia to Wanadongri	2	4	6.8	
	Sangam Road to ORR	2	4	0.6	
	Khadgaon Road	2	4	4.4	
	Koradi Naka to ORR	2	4	4.7	1
	Nari Village to ORR	2	4	3.1	Phase 2
27	MIDC Buti Bori to Samriddhi Mahamarg Interchange	1	4	4.0	
	Mauda NH 53 to Hotel Gajraj	2	4	1.8	(120.9
	Hudkeshwar Road from Dange Chowk to ORR	2	4	0.4	Km)
	Kadari Chowk to Pandhurna	2	4	5.3	(311)
_	Pili Nadi to ORR on Nara Road	2	4	3.5	1
	Devli to ORR	2	4	3.5 15	1
		2	4		+
	Devli to Butibori			6.8	-
	Hingana to Mohagoan	2	4	6.2	-
	New Kotal to Fetri (ORR)	2	4	6	-
	Fetri (ORR) to Lava	2	4	4.5	4
	Hingana to Miehan	2	4	4.3	1
	Hudkeswar (ORR) to Salaigodhani	2	4	6	1
39	Dongargaon to Pachgaon via Banvadi	2	4	17	
_	Total			137.1	



5.4

1.5

2.1

15.6

Total

Phase 3 (15.6 Km)

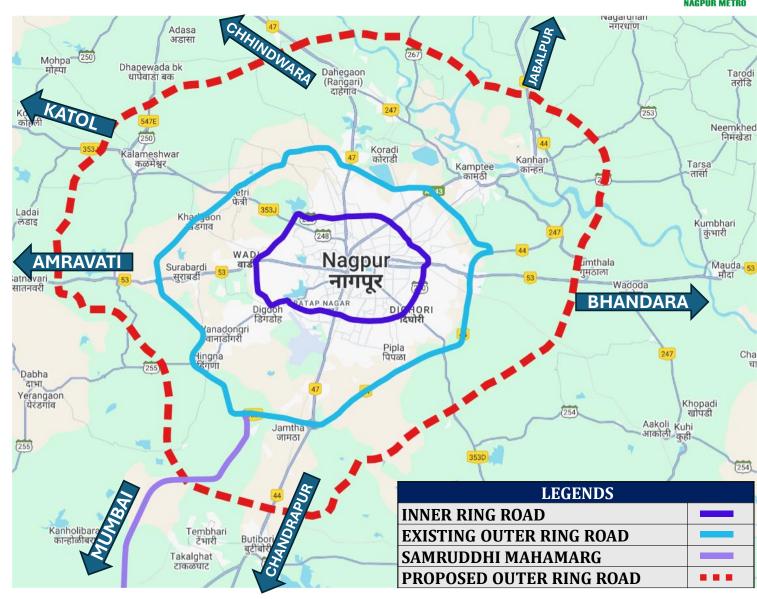
reserveu

महा मेट्रो

#### PROPOSED PERIPHERAL RING ROAD



- ➤ A Ring Road of 6 lane divided carriageway is proposed with a length of about 148 km.
- ➤ It will connect Samruddhi Mahamarg, NH 53, NH 353, NH 47 and NH 44, acting as a mega bypass for regional and national through-traffic.





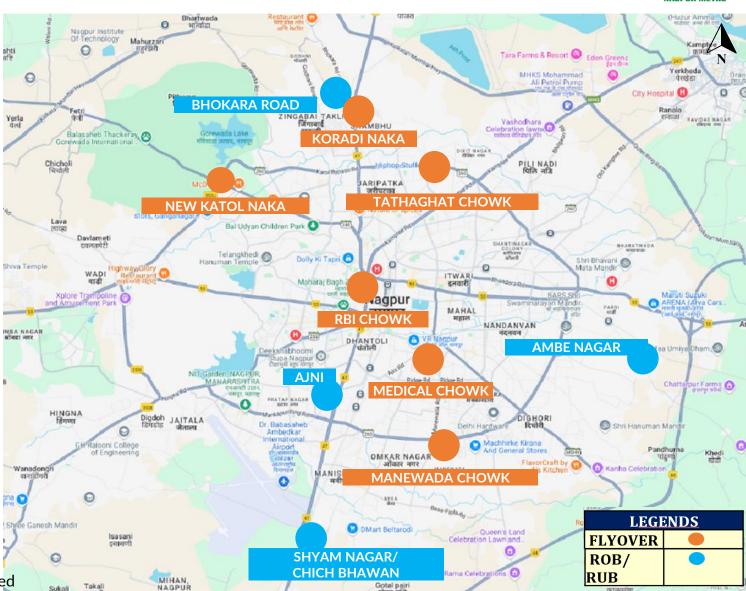
#### **GRADE SEPARATORS & RAIL OVER/UNDER BRIDGE**



- > To Improve Traffic Movement at intersections, grade separators are proposed at 6 locations.
- ➤ The level crossings are bottlenecks for traffic movements, 4 Rail over/ under bridges are proposed.

PROPOSED GRADE SEPARATORS					
SN	Location Names	Phase			
1	RBI Chowk*	Dhoos 4			
2	Manewada Chowk	Phase-1			
3	Koradi Naka	Phase-2			
4	Medical Chowk				
5	Tathaghat Chowk	Phase-3			
6	New Katol Naka				

PROPOSED ROB/RUB AND PHASING					
SN	Locations	Phase			
1	Shyam Nagar/Chich Bhawan				
2	Ajni	Phase-2			
3	Bhokara Road				
4	Ambe Nagar	Phase-3			



<sup>\*</sup> In RBI Chowk only modification of existing NHAI Flyover landing required

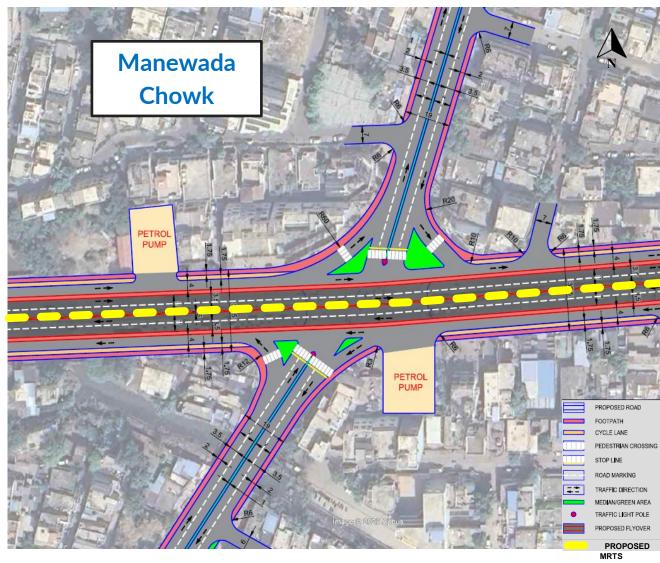


#### **JUNCTION IMPROVEMENT PLAN**



- Traffic management measures & Improvement plans proposed for 10 Junction in Phase 1
- Improvement in Junction geometry i.e. demarcation of proper lanes, median, footpath, provision of Traffic Channelizers, grade separators, NMV lanes etc.
- Proposals for Pedestrian Facilities i.e. at grade pedestrian crossings & signals, grade separated pedestrian crossings, NMV facilities etc.



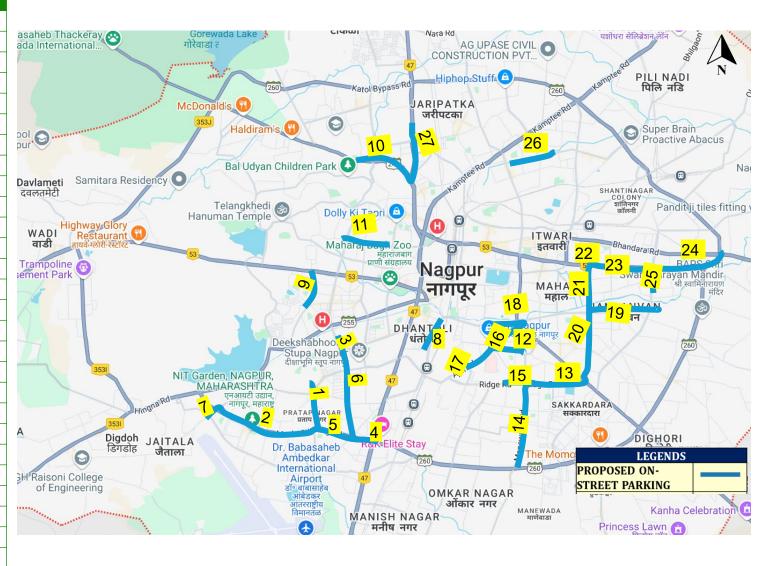




#### PROPOSED ON-STREET PARKING



SN	Proposed On-Street Parking	Length (m)
1.	Mate Chowk to Pratap Nagar Chowk	850
2.	Pratap Nagar Chowk to Mangalmurti Chowk	2460
3.	Bajaj Nagar Chowk to Dindayal Upadhyay Chowk	470
4.	Chatrapati Chowk to Orange City Hospital Chowk	530
5.	Orange City Hospital to Pratap Nagar Chowk	900
6.	Orange City Hospital to Aath Rasta Chowk	1160
7.	Mangal murti Chowk to London Street Intersection	230
8.	NMC Zone IV Square to Congress Nagar T point	660
9.	Ravi Nagar Square to Ramnagar Rotary	820
10.	Katol road Sub Post Office junction to Chhaoni T Point	1030
11.	Ladies Club Chowk to Akashwani Chowk	1120
12.	Medical Square to Krida Square	770
13.	Bande Plot Chowk to Tukdoji Chowk	1420
14.	Manewada Chowk to Tukdoji Chowk	2020
15.	Tukdoji Chowk to Rajkamal Chowk	420
16.	Medical Chowk to Ashok Chowk	760
17.	Medical Chowk to Medical College Entrance	510
18.	Baidhyanath Square to Ashok Nagar Square	690
19.	Jagnade Square to T Point (Middle Ring Road)	1460
20.	Bande Plot Chowk to Jagnade Square	1610
21.	Jagnade Square to Itwari Telephone Exchange Chowk	1110
22.	Telephone exchange to Chhapru Nagar square	490
23.	Chhapru square to Ambedkar square	430
24.	Vaishno Devi to Prajapati square	1350
25.	Vaishno Devi square to Shastri Nagar Chowk	440
26.	Kamal Chowk to Vaishali Nagar	980
27.	Chhaoni T Point to Taj Aulia Baba Square	900
	Total	25571





#### **PARKING MANAGEMENT MEASURES**



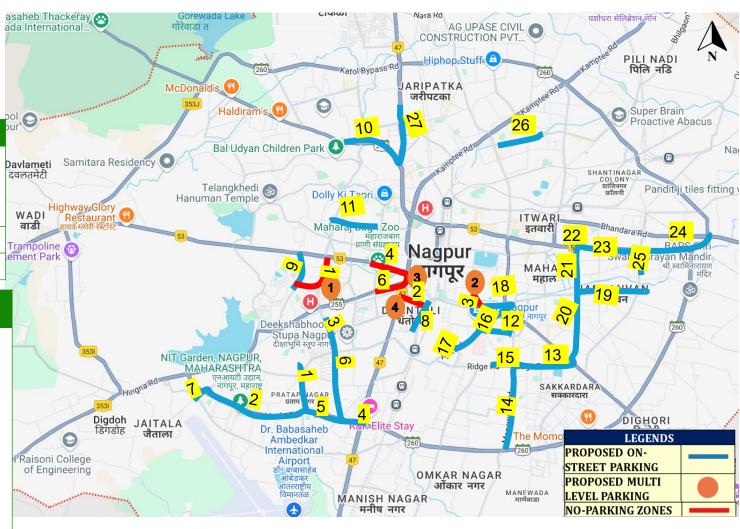
 Automatic Multi level parking is proposed at 4 locations of 1700 ECS

 Impose electronic ticketing/fining system for better enforcement & transparency

No Parking zones - 3.4 Km

SN	Proposed Multilevel Parking	ECS	Phase
1	Gokulpeth Market	600	
2	Near Ganeshpeth Bus Terminal	350	Phase 1
3	Near Mor Bhawan Bus Terminal	350	
4	Near Patwardhan Ground	400	Phase 2
	Total	1700	

SN	Proposed No Parking Zones	Length (m)	Phase	
1	West High Court Road near Gokulpeth Market  1216			
2	Panchsheel Chowk to NMC Zone IV Chowk	655		
3	Ganeshpeth Bus Stand Chowk to Baidhyanath Chowk	466	DI 4	
4	Agriculture College Chowk to Veriety Chowk	689	Phase -1	
5	Variety Chowk to Jhansi Rani Chowk	263		
6	University Liberty Chowk to Jhansi Rani Chowk	762		
	Total Length (m)	4051		



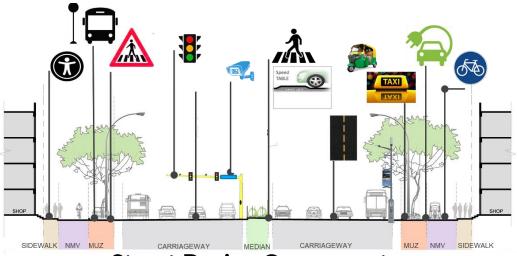


#### PROPOSED NMT AND PEDESTRIAN INFRASTRUCTURE



#### The proposals include:

- i. Development of Footpaths
- ii. Development of NMT lanes
- iii. Public bike sharing scheme



**Street Design Components** 



**Footpath Bollards** 



Streetlight



Signages



**Street Furniture** 

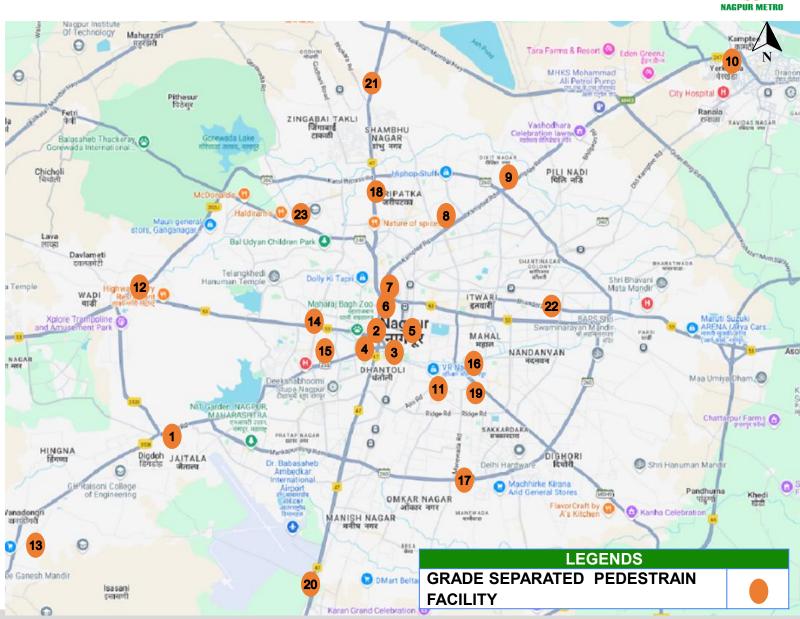


## **GRADE-SEPARATED PEDESTRIAN CROSSING FACILITIES**

महा मेट्रो
NAGPUR METRO

- FOBs with escalator and lift proposed.
- Half sunk and half elevated pedestrian subway may also be planned along with proper drainage system
- 23 Grade separated Pedestrian Crossing proposed

SN	Grade Separated Pedestrian Crossing Facilities	Phase
1	Hingna T-Point	
2	Variety Chowk	
3	Jhansi Rani Square	
4	University Library Chowk	
5	Anand Talkies Chowk	
6	Zero Mile	
7	RBI Chowk	
8	Indora Chowk	
9	Automotive square	
10	Kamptee	
11	Medical Chowk	
12	T-point Wadi	Phase 1
13	Hingna	
14	Ravi Nagar Chowk	
15	Lakshmi Bhawan Dharampeth	
16	Ashok Chowk	
17	Manewada chowk	
18	NADT Square	
19	Krada Chowk	_
20	Airport south	_
21	Koradi Naka (Shambhu Nagar)	_
22	Shambhunath Mandir Chowk	_
23	Gittikhadan Chowk	

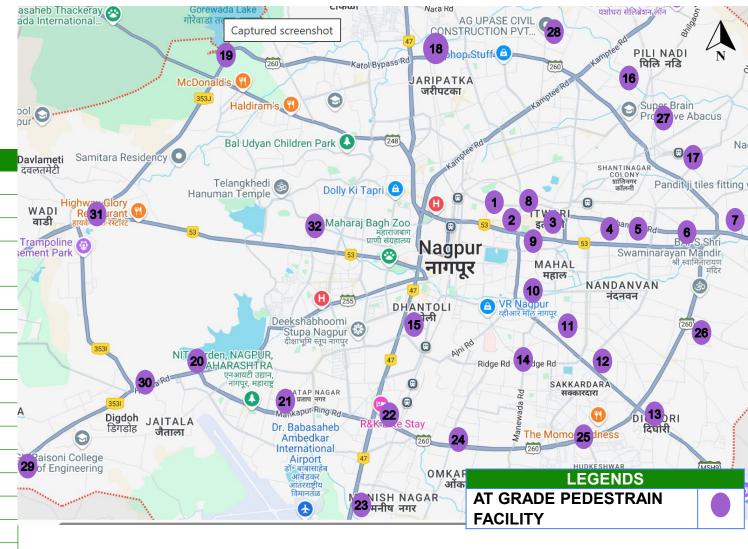


#### AT-GRADE PEDESTRIAN CROSSING FACILITIES



- To improve safety of pedestrians by creating a pedestrian friendly environment
- To improve traffic efficiency and road safety outcomes for all road users
- · To ensure smooth traffic flow
- 32 locations identified for at grade pedestrian crossings

SN	Junction/ Location Names	SN	Junction/ Location Names	Da दव
1.	Gitanjali Chowk	17.	Chikhli Chowk	
2.	Agrsen Chowk	18.	Mankapur Chowk	N
3.	Chitroli Chowk	19.	Katol Naka	— Tr
4.	Itwari Telephone Exchange	20.		ser
	Chowk		Rachana Ring Road Junction	_
5.	Chhapru Nagar	21.	Sambhaji Chowk	
6.	Vaishnodevi Chowk	22.	Chhatrapati Chowk	7
7.	Pardi Naka	23.	Dr. Hedgewar Chowk	P
8.	Ganjakhet Chowk	24.	Shatabdi Nagar Chowk	
9.	Chitnis Park	25.	Uday Nagar Chowk	
10.	Ashok Chowk	26.	Kharbi Chowk	A
11.	Reshim Bagh	27.	Ita Batti Chowk	
12.	Bande Plot	28.	Tathagat Chowk	2
13.	Dighori Naka	29.	Hingna	
14.	Tukdoji Putla	30.	Hinga T Point	
15.	Rahate Colony Chowk	31.	Wadi T Point	
16.	Nandi Chowk	32.	Ravi Nagar Chowk	

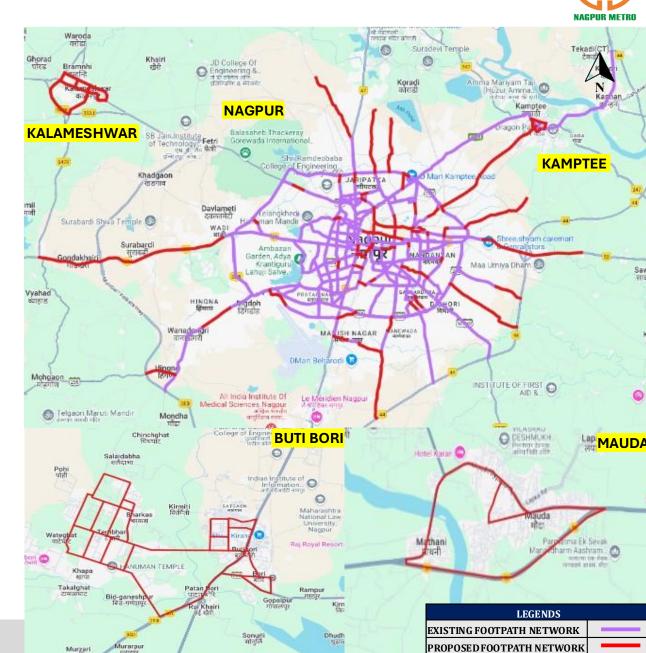




#### PROPOSED ROADS WITH FOOTPATHS



- Total of about 156 Km of road network has been identified for provision of footpath in Phase-1
- Minimum recommended width 1.8 m and height 150 mm
- Footpaths wherever discontinued, to be raised by table-top crossing
- Continuous and Encroachment free footpath has been proposed. Strict enforcement required to discourage the encroachment on Footpaths





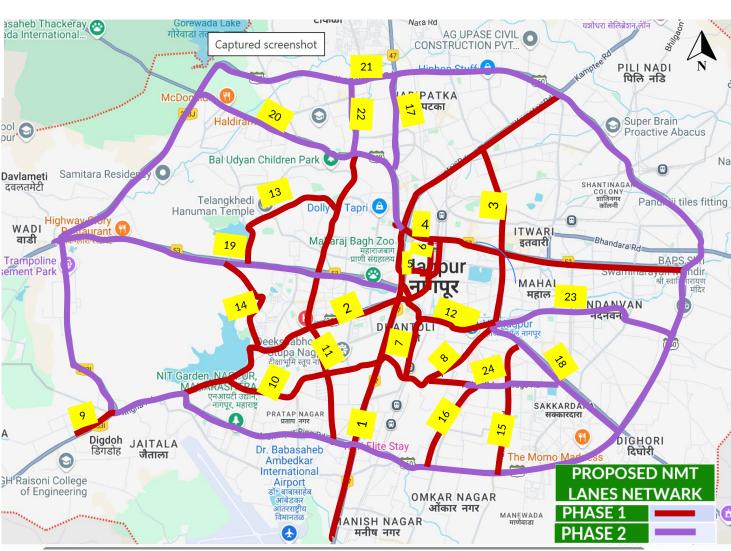
#### **DEVELOPMENT OF NMT CORRIDORS**



 Physically segregation of NMT from motorized traffic will improve traffic efficiency & road safety

 About 139 km of road network identified for provision of NMT along with all facilities

SN	Name of Roads	Length (km)	Phase
1	Airport South to Automotive Chowk	15.1	
2	Lokmanya Nagar to Prajapati Nagar	17.8	
3	Indora CHowk to Ashok Chowk	4.2	
4	NIT Office to Dosar Chowk	1.2	
5	Zero Mile to Cotton Market Chowk	0.8	
6	Manas Chowk to Jaystambh Chowk	0.9	
7	Rahate Colony to Varaety Chowk	1.7	
8	Ajni to Ashok Chowk via Medical	3	Phase 1
9	Old <u>Katol</u> Naka to Law College Chowk	2.9	
10	VNIT to Rahate Colony	3.6	(67.6 Km)
11	Law College Chowk to Khamla Chowk	3.9	
12	Humpyard Road to Ashok Chowk	1.8	
13	Japanese Gardan to New Khutala Chowk	3.0	
14	Ambajari T Point to Khutala Chowk	2.5	
15	Manewada Chowk to Reshion Bigh	3.0	
16	Shatabdi Nagar chowk to Ridge Road		
10	(Rameshwari Rd)	2.2	
17	Inner Ring Road	41.3	
18	Ashok Chowk to Dighori Chowk	3.9	
19	Wadi to Variety Chowk	8.1	<b>D</b> . 0
20	New Katol Naka to RBI Chowk	6.8	Phase 2
21	Chhaoni T Point to Mankapur Chowk	2.3	(71.6 Km)
22	Awasthi Nagar Road	1.7	(71.01411)
23	Ashok Chowk to Wathoda Ring Road	4.5	
24	Ridge Road	3.0	
	Total	139.2	



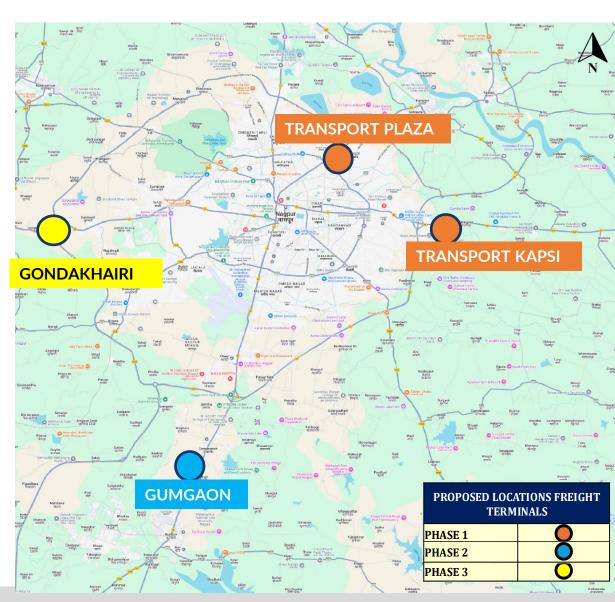


#### FREIGHT MANAGEMENT STRATEGY



- Segregation of long-distance commercial vehicles from city roads
- Freight terminals proposed close to Inner & Outer Ring Roads
- Use of small and medium size vehicles with modern emission controls in central city
- Shifting of godowns and yard from core city area
- Restricted movement of commercial vehicles in city core (7 AM - 9 PM prohibition) and other mobility corridors (morning and evening peak periods)

SN	Locations	Phase
1	Transport Plaza (Automotive Chowk)	Phase - 1
2	Kapsi Transport Nagar	Phase - 1
3	Gumgaon	Phase - 2
4	Gondakhairi	Phase - 3





## **BLOCK COST ESTIMATE & PHASING OF PROPOSALS**

महा	मेट्रो

	Proposals		Quantity					Cost (Rs. In Cr)			
SN		Units	Phase-I	Phase-II	Phase-III	Total	Phase-I	Phase-II	Phase-	Total	
1	NMT Facility Improvement Plan										
а	Footpath (1.5-2 m wide)	Km	156	-	-	156	131	-	-	131	
b	NMV Lane (2-2.3 m wide)	Km	67.6	71.6	-	139.5	56.8	60.1	-	116.9	
С	At Grade Pedestrian Crossing Facilities	Location	32	-	-	32	12.8	-	-	12.8	
d	Grade Separated Crossing Pedestrian Facilities	Location	23	-	-	23	4.6	-	-	4.6	
2	Mobility Management Measures										
а	Automatic Off-Street Parking	ECS	1,100	300	-	1400	44	12	-	56	
b	Intelligent Traffic Management System	Location	175	-	-	175	175	-	-	175	
С	Public Bicycle Sharing (PBS)	Location	50	40	30	120	10	8	6	24	
d	Intersection Improvements	Location	10	-	-	10	5.5	-	-	5.5	
3	Public Transport Improvement Plan									-	
а	High Capacity MRTS	Km	34.5	-	-	34.5	8,625	-	-	8,625	
b	Medium Capacity MRTS	Km	16.6	56.4	-	73	1,826	6,204	-	8,030	
С	Electric Buses	Nos.	2785	143	565.2	3493.2	2,785	143	565.2	3,493.2	
d	Bus Terminal Improvements	Location	2	-	-	2	10	-	-	10	
е	New Bus Terminals	Location	2	2	-	4	40	40	-	80	
f	Railway Station Improvement	Location	5	-	-	5	25	-	-	25	
4	Freight Infrastructure Improvement										
а	Freight Terminals	Nos.	2	1	1	4	40	20	20.0	80	
5	Road Improvement Projects									-	
а	Road Widening and Improvement (existing 1/2 lanes to 2/4 lanes)	Km	16.2	120.9	-	137.1	46.5	347	-	393.5	
b	New Road (4 lane divided C/W)	Km	-	-	15.6	15.6	-	-	89.5	89.5	
С	Rail Over Bridges (4 Iane carriageway) (30m Rly span, 6.5m vertical clearance)	Nos.	-	3	1	4	-	150	50	200	
d	Flyovers/ Underpass	Nos.	2	2	3	7	90	90	135	315	
е	Peripheral Ring Road (6 Lane)	km	-	148	-	148	-	3700	-	3700	
				•	Gra	and Total	13927.2	10774.1	865.7	25567.0	

#### **WAY FORWARD**



 Approval of Final Comprehensive Mobility Plan Report









## Future Ready

Not just more of the same; but much more of the New!

Get in touch: info@rites.com

Stay Updated : f y @ in 4



#### RITES Limited राइट्स लिमिटेड

Corporate Office: RITES Bhawan, No. 1, Sector-29, Gurgaon-122 001 Tel: (0124)-2571666 Fax: (0124)-2571660 E-mail: info@rites.com Website: www.rites.com.

