

CHAPTER 12

TRANSPORT

The transportation sector is growing exponentially in India. Particularly in Delhi, there is a huge pressure on this sector. Hence, it has become utmost important task of planners to take overview of all-inclusive set of indicators for an integrated and sustainable urban transport system. In any city like Delhi having unplanned urbanization and unparalleled growth in motorization, there is need of increased focus on sustainable use of mass transit systems like metro rails and bus transportation. An integrated transportation strategy is most needed so that various modes of transport are integrated efficiently to facilitate the sustainable transportation. The vision of planners is to ensure easy access, safe, affordable, quick, comfortable, reliable and sustainable mobility for all sections of the society in our cities. For transportation to be sustainable, It is equally important to understand the social, economic and environmental sustainability of each of these sub-systems.

- 1.2 Due to socio economic diversity in Delhi, large portion of population is still not using Public Transport. Growing uses of personal Cars & two wheelers has lead to tremendous decline in air quality and traffic safety. In many urban areas of city road/street congestion have increased a lot, and Delhi is already amongst the India's largest producer of greenhouse gas (GHG) emissions. Hence, promoting uses of and improving efficiency and effectiveness of Public transport is most desirable in Delhi.
- 1.3 To achieve sustainable public transport in the cities, following factors are crucial:
 1. Public transportation should be a priority for mass mobility,
 2. A multi-modal and integrated transit systems comprising of pedestrians, bicycles, buses, metro, and rail is to be created
 3. To monitor the sustainable development of the city, use of an integrated mass-transportation system as a planning mechanism /priority.
 4. Adopting more economical, sustainable and environment friendly technologies/ fuels to mitigate air quality problems (CNG vehicles, hybrids, electric vehicles, etc.).

2. Transport Infrastructure

2.1 Road Network

The road network in Delhi is being developed and maintained by Public Works Department (PWD), Municipal Corporations of Delhi, New Delhi Municipal Council (NDMC), Delhi Cantonment Board (DCB), National Highway Authority of India (NHAI) and Delhi Development Authority (DDA). Road network length maintained by different agencies in NCT of Delhi is presented in Statement 12.1.

STATEMENT 12.1
STATUS OF ROAD NETWORK IN DELHI-AGENCY-WISE

(As on 31st March 2022 in Lane KM)

S. No.	Agency	Road Length
1.	East DMC	512.47 Lane Km
2.	South DMC	7438.30 Lane Km
3.	North DMC	4753.18 Lane Km
4.	New Delhi Municipal Council	1298 Lane Km
5.	Public Works Department (Delhi Government)	
	a. National Highway	37.49 Lane Km
	b. Other Roads	1402.97 Lane Km
6.	DSIIDC	2285.44 Lane Km
7.	I&FC	297.52 Lane Km
8.	DDA	435 Lane Km

Source: Delhi Hand Book 2022

2.2 Road Infrastructure

2.2.1 Pedestrian Facilities- Foot Over Bridges (FOBs):

Traffic regulation and road construction in Delhi have to take care of cyclists and pedestrians including bus commuters. Approximately 113 numbers of footover Bridges have also been completed at various places in Delhi by end of 2021-22. Following 4 FOBs are completed at various locations in Delhi upto Dec, 2022 during the current financial year 2022-23:-

- 1) Nagloi Metro pillar no-364-365
- 2) Multan Nagar below pillar no. 224 to 225
- 3) FOB at Ashram
- 4) FOB at Metcalf House

Following FOBs are under construction and likely to be completed by 31.03.2023:-

- 1) Press enclave road near select city mall
- 2) Sri Aurobindo Marg at Adhchini Village
- 3) Near Pehladpur Bus Stand across Dwarka Road
- 4) Hauz khas Enclave (Near Padmini Enclave)
- 5) Sri Aurobindo Marg at PTS Bus Stop
- 6) FOB near T.B. Hospital

2.2.2. Flyover & Bridges / Corridors

A number of transport infrastructure projects at Ring Road and Outer Ring Road were made to encourage use of public transport in Delhi.

- Construction of Elevated Corridor Barapullah Phase-III starting from Sarai Kale Khan to Mayur Vihar:** The stretch from Sarai Kale Khan to Mayur Vihar Phase-I was sanctioned for ₹ 1260.63 crore (Tender Cost ₹ 964 crore). An expenditure of ₹ 862.01 crore has been incurred till Jan, 2023. The work is in progress and land acquisition of 8.5 Acre in progress and at final stage. 81.9% work has been completed till March, 2022. The work is likely to be completed tentatively by 31.08.2023.
- Corridor improvement of outer Ring Road from IIT to NH-8 Part A - Flyover on portal structure linking existing Munirka flyover in the east to the point beyond Army RR Hospital in the west. Part B – Underpass at junction of BJ Marg and inner road:** The project of Construction of (Part-A) Flyover on portal structure linking existing Munirka Flyover in the east to the point beyond Army RR Hospital in the west on the Outer Ring Road and (Part-B) Underpass at junction of BJ Marg and Inner Ring Road has been approved at the cost of ₹364.87 crore. An amount of ₹ 339.24 crore has been incurred till Jan, 2023. The Project is completed and opened to traffic.
- Construction of Underpass at Ashram Chowk along Mathura Road:** The estimated cost of this project is ₹ 77.92 crore along with shifting of services. An expenditure of ₹ 74.86 crore has been incurred till Jan, 2023. The project is completed and opened to traffic on 24.04.2022.
- Construction of Bridges on (i) NH-10 at Rampura, (ii) Tri Nagar/Inderlok and (iii) Karampura, Delhi:** Construction of bridge on Najafgarh drain at Tri-Nagar / Inderlok, Karampura and Rampura, Delhi to cover complete ROW excluding area of already constructed bridge along with road improvement on either side of bridge including making of drainage scheme, footpath etc. was approved at the estimated cost of ₹ 85.90 crore. An expenditure of ₹ 69.44 crore has been incurred till Jan, 2023.
- Extension of flyover from Ashram Flyover to DND Flyover, Sh: - FOB's, ramps, footpath, road work including road, signage, street lights, drainage and allied works:** The estimated cost of this project is ₹ 164.84 crore. An expenditure of ₹ 151.91 crore has been incurred till Jan, 2023. The work is likely to be completed tentatively by 28.02.2023.
- Integrated Transit Corridor Development and Street Network between Punjabi Bagh Flyover & Raja garden Flyover:** The estimated cost of this project is ₹ 352.32 crore. An expenditure of ₹ 31.88 crore has been incurred till Jan, 2023. The work is likely to be completed tentatively by 08.12.2023.
- C/o Grade separator/Flyover at Road No. 56 from Anand Vihar ROB to Apsara Border ROB Delhi:** The estimated cost of this project is ₹ 372.04 crore. An expenditure of ₹ 31.49 crore has been incurred till Jan, 2023. The work is likely to be completed tentatively by 08.12.2023.

- **Construction of underpass by Jack pushing Pre-cast RCC box at ORR new Mukarba Chowk:** The estimated cost of this project is ₹ 59.50 crore. Nil expenditure has been incurred till Jan, 2023. The work is likely to be completed tentatively by 13.10.2023.
- **C/o Half Underpass on ORR at Gopalpur Red Light-Jagatpur Bridge:** The estimated cost of this project is ₹ 38.17 crore. An expenditure of ₹ 31.82 crore. has been incurred till Jan, 2023.
- **Widening of bridge on Najafgarh drains at Basai Darapur to cover the complete ROW:** The estimated cost of this project is ₹ 48.60 crore. An expenditure of ₹ 46.10 crore has been incurred till Jan, 2023.
- **Widening of Bridges on Najafgarh Drain at NH-10 at Nangloi:** The estimated cost of this project is ₹ 42.21 crore. An expenditure of ₹ 37.82 crore has been incurred till Jan, 2023.

2.3 Bus Terminals and Depots

The objective of the project is to create infrastructure for the benefit of the bus commuters. As on Dec, 2022 there are 23 Cluster bus depots and 40 DTC bus depots in which one DTC depot namely Sawada Ghevra is under construction and one DTC depot namely Central Workshop-II Okhla is under renovation/up gradation. Further there are 17 numbers of bus terminals in which 16 are in operation and one terminal Bindapur Terminal is not in operation.

2.4 Inter State Bus Terminals (ISBTs)

Delhi has three Inter State Bus Terminals (ISBTs) functioning at present at Kashmere Gate, Sarai Kale Khan & Anand Vihar. The Kashmere Gate ISBT has been renovated and made operational with state of the art facilities. Sarai Kale Khan & Anand Vihar ISBTs project will be redeveloped by PWD for their integration with RRTS projects.

2.5 Rail Network

Delhi is a major junction on the rail map of India linked with the entire major metropolitan cities directly. There are five main railway stations viz. at New Delhi, Old Delhi, Hazrat Nizamuddin, Sarai Rohila and Anand Vihar, besides Container Depots at Patparganj and Tuglakabad.

2.6 Mass Rapid Transit System (MRTS)

The Mass Rapid Transit System (MRTS) is an ambitious project that aims at providing a non-polluting and efficient rail-based transport system, properly integrated with the road transport system.

Delhi Metro Rail Corporation Limited (DMRC) was registered on 3rd May 1995 under the Companies Act, 1956 with equal equity participation of the Government of the National Capital Territory of Delhi (GNCTD) and the Govt. of India. The work of PHASE IV is in progress and PHASE I to III has been completed. Presently, Delhi Metro network consists of 348.121 Km including 58.5 Km of NCR. The details are as under:-

DMRC – PHASE I

- The construction of Phase-I of DMRC is started in the year 2002 with a total project cost of ₹ 10,571 Cr which includes GNCTD share of ₹ 1,777 Cr which has been released to DMRC.
- The total length of Phase I is 64.751 Km with 59 numbers of stations.
- Phase-I completed in the year 2006.

STATEMENT 12.2 DETAILS OF DMRC – PHASE I

S. No.	Line	Name of the Corridor	Length (Kms)	No. of Stations
1.	Line 1 (Red)	Shahdara-Tis Hazari	8.349	6
		Tis Hazari-Inderlok	4.872	4
		Inderlok-Rithala	8.835	8
2.	Line 2 (Yellow)	Vishwa Vidhyalaya- Kashmere Gate	4.06	4
		Kashmere Gate- Central Secretariat	6.621	6
3.	Line 3 (Blue)	Barakhamba - Dwarka	22.736	22
		Barakhamba - Indraprastha	2.804	3
		Dwarka Sub-City	6.474	6
		Total	64.751	59

DMRC – PHASE II

- Construction of Phase-II of DMRC is started in the year 2005 with a total project cost of ₹ 19,231 Cr. out of which GNCTD share is ₹ 4,691 Cr which has been released to DMRC.
- Total length of Phase-II is 123.3 Km which includes 22.91 Km High Speed Airport Metro Express Line and 16.315 Kms of NCR lines with 86 numbers of stations (of which 13 are on NCR Line).
- Phase-II completed in the year 2012.

STATEMENT 12.3
DETAILS OF DMRC – PHASE II

S.No.	Line	Name of the Corridor	Length (Kms)	No. of Stations
1.	Line 1 Extn (Red)	Shahdara-Dilshad Garden	2.858	3
2.	Line 2 Extn (Yellow)	Vishwa Vidhyalaya-Jahangir Puri	6.38	5
		Central Secretariat - Qutub Minar	11.764	10
		Qutub Minar - Haryana Border	8.771	4
3.	Line 3 Extn (Blue)	Indraprastha - Yamuna Bank	2.173	1
		Yamuna Bank - New Ashok Nagar	5.849	4
		Dwarka Sec 9 - Dwarka Sec 21	2.279	2
4.	Line 4	Yamuna Bank - Anand Vihar	6.246	6
5.	Line 5 (Green)	Inderlok - Mundka	14.192	14
		Kirti Nagar- Ashok Park	3.406	2
6.	Line 6 (Violet)	Central Secretariat - Sarita Vihar	15.336	13
		Sarita Vihar - Badarpur	4.822	3
7.	Airport Express Line	High Speed Airport Metro Express Line - New Delhi Railway Station to Dwarka Sector - 21	22.909	6
		Sub Total (Delhi)	106.985	73
		In NCR		
1.	Line 2	Haryana Border - Huda City Center Gurgaon	7.05	5
2.	Line 3	New Ashok Nagar - Noida City Center, Noida	7	6
3.	Line 4	Anand Vihar - Vaishali	2.265	2
		Sub Total (NCR)	16.315	13
		Total	123.3	86

DMRC – PHASE III

- Construction of Phase-III of DMRC started in the year 2012 with a total project cost of ₹ 39,785 Cr out of which GNCTD share is ₹ 8,407 crore which has been released to DMRC.
- Total length of Phase-III is 160.07 Km (including 42.18 kms of NCR length) and has 109 numbers of stations. (Including 30 stations of NCR).
- Phase-III has been completed in the year 2021.

- The total length of metro lines Phase-I to Phase-III is 348.121 kms including 58.497 kms of length in NCR and 22.91 kms of Airport Line.

STATEMENT 12.4
DETAILS OF DMRC – PHASE III

S. No.	Line	Name of the Corridor	Length(Kms)	No. of Stations
1.	Line 2	Ext.: Jahangirpuri-Badli	4.373	3
2.	Line 5	Extn.:Mundka-Tikri Border	6.308	4
3.	Line 6	Ext: Central Sectt.-Kashmere Gate	9.272	7
4.	Line 7	Majlis Park- Shiv Vihar	59.242	38
5.	Line 8	Janakpuri West-Kalindikunj	33.499	23
6.	Line 9	Dwarka-Najafgarh	4.303	3
7.	Line 9	Extension to Dhansa Bus Stand	0.891	1
		Sub Total (Delhi)	117.89	79
		In NCR		
1.	Line 6	Extn: Badarpur-Faridabad	13.561	9
2.	Line 5	Extn.:Tikri Border- Bahadurgarh	4.875	3
3.	Line 6	Escorts Mujesar - Ballabhgarh	3.35	2
4.	Line 8	KalindiKunj – Botanical Garden	3.962	2
5.	Line 1	Dilshad Garden to New Bus Adda Ghaziabad	9.635	8
6.	Line 3	Noida City Centre to Noida Electronic City	6.799	6
		Sub Total (NCR)	42.18	30
		Total	160.07	109

DMRC – PHASE IV

- Phase-IV has two parts of 3 Corridors each. Construction of first 3 priority corridor started in the year 2020-21 with total project cost ₹ 24,949 Cr and GNCTD share is ₹ 5,887 Cr. which includes additional 244 cars. Out of which ₹ 3921.11 crore has been released to DMRC upto December 2022. However, DMRC has transferred back unspent amount of the project funds of ₹ 1,167.64 crore in FY 2022-23.
- After completion of Phase-IV, the total length of metro lines including NCR lines will be about 457 kms.
- DMRC has submitted DPR for remaining 3-corridors of Delhi Metro Phase-IV with the corridor between Rithala and Narela (METRO LITE) and Lajpat Nagar to Saket G-Block and Inderlok to Indraprastha being metro corridors.
- Now, it was decided, in the meeting held with MoHUA, to consider conventional metro system on Rithala - Narela Corridor.

STATEMENT 12.5
DETAILS OF DMRC - PHASE IV

S. No.	Name of the Corridor	Length (Kms)	No. of Stations
Phase – IV (First 3 priority corridor)			
1.	Majlis Park – Burari - Maujpur	12.318	8
2.	R.K. Ashram - Janakpuri (West)	29.262	22
3.	Aerocity - Saket - Tughlakabad	23.622	15
	Sub Total	65.202	45
Phase – IV (Other 3 corridors)			
1.	Lajpat Nagar - Saket G Block	12.377	10
2.	Inderlok - Indraprastha	8.385	8
3.	Rithala - Bawana – Narela (MET-RO LITE)	22.915	19
	Sub Total	43.677	37
	Total	108.879	82

2.7 Delhi Metro Rail Corporation

The average daily passenger journey recorded during 2021-22 is 25.16 lakh. In Delhi, the Metro Trains run from 6:00 AM in the morning till about 11:00 PM in the night. The train frequency varies from 2 minutes 44 seconds in peak time up to 10 minutes in non-peaks hours. The details regarding year-wise Average Daily Ridership/ Passenger Journey is presented in Statement 12.6

STATEMENT 12.6
AVERAGE DAILY RIDERSHIP/ PASSENGER JOURNEY AND ROLLING STOCK
(With Airport Line and Rapid Metro)

Year	Ridership	Operational Route (Km)	Rolling Stock (No. of Cars)
2013-14*	22,04,908	188.050	1,282
2014-15*	24,02,850	191.120	1,306
2015-16*	26,15,050	209.970	1,392
2016-17*	28,00,792	209.970	1,468
2017-18*	25,87,271	249.460	1,888
2018-19*	25,93,090	342.070	2188
2019-20**	27,80,000***	359.230	2,242
2020-21** (07.09.2020-31.03.2021)	8,78,000***	359.230	2,280
2021-22	25,16,068***	360.975	2282

* Including Airport Line. DMRC has taken over the operation from the close of business operating hours of 30.06.2013.

** Including Rapid Metro. DMRC has taken over the operation on 22.10.2019

*** Passenger Journey (Passenger Journey calculates a Metro journey in terms of the number of corridors used by a passenger.)

2.8 DMRC Feeder Bus Service

DMRC is in the process to procure 100 AC e-buses to be operated on 10 new routes under FAME-2 scheme. Out of these 100 buses, 62 buses are made operational by DMRC.

2.9 Regional Rapid Transit System (RRTS)

To address the issues, meet organic future demand as well as the mobility demand for unlocking economic potential of the NCR, National Capital Region Planning Board (NCRPB) had recommended development of multi-modal transport system with special emphasis on rail based high-speed, high-frequency Regional Rapid Transit System (RRTS) for connecting major regional centers in Functional Plan on Transport for National Capital Region-2032.

The regional rails are envisaged to run at the speed of 180 kmph on the line of European trains, caters to passenger services within a larger urban agglomerate or metropolitan area connecting the outskirts to the centre of the city. The services have greater number of halts at smaller distances compared to long distances stations on high-speed railway networks running at the speed of more than 300 kmph, but fewer halts and higher speeds compared to metro rail.

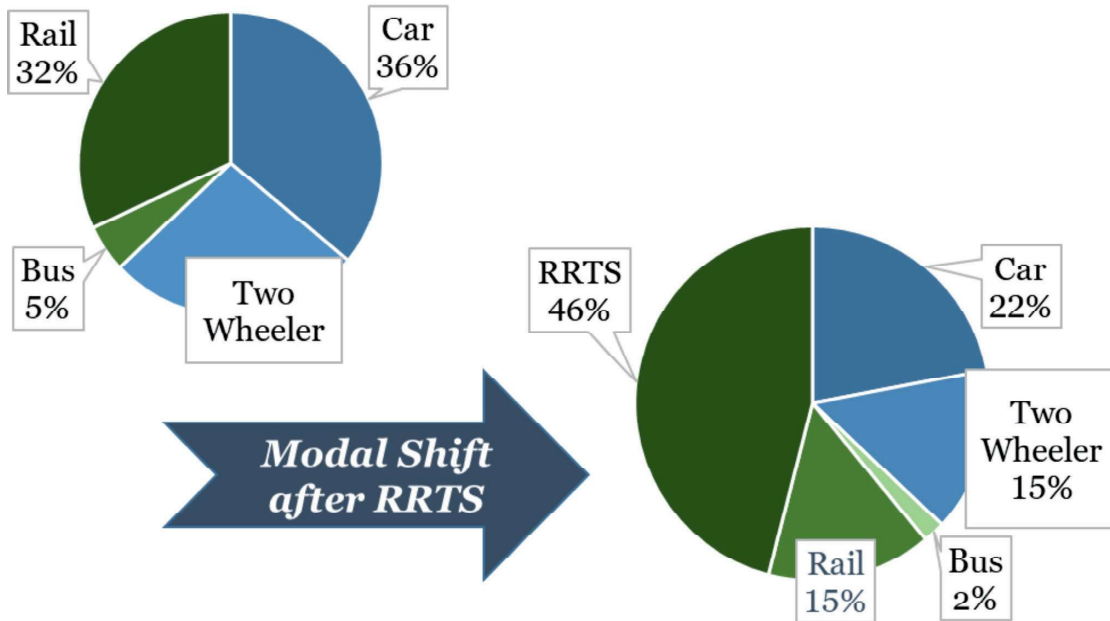
Regional rail is a new concept in India but common in large metropolitan cities to help in decongesting the city centre by providing safe and speedy access to the city centre for commuters residing in less congested suburbs.

The Task Force constituted by Planning Commission had identified 8 RRTS corridors in NCR, out of which three corridors were prioritized viz. Delhi – Meerut, Delhi – Alwar and Delhi – Panipat for implementation in Phase 1. The three prioritized RRTS projects are part of ‘Comprehensive Action Plan’ (CAP) for Air Pollution Control in Delhi & NCR’ and the recommendation of ‘High Powered Committee on Decongesting Traffic in Delhi’. Furthermore, all the three prioritized RRTS projects have been included in the National Infrastructure Pipeline (NIP).

RRTS will provide an integrated mobility solution for National Capital Region (NCR) supported by multimodal integration. It will bring in significant direct/indirect economic benefits, such as savings due to reduction in pollution, travel time, vehicle-operating costs, road stress and accidents by reducing congestion (increasing the modal share of public transport), agglomeration benefits, improved productivity output of labour and industries, indirect and induced employment and increase in GDP of the entire NCR.

RRTS stations will be seamlessly connected with other existing modes of public transit, wherever possible. Furthermore, use of renewable energy will be maximized to ensure that RRTS becomes the most energy efficient public transit system. Solar panels will also be installed at stations, depots, and other auxiliary buildings. New-age regenerative system will be used in RRTS trains, which will save about 30% of total traction electric energy.

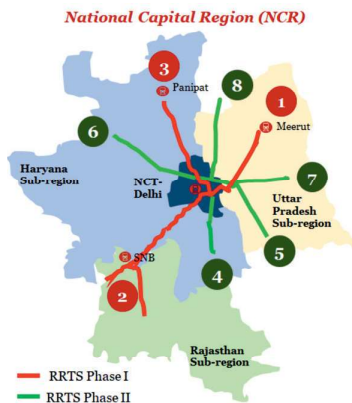
Share of Public Transport



Increase in share of public transport from 37% to 63%

Once completed, length of Delhi’s Mass transit system including DMRC and RRTS network phase-I will be 748Km which is more than the length of London Cross rail, Hong Kong MTR and Paris RER.

The three prioritized RRTS corridors are planned to originate from a common elevated terminus station Sarai Kale Khan in Delhi. Such a common terminus station will facilitate inter-connectivity/inter-operability among three corridors.

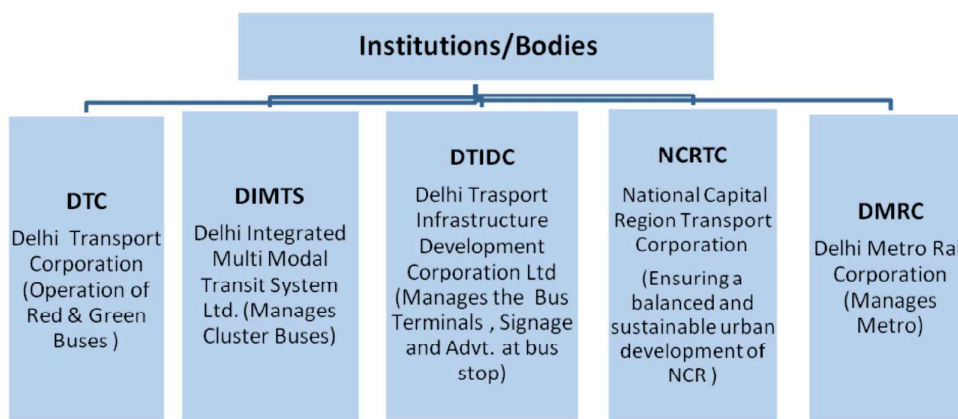


Delhi-Meerut RRTS Corridor: The Delhi-Meerut RRTS corridor is 82.15 km long corridor with 15 RRTS stations. The project completion cost is estimated at ₹ 30,274 crore and contribution of GNCTD is ₹ 1,180 crore. Project got sanctioned and approved by Government of India in March 2019. The first RRTS corridor has 25 stations and most of them will be interconnected with other mode of public transport at Sarai Kale Khan, New Ashok Nagar, Jangpura, and Anand Vihar, via Foot over Bridge, underpass, lifts, escalator and other possible means.

The civil construction work on the entire corridor is in full swing and on schedule. RRTS Priority Section from Sahibabad, UP to Duhai, UP will be Operational by June-2023. The commercial operation of complete Delhi-Meerut corridor is scheduled to be operational by June-2025. With RRTS, people will be able travel from Sarai Kale Khan (SKK) in Delhi to Modipuram within 55 minutes. Implementation of Delhi-Ghaziabad-Meerut RRTS Corridor is expected to shift the modal share in favor of public transport from 37% to 63% in the region, which ultimately helps in curbing pollution.

- Delhi-Gurgaon-Rewari-Alwar corridor: RRTS Corridor will be implemented in three stages (Stage-1: Delhi-Gurugram-SNB (Shahjahanpur-Neemarna-Behror) Urban Complex, Stage-2: SNB Urban Complex-Sotanala RIICO Industrial area and Stage-3: SNB Urban Complex-Alwar). Delhi-Gurugram-SNB corridor is being implemented in Stage-I of Delhi-Alwar corridor. This corridor will be around 106 km long and will have 16 RRTS stations. Delhi portion of the corridor is 21.67 km and will comprise of 04 stations. It will start from Sarai Kale Khan in Delhi and will end at SNB (in Rajasthan and will pass through INA, Aerocity, Gurugram, Manesar, Dharuhera etc. The project completion cost is estimated as ₹ 37,987 cr. and contribution of GNCTD is ₹ 3,261 cr. The project is under consideration for sanction by Government of India. Pre-construction activities in the project are in progress and construction will commence on sanction by Government of India. The DPR for SNB-Sotanala (Stage 2) has been approved by Board of NCRTC and submitted to the Government of Rajasthan for their approval.
- Delhi-Panipat RRTS Corridor: The total route length of the RRTS alignment is 103.02 kms with 17 RRTS stations. This RRTS corridor originates from Sarai Kale Khan Station in Delhi and ends at Panipat. The six stations proposed in Delhi at Sarai Kale Khan, Indraprastha, Kashmere Gate, Burari Crossing, Mukarba Chowk & Alipur. The proposed alignment passes through dense development of Delhi, Gannaur, Samalkha and Panipat regions.

3. Institutes and Bodies engaged in public Transport System



3.1 Delhi Transport Corporation (DTC) :

Govt. of NCT of Delhi release equity capital for procurement of buses and for development of infrastructural facilities to DTC. As on Dec, 2022 DTC has existing infrastructure of 40 depots. DTC has fleet size of 4010 buses, comprising 1256 AC low floor buses and 2504 Non-AC low floor buses and 250 AC low-floor (Electric) buses as on date 31.12.2022. DTC is the largest public transport entity in the NCR transporting about 15.62 lakh passengers in 2021-22 and covering 6.45 lakh km per day. DTC operates 31,834 (average) trips per day on about 461 city routes and 07 NCR routes.

3.2 Delhi Integrated Multi-modal Transit System Ltd (DIMTS) :

The Government of NCT of Delhi initiated the Scheme for Corporatization of Private Stage Carriage Service to substitute the Blue line private stage carriage system under Public Private Partnership (PPP) model. The Cluster Scheme is based on gross-cost model (OPEX MODEL) where fleet owners are remunerated on the basis of operational parameters irrespective of the fare box inflow. 3,319 cluster buses are in operation under 16 clusters in the NCT of Delhi as on date 31.12.2022.

3.3 Delhi Transport Infrastructure Development Corporation Limited (DTIDC) :

The Corporation has been created with the objectives of development, implementation, operation and maintenance of urban transport infrastructure. At present, three existing operational ISBTs situated at Kashmere Gate, Anand Vihar and Sarai Kale Khan are controlled by DTIDC.

3.4 National Capital Region Transport Corporation (NCRTC) :

A Memorandum of Understanding (MoU) was signed in 2011 between Government of India, and State Governments of National Capital Territory of Delhi, Haryana, Rajasthan and Uttar Pradesh (UP) for implementation of RRTS in NCR. Unlike metro rail projects, which are promoted by the respective State Governments, RRTS is a socially oriented, multi-state, central sector project being implemented in partnership with the State Governments.

NCRTC is mandated for implementing the Regional Rapid Transit System (RRTS) project across the National Capital Region, ensuring a balanced and sustainable urban development through better connectivity and access.

4. Achievement/ Progress of Major leading indicators

4.1 Motor Vehicles:

The total number of motor vehicles on road in NCT of Delhi on 2022 was 79.18 lakh, showing the decrease by 35.38% because Delhi government has banned Diesel

Vehicles of more than 10 year old and Petrol Vehicles of more than 15 year old hence GNCTD has deregistered 48,77,646 vehicles till 2021-22. The category-wise growth of motor vehicles in Delhi is presented in statement 12.7

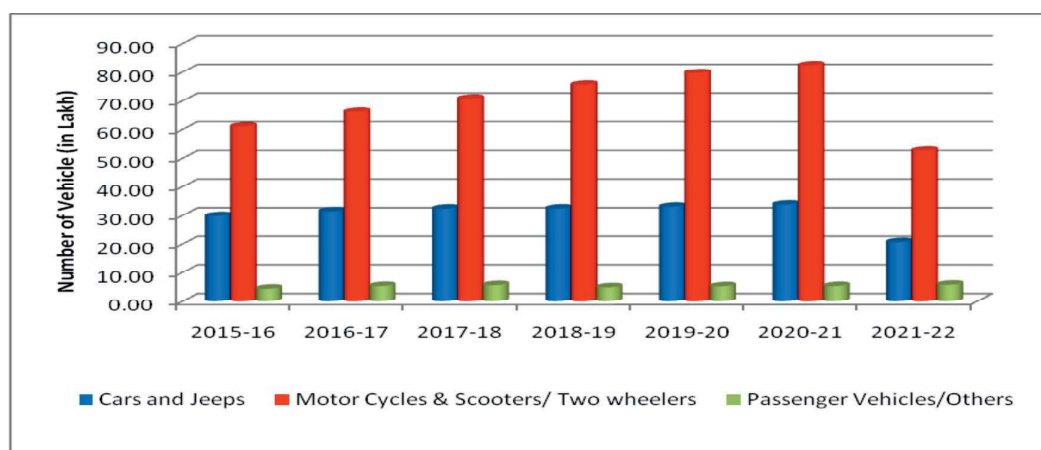
STATEMENT 12.7
YEAR WISE GROWTH OF VEHICLE POPULATION

S. No.	Details	Number of Vehicles						
		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
1.	Cars and Jeeps	29,86,579	31,52,710	32,46,637	32,49,670	33,11,579	33,84,736	20,76,113
2.	Motor Cycles & Scooters/ Two wheelers	61,04,070	66,07,879	70,78,428	75,56,002	79,59,753	82,39,550	52,68,685
3.	Ambulances	2,990	3,059	3,220	2,358	2,287	2,289	1,145
4.	Auto Rickshaws (Passenger)	1,98,137	1,05,399	1,13,074	1,13,240	1,14,891	1,14,869	93,578
5.	Taxis	91,073	1,18,308	1,18,060	1,09,780	1,22,476	1,12,401	85,033
6.	Buses	34,365	35,206	35,285	32,218	33,302	33,294	17,522
7.	Other Passenger Vehicles	6,368	59,759	76,231	81,422	85,477	91,887	1,14,504
8.	Tractors, Goods Vehicles (All Type) & Others	2,81,159	3,00,437	3,15,080	2,46,861	2,63,112	2,74,324	2,61,318
	Total	97,04,741	1,03,82,757	1,09,86,015	1,13,91,551	1,18,92,877	1,22,53,350*	79,17,898**

**Delhi government has banned Diesel Vehicles of more than 10 year old and Petrol Vehicles of more than 15 year old hence GNCTD has deregistered 48,77,646 vehicles till 2021-22.

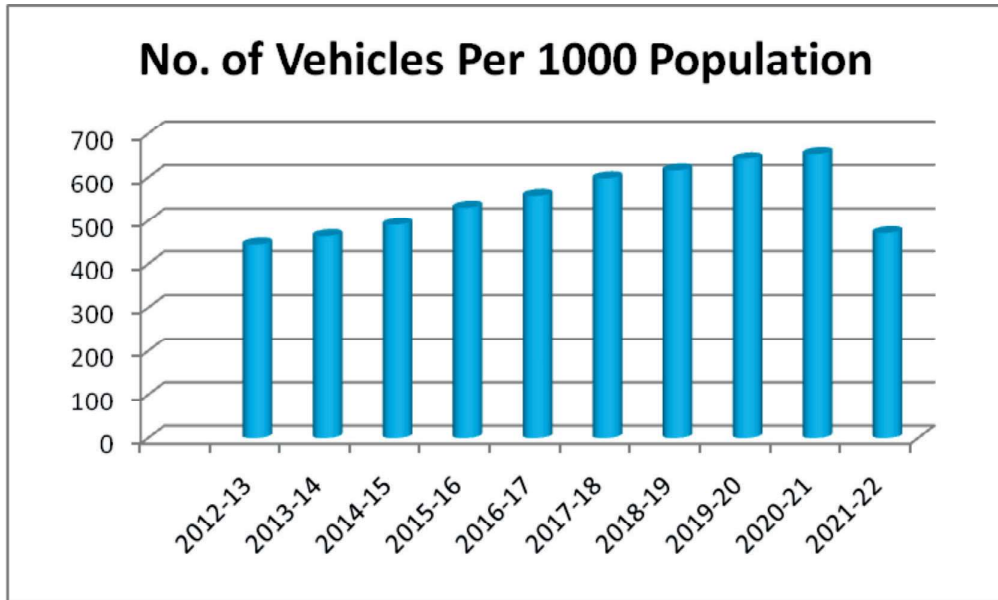
*Number of vehicles registered are excluding NOC, RC Cancellation, Surrendered, De-registered and Scrapped Vehicles (Record available in Vahan 4.0 database).

CHART 12.1
VEHICULAR GROWTH IN DELHI



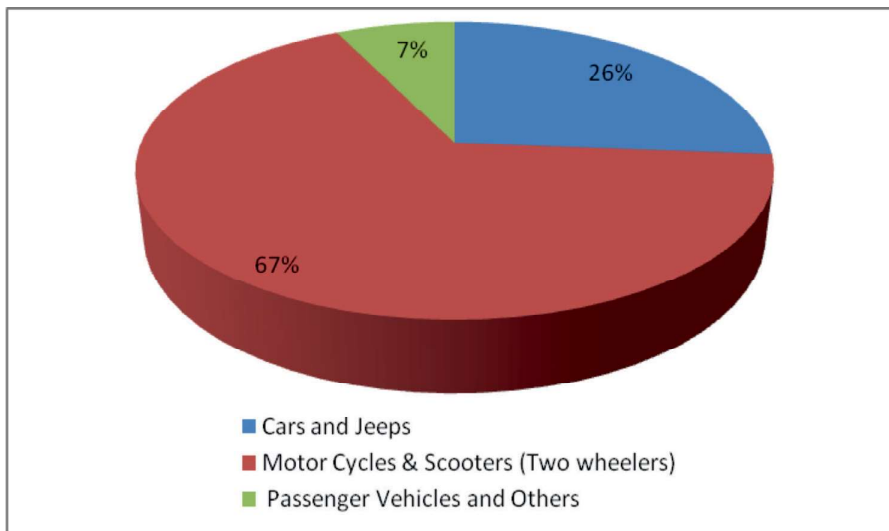
- During the period of 2021-22, the number of vehicles per thousand population is 472 which is decreased from 655 in 2020-21 due to scrapping policy of Diesel & Petrol Vehicles. The details regarding annual growth rate is presented in chart 12.2.

CHART 12.2
TRANSPORT TRENDS



- Delhi is a hub for personal motorized vehicles in India. Total motorized vehicles in Delhi are 79.18 lakh. Car and jeeps accounted for around 26% of the total registered motorized vehicles, whereas two wheelers are about 66.50% of total registered vehicles. Percentage of vehicles in Delhi during 2021- 22 is depicted in Chart 12.3.

CHART 12.3
PERCENTAGE OF VEHICLES POPULATION 2021-22



- There is a contradiction regarding the actual number of vehicles plying on Delhi's road as the large numbers of vehicles registered in Delhi are plying in NCR areas and vis-a-vis the vehicles registered in NCR are plying in Delhi.
- Transport Department is making efforts to estimate the actual number of vehicles in Delhi by taking into account vehicles that have outlived their life due to any account, transferred to and from other states etc.

4.2 Performance of Delhi Transport Corporation (DTC) Buses

DTC is the largest public transport entity in the NCR. DTC operates 4010 buses on 461 city routes and 7 NCR routes as on date 31.12.2022. DTC is also operating International Bus Service on Delhi–Kathmandu. Daily average passengers in DTC buses are about 15.62 lakh during 2021-22. The performance of DTC is presented in Statement 12.8 and activity wise status of DTC is presented in Statement 12.9.

STATEMENT 12.8
PERFORMANCE OF DELHI TRANSPORT CORPORATION (DTC)

S. No.	Years	Fleet (In No's)	Fleet Utilization (In %)	Vehicle Utilization (Km/Bus/Day)	Load Factor (In %)	Passenger Carried per bus daily (In No's)	Daily Average Passengers (In Lakh)
1.	2017-18	3,951	85.69	191	83.83	878	29.86
2.	2018-19	3,849	84.62	195	81.34	915	30.15
3.	2019-20	3,762	85.04	193	86.17	1,033	33.31
4.	2020-21	3,760	76.95	180	22.97	423	12.24
5.	2021-22	3,762	85.27	201.00	22.30	487	15.62

Source: Operational Statistics of DTC

STATEMENT 12.9
ACTIVITIES OF DELHI TRANSPORT CORPORATION: 2017-18 to 2021-22

S. No.	Details	Types	2017-18	2018-19	2019-20	2020-21	2021-22
1.	Total Buses in the Fleet (At the end)	Non- AC	2,506	2,506	2,505	2,504	2,504
		AC	1,275	1,275	1,257	1,256	1,256
		Standard	170	68	-	-	-
		Electric AC	-	-	-	-	2
		Total	3,951	3,849	3,762	3,760	3,762
2.	Buses on Road (Daily Average)	Non- AC	2,232	2,197	2,149	1,963	2,113
		AC	1,078	1,071	1,073	931	1,093
		Standard	92	27	-	-	-
		Electric AC	-	-	-	-	-
		Total	3,402	3,295	3,222	2,894	3,206
3.	Passengers (in Crore)	Non- AC	84.86	84.96	85.66	31.41	39.51
		AC	21.77	24.35	36.16	13.27	17.51
		Standard	2.35	0.74	-	-	-
		Electric AC	-	-	-	-	-
		Total	108.98	110.15	121.82	44.68	57.02

S. No.	Details	Types	2017-18	2018-19	2019-20	2020-21	2021-22
4.	Daily Average Passengers (in Lakh)	Non- AC	23.25	23.28	23.4	8.6	10.82
		AC	5.97	6.67	9.88	3.64	4.8
		Standard	0.64	0.2	-	-	-
		Electric AC	-	-	-	-	-
		Total	29.86	30.15	33.29	12.24	15.62
5.	Kilometer operated (in Crore)	Non- AC	15.78	15.68	14.96	12.3	15.19
		AC	7.41	7.57	7.76	6.69	8.36
		Standard	0.54	0.15	-	-	-
		Electric AC	-	-	-	-	-
		Total	23.73	23.4	22.72	18.99	23.55
6.	Kilometer operated Daily Average (in lakh)	Non- AC	4.32	4.3	4.09	3.37	4.16
		AC	2.03	2.07	2.12	1.83	2.29
		Standard	0.15	0.04	-	-	-
		Electric AC	-	-	-	-	-
		Total	6.5	6.41	6.21	5.2	6.45
7.	Break-down per 10000 buses	Non- AC	713	710	806	472	766
		AC	923	898	1029	627	885
		Standard	730	735	-	-	-
		Electric AC	-	-	-	-	-
		Total	780	781	880	522	807
8.	Accidents	Non- AC	75	79	83	55	65
		AC	43	45	35	12	30
		Standard	3	1	-	-	-
		Electric AC	-	-	-	-	-
		Total	121	125	118	67	95
9.	Inter-State Bus Route Service	-	8	8	7	7	7
10.	D.T.C. Work Shops	-	2	2	2	1	1
11.	D.T.C. Depots	-	39	39	35	35	36

Government is providing various concessions in the bus fares to students, senior citizens, disabled, freedom fighters etc in DTC and Cluster Buses. The concession amount is reimbursed by GNCTD. The Govt. of NCT of Delhi has disbursed an amount of ₹ 168.94 Crore for DTC concessional passes (₹ 38.46 Crore) & for Female commuters (₹ 130.48 Crore) during 2021-22.

Performance of Cluster Buses

Cluster Buses: The Government of NCT of Delhi initiated the Scheme in 2011- 12 for Corporatization of Private Stage Carriage Service to substitute the Blue line private stage carriage system under Public Private Partnership (PPP) model. 3319 cluster buses are in operation under 16 clusters in the NCT of Delhi as on date 31.12.2022. Electronic Ticketing Machine (ETMs) based automatic fare collection system (AFCS) in Cluster Buses has been fully implemented. Department of Transport has initiated the trial of Contactless Mobile Ticketing in 497 Cluster buses w.e.f. 05.08.2021. It has been further extended on all the cluster buses from 01.03.2021 onwards. Daily

average passengers in Cluster buses are about 9.87 lakh during 2021-22. An amount of ₹ 126.90 Crore has been disbursed for Female commuters in Cluster Buses during 2021-22. The performance data of the cluster buses are given under:

STATEMENT 12.10
PERFORMANCE OF CLUSTER BUSES

S. No.	Years	Fleet (No)	Fleet Utilization (In %)	Vehicle Utilization (Km/Bus/Day)	Load Factor* (In %)	Passenger Carried per bus daily	Daily Average Passengers (In Lakh)
1.	2017-18	1744	97.16	205.15	81	753	11.65
2.	2018-19	1,803	98.66	211.02	88	760	12.24
3.	2019-20	2,910	96.48	202.10	89	841	17.71
4.	2020-21	3,191	98.88	214.05	67	308	8.51
5.	2021-22	3310	99.01	217.10	68	351	9.87

* LF is calculated using Central Institute of Road Transport (CIRT) Formula,
Source: DIMTS Ltd.

4.3 Installation of CCTV Cameras in DTC and Cluster Buses

Hardware installation (3 IP CCTV Cameras, 7" screen, 10 Panic Buttons, Hooter & Strobe, two-way communication for driver and conductor seat, mNVR with GPS device in each bus) completed in all Cluster buses, however the work in 43 DTC buses has been remained.

4.4 Augmentation of DTC Night bus service (11 PM – 5 AM)

Gender Sensitization Program for bus crew undertaken by DTC is also being conducted on a regular basis or safety of women passengers. 88 buses are running on 27 routes. 30 Ladies Special Buses are also being plied during peak hours on 30 routes. 25% seats have been reserved for women in stage carriage buses (i.e. Low floor buses – 10 seats, & standard floor buses – 12 seats. Comparative detail for the years 2019-20 to 2021-22 is presented in Statement 12.11.

STATEMENT 12.11
PERFORMANCE OF DTC BUSES

Details	2019-20	2020-21	2021-22
Number of Buses in Night Bus Service	88	88	88
Number of routes of Night Bus Service	27	27	27
Number of Civil Defense Marshals & Home guards	7,835	9,286	8968*
Number of Ladies Special bus routes	30	30	30
Percentage of seats reserved for ladies	25	25	25

*7938 Marshals & Home Guards in DTC buses and 1,030 in Cluster buses

4.5 Deployment of Marshals in Buses

The Govt. of NCT of Delhi has decided to depute “Marshals” in all DTC & Cluster buses in both shifts from 29.10.2019. As on 30.09.2022, 7938 marshals & Home Guards in DTC and 3,296 marshals in Cluster buses were deployed for women safety and security.

5. Ongoing schemes and new Initiatives:

5.1 Electric Vehicle Policy

The policy aims to encourage the rapid adoption of Electric Vehicles in Delhi and establishing a necessary charging infrastructure for electric vehicles at an accelerated pace through implementation of Purchase incentives, Scrapping incentives, Interest subvention on loans, Waiver of road tax and registration fees and Establishment of network of charging & swappable batteries stations. Software has been launched for disbursement of purchase incentive & scrapping incentive.

The policy also seeks to put in place measures to support the creation of jobs in driving, selling, financing, servicing and charging of Electric Vehicles. The department has been disbursing incentives since 22nd October, 2020 since the opening of the scheme. 52,683 vehicles have been provided subsidies under the scheme.

5.2 Subsidy to E-rickshaw: E-rickshaw subsidy is also made fully online for the E-rickshaws registered w.e.f. 07.08.2020 and subsidy is being disbursed to the beneficiaries from that day onwards under the Delhi EV policy.

5.3 Last Mile Connectivity by E-rickshaw: 1,14,848 E-rickshaws have been registered upto December, 2022 for improving first & last mile connectivity in Delhi.

5.4 Sales of EVs : Total sales of EVs w.e.f. 07/08/2020 to till Dec, 2022 is 93,160.

5.5 E-Auto: To promote the operation of e-vehicles in order to minimize the pollution in GNCTD wherein LOI have been allotted against 9261 e-autos out of which 1053 e-autos are registered.

5.6 WhatsApp Chatbot- A whatsapp chatbot has been launched by the Department to disseminate information and promote the usage of EVs in Delhi. Citizens can send “Hi” or a “Hello” to 9810336008.

5.7 E-cycle -Further to its endeavour of making the policy inclusive, the Transport Department included e-cycles (Passenger and Cargo) vide its notification on 05.04.2022. Subsidy on passenger e-cycles is 25% of MRP upto a maximum of ₹5,500 per e-cycle with an additional incentive of ₹ 2,000/- for first 1,000 e-cycles for individuals and a subsidy of 33% of MRP upto a maximum of ₹ 15,000 per e-cargo cycles with additional ₹ 3,000 as scrap incentive.

e-Vehicle registered upto 2021-22	Numbers
Total number of e-Vehicle	34,493
e-two wheeler	14,257
e-rickshaw/ e-Auto/ e-cart	15,952
e-car	2,273
Other e-vehicles	2011

5.8 Following initiatives have been taken to foster the adoption of EV Charging and Swapping Infrastructure in the NCT of Delhi

- Department of Transport, GNCTD has prepared a comprehensive EV Charging & Swapping Infrastructure Action Plan for the deployment of 18,000 Public EV charging points across Delhi within 3 years.
- 'One Delhi' Mobile App facility has been provided to the consumers to locate public EV charging stations and battery swapping stations.
- Department of Transport, GNCTD has set in place an open, publicly owned database as per the mandate of the policy.

5.9 Status on Charging Infrastructure

- Total of 3,734 numbers of charging points (at 2610 locations) and 234 battery swapping stations are operational in Delhi by 31.12.2022.
- Under the Single window facility total of 1,249 charging points at 498 locations across Delhi have been installed (252 nos. private and 997 numbers are semi-public). GNCTD is providing ₹ 6,000 per charging point subsidy to slow chargers (LEVAC and Type 1 AC001 chargers) under single window mechanism managed by DISCOMs operating in Delhi.
- Total 100 nos. of concessional land packages are being provided to the Energy Operator Presion or Charge Point Operators (CPOs) for the installation of total 896 nos. EV charging points (426 chargers) and 103 nos. of Battery swapping stations.

5.10 Summary of EV Charging

Type of Charging Points	Numbers
Fast Charging Points (Public)	232
Slow Charging Points (Public)	2,085
Slow Charging Points (Private and Semi-Public) under single window mechanism	1,249
Total Charging Points	3,566
Total Battery Swapping Stations	234

5.11 Electric Buses

- Department of Heavy Industry formulated a Scheme viz. Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme in the year 2015 to promote manufacturing of electric and hybrid vehicle technology and to ensure sustainable growth of the same. GNCTD has decided to engage pure electric buses in Delhi which will go a long way to reduce overall vehicular emissions in Delhi. Ministry of Heavy Industries & Public Enterprises, GoI conveyed the approval of the competent authority to extend financial support for deployment of 300 electric buses on operational cost Model under phase-II of FAME India scheme to DTC.
- It was decided to induct a total of 4005 e-buses in DTC and Cluster Scheme. It has also been proposed that now onwards all the buses whether new or being replaced, shall be e-buses. To achieve this, it has proposed to electrify 41 DTC Depots (3 already electrified) and 8 Cluster Depots (2 already electrified).

6. Free Travel for Women

The free travel facility for women in DTC/ Cluster buses has been given by GNCTD from 29.10.2019. A single journey based pass of ₹ 10/- for both AC and Non-AC buses is being issued in the form a similar size of ticket currently being distributed in the colour "Pink". DTC is printing these passes and issues to DIMTS for cluster buses and proper accounting of these tickets is being maintained by both the DTC & DIMTS. During 2021-22, 13.01 Crore women passengers traveled free in DTC and Cluster buses for which ₹ 130.48 crore and ₹ 126.90 crore given to DTC and Cluster buses respectively towards subsidy.

7. Reform Package of Transport Services

The Transport Department has taken up a major initiative to provide all public services in faceless manner. The applicants will be required to have physical visit only for the purpose of taking a driving test or fitness of vehicle. It has resulted in minimizing the department's manual interface with public.

- 7.1 Induction of Women drivers:** Transport Department is providing free training for Heavy Motor Vehicles for induction into DTC and Cluster bus fleet and many women drivers have been inducted into DTC. Similarly, sanctions have been accorded for providing free LMV training to women for induction as driver in Cab aggregators like Blusmart, Ola, Uber etc.
- 7.2 Faceless Services:** Currently, 47 services (12 RC services, 17 Permit and Fitness Services in First Phase with 2 services, i.e (a) Issuance of Lol for replacement of Vehicle

(b) No dues certificate for PSV replacement, are under process in Second Phase and 16 DL services in First Phase) have been completely switched to faceless delivery mode and more than 26 lakh applicants have been benefitted from this programme till December, 2022. The remaining 2 services shall also be made available in faceless manner very soon. It has resulted in minimizing the department’s manual interface with public.

As an e –Governance initiative, all the public services provided by Transport Department in the areas of Registration of Vehicles, issuance of Driving Licenses, issuance of Permits, Collection of Road Tax, allotment of Fancy/Choice Registration Number for vehicles, issuance of Fitness Certificates, Issuance of Pollution Under Control Certificates etc. have been made faceless.

7.3 Now, online learner license test and issuance of e-learner license is done on the spot after clearing the on-line test. Dealers of Private Vehicles (2 wheelers and 4 wheelers) have been empowered as registering authorities which results in getting the registration certificate instantly from the Dealers while taking delivery of the new vehicle by the vehicle owner. Further all the Registration Certificates and Driving Licenses have been made available in electronic form in mParivhan mobile app and in DigiLocker.

7.4 Automated Driving Test Tracks: ADTTs have been established for taking Driving Skill Tests of the DL applicants which are fully equipped with CCTVs, Sensors etc. There is no human intervention in these Driving Skill Testes. 12 driving test tracks in Delhi have already gone automatic. The only remaining 13th ADTT at Lado Sarai centre is at final stage.

CHAPTER AT A GLANCE

➤	An integrated transportation strategy is most needed so that various modes of transport are integrated efficiently to facilitate the sustainable transportation.
➤	As on Dec, 2022 there are 23 Cluster bus depots and 40 DTC bus depots in which one DTC depot namely Sawada Ghevra is under construction and one DTC depot namely Central Workshop-II Okhla is under renovation/up gradation.
➤	The Mass Rapid Transit System (MRTS) is an ambitious project that aims at providing a non-polluting and efficient rail-based transport system, properly integrated with the road transport system.
➤	Regional rail is a new concept in India but common in large metropolitan cities to help in decongesting the city centre by providing safe and speedy access to the city centre for commuters residing in less congested suburbs.

➤	As on Dec, 2022 DTC has existing infrastructure of 40 depots. DTC has fleet size of 4010 buses, comprising 1256 AC low floor buses and 2504 Non-AC low floor buses and 250 AC low-floor (Electric) buses as on date 31.12.2022.
➤	The Government of NCT of Delhi initiated the Scheme for Corporatization of Private Stage Carriage Service to substitute the Blue line private stage carriage system under Public Private Partnership (PPP) model.
➤	The Govt. of NCT of Delhi has decided to depute “Marshals” in all DTC & Cluster buses in both shifts from 29.10.2019. As on 30.09.2022, 7938 marshals & Home Guards in DTC and 3,296 marshals in Cluster buses were deployed for women safety and security.
➤	Electronic Vehicle policy aims to encourage the rapid adoption of Electric Vehicles in Delhi and establishing a necessary charging infrastructure for electric vehicles at an accelerated pace through implementation of Purchase incentives, Scrapping incentives, Interest subvention on loans, Waiver of road tax and registration fees and Establishment of network of charging & swappable batteries stations.