MINISTRY OF URBAN DEVELOPMENT
(DELHI DIVISION)

NOTIFICATION

New Delhi, the _____th March, 2015

S.O. …… (E).- Whereas, certain modifications which the Central Government proposed to make in the Master Plan for Delhi-2021 as part of its review exercise which were published in the Gazette of India, Extraordinary, as Public Notice S.O.2975 (E) dated 26th November, 2014 by the Delhi Development Authority in accordance with the provisions of Section 44 of the Delhi Development Act, 1957 (61 of 1957) inviting objections / suggestions as required by sub-section (3) of Section 11-A of the said Act, within forty-five days from the date of the said notice.

2. Whereas, objections/suggestions received with regard to the proposed modifications have been considered by the Board of Enquiry and Hearing, setup by the Delhi Development Authority and also approved at the meeting of the Delhi Development Authority.

3. Whereas, the Central Government has, after carefully considering all aspect of the matter, decided to modify the Master Plan for Delhi-2021.

4. Now, therefore, in exercise of the powers conferred by sub-section (2) of Section 11-A of the said Act, the Central Government hereby makes the following modifications in the said Master Plan for Delhi-2021 with effect from the date of publication of this Notification in the Gazette of India.

MODIFICATIONS TO RELATED CHAPTERS IN MPD-2021

Modifications to Chapter 3.0 DELHI URBAN AREA-2021, MPD-2021		
3.3 REDEVELOPMENT OF EXISTING URBAN AREA		
S. no	**Existing Provision**	**Proposed Amendment**
1	**2**	**3**
1	**3.3.1 REDEVELOPMENT STRATEGY** The target areas for redevelopment will have to be identified on the basis of their need for up-gradation and potential for development. Redevelopment Schemes will be prepared by the respective local body / land owners / residents. The concerned local body should promote private land owners to take up assembly and redevelopment of a minimum area of 4 hectares. Some of the areas identified are:	**3.3.1. REDEVELOPMENT STRATEGY** The target areas for redevelopment will have to be identified on the basis of their need for up-gradation and potential for development. Redevelopment Schemes will be prepared by the respective local body / land owners / residents. The concerned local body should promote private land owners to take up assembly and redevelopment of **land as per the criteria below.** Some of the areas identified are:
2	**3.3.1.1 Planned Areas** **A. Influence Zone along MRTS and major Transport Corridor** Growth of Delhi over the years has been	**3.3.1.1 Planned Areas** **A. Influence Zone along MRTS Corridors** **The g**rowth of Delhi **has** over the years has

	on the ring and radial pattern with reliance on road based public transport. The development envisaged by the previous Plans was poly nodal with hierarchy of Commercial Centres located either on ring or radial roads. The proposed MRTS network will bring sizable urban area within walking distance from the proposed stations. This will have an impact on the existing structure of the city and consequently its development. This changed scenario provides opportunities for city restructuring and optimum utilization of the land along the MRTS corridors. In this process, a sizable proportion of the additional population with requisite facilities and employment can be absorbed along these corridors. Influence Zone along MRTS corridor is envisaged as intensive development zone. The scheme for Redevelopment of Influence Zone shall be prepared on the basis of the following: i) Maximum upto 500 m. wide belt on both sides of centre line of the MRTS / Major Transport Corridor (to be identified in consultation with GNCTD) will be designated as Influence Zone which will be identified in the respective Zonal Development Plans. ii) Entire approved layout plan of a scheme will be included in the zone if more than 70% of the plan area falls inside the influence zone. In case of large schemes, block / pocket boundary should be considered as one scheme for this purpose. iii) The approval of schemes will be granted only after commencement of execution of the respective phase of MRTS. iv) Development Controls applicable will be as permissible for the respective use zones / use premises. v) Higher FAR and height can be availed of through the preparation and approval of comprehensive integrated scheme. vi) In the proposed Urban Extension areas the land uses will be integrated with the proposed movement corridors at planning stages only. vii) The following areas shall be excluded	been on the ring and radial pattern with reliance on road based public transport. The development envisaged by the previous Plans was poly nodal with **a** hierarchy of Commercial Centres located either on ring or radial roads. The proposed MRTS network will bring sizable urban area within walking distance from the proposed stations. This will have an impact on the existing structure of the city and consequently its development. This changed scenario provides opportunities for city restructuring and optimum utilization of the land along the MRTS corridors. In this process, a sizable proportion of the additional population with requisite facilities and employment can be absorbed along these corridors. Influence Zone along MRTS corridor is envisaged as intensive development zone. **The concept of Transit Oriented Development shall be adopted for development within the Influence Zone, such that maximum number of people can live, work or find means of recreation within walking/cycling distance of the MRTS corridors/ stations.** The scheme for **Development/** Redevelopment of Influence Zone shall be prepared on the basis of the following: **i)** **About** 500 m. wide belt on both sides of centre line of the **existing and planned/approved MRTS** Corridor**s** will be designated as Influence Zone which will be identified in the respective Zonal Development Plans, except for those corridor lying within the land pooling area and Low Density Residential Area (LDRA) of Urban Extension**..** ii) Entire approved layout plan of a scheme will be included in the zone if more than **50**% of the plan area falls inside the influence zone. In case of large schemes, block/ pocket boundary **may** be considered as one scheme for this purpose. iii) The approval of schemes will be granted

	from the enhancement of FAR:- - Lutyens' Bungalow Zone, Chanakya Puri., DIZ Area and Matasundari Area. - Civil Lines Bungalow Area. - Monument Regulated Zone (As per ASI guidelines). - Comprehensive commercial schemes.	after **the approval/ notification** of the respective phase of MRTS. iv) Development Controls applicable will be as permissible **TOD Zone specified in Chapter 12.0 and 17.0.** v) Higher FAR and height can be availed of through the preparation and approval of comprehensive integrated scheme. **vi) This TOD zone may be also used as TDR absorption zone.** **vii) TOD norms will not be applicable to the following areas:** - Lutyens' Bungalow Zone, Chanakya Puri - Civil Lines Bungalow Area. - Monument Regulated Zone (As per ASI guidelines). - **Zone-O**
3	**3.3.2 GUIDELINES FOR REDEVELOPMENT SCHEMES** The basic objective of redevelopment is to upgrade the area by implementing specific schemes on the basis of existing physical and socio-economic conditions in the following way: i) Influence Zone along MRTS Corridor and the Sub-Zones for redevelopment and renewal should be identified on the basis of physical features such as metro, roads, drains, high tension lines and control zones of Monuments / Heritage areas, etc. ii) The residents / cooperative societies / private developers should get the layout and services plan prepared in consultation with the concerned authority for approval. iii) Within the overall Redevelopment / Regularisation plans, building plan approval shall be at following two stages: a) Planning Permission for an area of around 4 Ha. This permission may not be required in case an approved layout/ Redevelopment/ Regularisation plan exists. b) 1. Cluster Block for a	**3.3.2. REGULATIONS** FOR REDEVELOPMENT SCHEMES The basic objective of redevelopment is to upgrade the area by implementing specific schemes on the basis of existing physical and socio-economic conditions in the following way: **i)** Influence Zone along MRTS Corridor and the Sub-Zones for redevelopment and renewal should be identified on the basis of physical features such as metro, roads, drains, high tension lines and control zones of Monuments / Heritage areas, etc. **and designated as TOD Zone with additional norms applicable as per Section 12.18.** ii) The residents / cooperative societies / private developers should get the layout and services plan prepared in consultation with the concerned authority for approval. iii) Within the overall Redevelopment / Regularisation plans, building plan approval shall be at following two stages: a) Planning Permission for an area of around 4 Ha. **However, in TOD Zone, comprehensive schemes shall be considered for a minimum area of 1Ha.** This permission may not be required in

	minimum area of 3000 sq.m. The owners should pool together and reorganise their individual properties so as to provide minimum 30% of area as common green / soft parking besides circulation areas and common facilities. 2. Individual buildings shall be given sanction by the concerned authority within the framework of cluster block approval. c) The norms of Group Housing with respect to ground coverage, basement, parking, set backs etc. (except FAR) shall be applicable. iv) Amalgamation and reconstitution of the plots for planning purpose will be permitted. v) To incentivise the redevelopment a maximum overall FAR of 50% over and above the existing permissible FAR on individual plots subject to a maximum of 400 shall be permissible. Higher FAR shall however not be permissible in redevelopment of Lutyens Bungalow Zone, Civil Lines Bungalows Area and Monument regulated Zone. vi) In case of plots with service lanes, the lane area may be included in the scheme. However, no FAR / coverage will be granted and the area shall be used as public area. vii) The standards of housing density, minimum width of roads and community facilities can be relaxed, wherever justified, by planning considerations (e.g., pedestrianization of the area). viii) The Public and Semi-public uses and services like hospitals / tertiary health care centres, dispensaries, colleges, schools, police stations, fire stations, post offices, local government offices, parking etc. shall be retained in their present locations as far as possible and if not, relocated as part of the redevelopment scheme. Alternative	case an approved layout/ Redevelopment/ Regularisation plan exists. b) 1. Cluster Block **approval may be given to DE** for a minimum area of 3000 sq.m. **only if an approved influence zone plan or integrated scheme for the area exists**. The owners should pool together and reorganise their individual properties so as to provide minimum 30% of area as common green / soft parking besides circulation areas and common facilities. • **In TOD Zone, 20% of the public recreational/ open space which shall be designed, developed and maintained by the DE and will remain open for general public at all times, failing which it will be taken over by Public agency. The location of such space will be tentatively indicated in the plan as mentioned in clause 12.18.1.** • **At least 20% of land shall be handed over as constructed roads / circulation areas to the Government/ local body for public use. However FAR can be availed on the entire amalgamated land parcel.** • **Land to be surrendered as roads/ public spaces to the extent of at least 10% shall be along one side, to be consolidated with the adjacent plot wherever applicable.** 2. Individual buildings shall be given sanction by the concerned authority within the framework of cluster block/ **integrated scheme** approval. **Single window clearance software may be used for approval of TOD projects which shall be notified by DDA separately.** c) The norms of **Group Housing** with respect to ground coverage, basement, parking, setbacks etc.

	sites shall be indicated in the Redevelopment Schemes / Zonal Development Plans. Any change or addition thereof shall be in accordance with the overall policy frame prescribed in the plan. ix) Reduced space standards may be adopted for community facilities / social infrastructure for the areas mentioned in 4.2.2.2 B sub para (ii) 'social'. The land required for any public purpose may be acquired with the consent of the owner through issue of Development Rights Certificate in lieu of payment towards cost of land as per the prescribed regulations. The concept of Accommodation Reservation i.e. allowing construction of community facilities without counting in FAR may also be utilized. x) Subject to preparation and approval of integrated / comprehensive Redevelopment schemes and provision of parking and services, up to 10% of the FAR may be allowed for commercial use and 10% of the FAR for community facilities with a view to trigger a process of self-generating redevelopment. xi) The circulation pattern should include segregation of pedestrian and vehicular traffic, entry control, access of emergency vehicles to every block, provision of adequate parking etc. xii) Appropriate levies for increased FAR, and landuse conversion shall be charged from the beneficiaries by the competent authority as per prevailing rules / orders. xiii) Urban Design and Heritage to be ensured as per the guidelines. xiv) The land use shall be governed as per the Master Plan / Zonal Development Plan. The non-residential use will be permitted as per the provisions of the Mixed Use Regulations and Special Area Regulations.	(except FAR) shall be **applicable in all areas except TOD Zone where TOD norms shall be applicable.** iv) Amalgamation and reconstitution of the plots for planning purpose will be permitted. v) To incentivise the redevelopment a maximum overall FAR of 50% over and above the existing permissible FAR on individual plots subject to a maximum of 400 shall be permissible **in all redevelopment projects, except in TOD Zone where TOD norms shall be applicable.** Higher FAR shall however not be permissible in redevelopment of Lutyens Bungalow Zone, Civil Lines Bungalows Area and Monument regulated Zone. vi) In case of plots with service lanes, the lane area may be included in the scheme. However, no FAR / coverage will be granted and the area shall be used as public area. vii) The standards of housing density, minimum width of roads and community facilities can be relaxed, wherever justified, by planning considerations (e.g., pedestrianization of the area). viii) The Public and Semi-public uses and services like hospitals, dispensaries, colleges, schools, police stations, fire stations, post offices, local government offices, parking etc. shall be retained in their present locations as far as possible and if not, relocated as part of the redevelopment scheme. Alternative sites shall be indicated in the Redevelopment Schemes / Zonal Development Plans. Any change or addition thereof shall be in accordance with the overall policy frame prescribed in the plan. ix) Reduced space standards may be adopted for community facilities / social infrastructure for the areas mentioned in 4.2.2.2 B sub para (ii) 'social'. The land required for any public purpose may be acquired with the consent of the owner through issue of Development Rights Certificate in lieu of payment towards cost of land as per the prescribed regulations. The concept of Accommodation Reservation i.e. allowing construction of community

		facilities without counting in FAR may also be utilized. x) Subject to preparation and approval of integrated/comprehensive Redevelopment schemes and provision of parking and services, **a minimum** 10% of the FAR may be for commercial use and 10% of the FAR for community facilities with a view to trigger a process of self-generating redevelopment. • **In addition, within TOD Zone, a minimum of 30% of overall FAR shall be mandatory for Residential use. This component comprises of 50% units of size ranging between 32-40 sq.m. and the balance 50% comprising of homes ≤65 sq.m. Indicative mix of uses within Zonal Plan landuses falling within TOD Zone are shown in Table 12.8.** xi) The circulation pattern should include segregation of pedestrian and vehicular traffic, entry control, access of emergency vehicles to every block, provision of adequate parking etc. xii) Appropriate levies for increased FAR, and landuse conversion shall be charged from the beneficiaries by the competent authority as per prevailing rules / orders. xiii) Urban Design and Heritage **Conservation** to be **ensured** as per the **regulations/** guidelines. xiv) The land use shall be governed as per the Master Plan / Zonal Development Plan. The non-residential use will be permitted as per the provisions of the Mixed Use Regulations and Special Area Regulations. **The MRTS Influence Zone shall be designated as TOD Zone and norms shall be applicable as per Section 12.18.**

Modifications to Chapter 4.0 Shelter, MPD-2021

Annexure- 4.0 (I)

S. no	Existing Provision	Proposed Amendment
1	i) In case if Metro Corridor is passing through villages in LDRA, development along Metro Corridor and Metro influence zone shall also be allowed in LDRA villages as per TOD policy.	**Transit Oriented Development (TOD) policy would not be applicable to the influence zone of MRTS corridors lying within the villages falling in Low Density Residential Area.**

12.0 TRANSPORTATION

The period between 1981 and 2001 and subsequently 2011 has seen a phenomenal increase in the growth of vehicles and traffic in Delhi. There has been a rise in per capita trip rate (excluding walk trips) from 0.72 in 1981 to 0.87 in 2001 and exponentially more in 2011. Keeping in view the population growth, this translates into an increase from 45 lakh trips to around 118 lakh trips in 2001 and 144 lakh trips till 2008. As per the Transport Demand Forecast Study (TDFS) undertaken by GNCTD and approved by the UTTIPEC in 2011, it is seen that between 2001 and 2008, the private motor vehicle trips have increased from 28% to 35% and non-motorized vehicle trips from 9% to 15%, however bus trips have unfortunately decreased from 60% to 42% of the total number of trips.

Besides the above, Delhi has developed as a seamless city and an urban continuum comprising of a number of rapidly growing towns in Haryana and UP. This has added to the flow and movement of traffic within Delhi.

Despite measures by way of increasing the length of the road network and road surface space through widening, construction of a number of flyovers / grade separators and, launching of the Metro, the traffic congestion has continued to increase unabated. This has its inevitable consequences in terms of accidents, pollution, commuting time, and wasteful energy / fuel consumption.

Based on the rate of increase in the number of trips between 1981 and 2001/2011, it is estimated that the total trips would rise to 280 lakh by the year 2021, including 257 lakh motorized trips and 23 lakh non-motorized trips. In this context, it needs to be noted that roads already occupy approx. 21 percent of the total area of the city, which clearly limits the potential for increase in road space.

Apart from the problems and requirements of transportation at the macro level, there are special problems in specific areas, particularly the old city, which deserve special attention. Special requirements also tend to arise from the mega events such as the Commonwealth Games.

The plan and strategy for transportation will have to be worked out in this background. The broad aim of this would be to ensure safe and economical commuting between place of origin and destination, convenient and quick access to all areas for all sections of the society, reduction of pollution and congestion, energy efficiency and conservation, safety for all sections of the road and transport users and, towards meeting these objectives, providing a significant increase in efficient rapid public transport systems and facilities with a corresponding reduction in individual private transport usage. This is in addition to pedestrianisation and properly planned use of non-motorised transport systems throughout the city.

The National Urban Transport Policy, 2006 had also recognized that ‘people occupy center stage in our cities and all plans would be for their common benefit and well being and recommended to make our cities most liveable and to allow the cities to evolve into an urban form that is better suited to support the main socio-economic activities that take place in the city’. In addition, the National Mission on Sustainable Habitat (NMSH), 2011 provides various parameters ‘to address the issue of mitigating climate change by taking appropriate action with respect to the transport sector such as evolving integrated land use and transportation plans, achieving a modal shift from private to public modes of transportation, and encouraging the use

of non-motorized transport". The Transport policy for Delhi aims to deliver the objectives of NUTP and NMSH through its vision, policies, strategies and standards.

The Vision for Delhi is to have a mobility transition which will deliver a sustainable urban transport system for the city that is equitable, safe, comfortable, affordable, energy efficient and environment-friendly; a system that satisfies the mobility needs of all sections of the population and enhances their quality of life.

"The seven primary objectives of the Transport Policy are as follows:

1. 80:20 modal share, favouring Public Transport excluding walk trips by 2021.
2. Reduction in vehicular emissions to meet the national ambient air quality standard
3. Achieving Zero fatality through an uncompromising approach to reduction of fatalities of all road and transport users.
4. Safety and accessibility for all through safe, convenient, comfortable and barrier-free movement for all users,
5. Equity through equitable distribution of road space for all modes
6. Affordability by providing range of mobility options for all users
7. Efficiency in movement of people and goods"

The following strategy is proposed in order to meet these objectives:

i. Preparation and operationalisation of an integrated and mutually complementary multi-modal transportation and traffic plan comprising the Road, Rail and Metro-rail network, so that work centers / residences are within a walkable distance.

ii. The multimodal system will be integrated with safe facilities for pedestrians, bicyclists, differently abled persons, children, women and the elderly and Intelligent Transport System (ITS) enabled public transport, taxis and three-wheeled scooter rickshaws (TSR).

iii. Optimal use and utilisation of the existing road network and full development of ROW by removing all impediments and equitable distribution of road space as per National Urban Transport Policy. All arterial roads will be restructured to allow for smooth and safe flow of buses non-motorised transport and pedestrians to minimize pollution and congestion.

iv. Restructuring of the finer street networks and creating alternate access ways and reducing congestion on the existing roads to the extent possible. New Urban Link Roads should also be identified as additional or alternative links, wherever possible, to reduce congestion.

v. Planning of new road network in such a manner as to prevent possibilities of future congestion by modifying road sections to promote use of public transport, non-motorized transport and walking, which would reduce use of private transport modes.

vi. Making all roads usable and safe at all times for women, children, elderly and the differentially abled.

vii. Planned and targeted expansion of the Metro-rail network.

viii. Expansion and strengthening / restructuring of the Ring Rail System and sub-urban rail system.

ix. Developing an integrated relationship between the bus, rail and metro-system to provide for seamless multi-modal transport, through provision of additional stations,

park and ride facilities, introduction of single multi-modal ticketing, etc. The choice of technology for the multimodal public transport system (Bus Rapid Transit System, Metro, Mono-Rail, Light Rail) be based on comparative cost-effectiveness analysis studies to ensure rapid development of public transport and to ensure judicious use of public funds. Public transport modes be made more reliable and affordable to the end-user to induce shift from private modes.

x. Development of a comprehensive parking policy in line with the broad aims of the Plan for transportation mentioned earlier, including measures for linking new vehicle registration with owner parking facilities.

xi. Establishment of a quick and efficient transport network between the NCR and the NCT of Delhi.

xii. Provision of directional Goods and Passenger Terminals with adequate infrastructure.

xiii. Review of the licensing policy and systems, and effective arrangements for training of drivers / transport operators.

12.1. INTEGRATED MULTI-MODAL TRANSPORT SYSTEM

Keeping in view the diverse built up physical forms within the city, it is logical to state that a single mode of transport cannot practically and effectively, serve the needs of the city. Accordingly, an Integrated Multi-Modal Transport System suitable for the overall structure of the city and at the same time interlinking the various sub-structures is necessary. It is envisaged that the future transport system shall consist of a mix of rail and road based systems which may include Metro Rail, ring rail, dedicated rail corridors for daily commuters, (IRBT / RRTS corridors as identified in NCR Plan 2021), Bus Rapid Transit System (BRTS), Bus (both State run and private), other mass transit modes as technologies become available and Intermediate Passenger Transport (IPT) including Feeder Services, Taxis, Auto-rickshaws and Cycle-rickshaws and private modes. In addition, all roads should be made pedestrian, bicycle/ non-motorized transport (NMT)-friendly and for children, elderly and the differently abled.

12.2. METROPOLITAN TRANSPORT AUTHORITY

Establishment of a single authority is the need of the hour for planning/development of an integrated system, implementation and enforcement of the policies, which may be framed in that context. Inter alia, this would help to avoid wasteful expenditure and other problems that could arise from duplication, overlap and even mutually exclusive / and contradictory facilities. Therefore, a single unified Metropolitan Transport Authority, on the lines recommended by the National Transport Policy Committee, needs to be established on priority.

12.3. ROADS

Delhi is planned on a ring - radial pattern with a hierarchical road network. Broadly, the road network is designed for regional, intra - city and local traffic. The proposed roads are classified taking into account the land use pattern and road system hierarchy with recommended right of ways as follows:

1. National Highways

All National Highways (5 Nos.) are connected to the city's Ring-Radial arterial road network system resulting in regional traffic passing through the city in absence of any bypass. National

Highways Authority of India (NHAI) would incorporate the Street Design Regulations (Annexure-12.0 (I) while designing the National highways in Delhi during strengthening/ re-designing/ widening/ upgrading of the National Highways in Delhi as per periodic maintenance by the road owning agency. The recommended Right of Way (ROW) is 90 meters, wherever possible. However, within the city it shall not be less than 60 meters. All the National Highways within the NCTD shall be access controlled upto the Delhi Border and follow regulations as per the Arterial roads.

2. Arterial Roads

Arterial Roads provide long distance mobility connecting one part of the city to another, carrying heavy volume of traffic of all modes. These include ROW above 30m, and need to have multi-modal high-capacity Public transportation systems apart from private motor vehicular movement space, in addition to fully segregated space for pedestrians and NMT.

3. Collector Roads

Collector roads provide connections between neighbourhoods and also connect local streets to arterial roads. All roads with ROW above 12m to 30m may be considered as collector roads. However, the existing roads which are less than 30m yet functioning as Arterial Roads on ground may be continued in future also.

4. Local Streets

These are intended for neighbourhood (or local) use on which through traffic is to be discouraged. The suggested ROW is 9 to 12 m in the existing and proposed urban area. These roads should be made pedestrian and bicycle friendly by using modern traffic calming designs to keep the speeds within limits as per design. A special cell should be set up within Transport Departmentfor developing standards and guidelines for traffic calming designs and for their implementation in the whole city in a phased manner.

As a matter of general policy, it is proposed that for all categories of roads, the full cross section should be developed in future and no encroachments will be permitted on the existing road network. Further, the development of roads should start from the extremes ends of the designated ROW.

The following definitions for various components of Roads may be considered for planning and enforcement purposes:

i) ‘Right of way’ (ROW) is a reserved space for movement of all modes of traffic which includes pedestrian, cycles, cycle rickshaws, buses, cars, scooter, taxis, autorickshaws, etc. ROWs are shown on the zonal plan and master plan of delhi with designated widths. Space for services, underground/ overground utilities, public conveniencies and amenities, vendors. drinking water kiosks, etc, must be planned and reserved within the row, without encroaching on walking space or motor vehicle movement space, as per street design regulations.

ii) ‘Carriageway’ is a reserved space for movement of motorized vehicles only, in case segregated space is reserved for non-motorized vehicles within the ROW, and for mixed traffic in case segregated space is not reserved for NMT.

iii) NMV/Cycle Track – is a reserved space for movement of non-motorized vehicles like cycle, cycle rickshaws and hand pull carts.

iv) Cross section of the road- shows the typical space reservation along the width of the ROW for all motorized vehicles (cars, scooter, buses etc.) non-motorized vehicles (cycle, cycle

rickshaws etc.), pedestrians, medians, street furniture, utilities, etc. within the Right of Way (ROW).

Table 12.1: ***Guidelines*** for Road Hierarchy

	Arterial Roads	Collector Roads	Local Streets
RIGHT OF WAY	> 30 M	>12 - 30 M	9 - 12 M
SUGGESTED SPEED LIMIT	40-50 km/hr	20-30 km/hr	10-20 km/hr
SPEED CONTROL	Enforcement and Traffic Calming required	Enforcement and Traffic calming required.	Enforcement and Traffic calming required
BUSWAYS	Segregated busways (3.5M) per direction	Demarcated bus-lanes (3.3M) per direction.	No segregated bus lanes required.
MOTORIZED LANES	2 to 3 motorized lanes (min. 3.3 m wide each) per direction, excluding busways	1 to 2 motorized lanes(min. 3.1m wide each) per direction, excluding buslanes	No minimum lane width specification.
CYCLE/ NMV TRACKS	Segregated cycle tracks required; min. 2.5 m wide for two-way movement.	Traffic calming essential where segregated cycle lanes (min. 2.5m) are not provided.	No special provision for cyclists
SERVICE LANES	Service lanes required.	No service lane required	No service lane required
MEDIANS AND JUNCTIONS	Continuous median; all openings and intersections accompanied by signals and traffic calming.	Intermittent or No median; openings/ intersections accompanied by signals and traffic calming.	No medians; traffic calmed crossings, or mini roundabouts

12.3.1. ROAD NETWORK AND CONNECTIVITY

In the current scenario, only arterial roads are forming the network system of the city. There is complete absence of a secondary road network system resulting in restricted distribution of traffic over a network and concentration of even local traffic on arterial roads, resulting in congestion on these roads. Further, closure of medians all along arterial/ sub-arterial roads to have signal-free corridors, have restricted movement of traffic/ people between neighbourhoods on either side. Moreover, connections between colonies are also not planned to enable direct connectivity to local destinations, forcing people to come on to arterial roads to make even short local trips.

In order to reduce congestion on the existing roads, it is proposed to identify additional/ alternative links and access corridors to augment the current network, with the following measures:

i. Augmentation of road network to distribute high traffic volume over multiple roads, instead of stand-alone corridor/ junction capacity improvement strategies.

ii. Road networks to be planned with a vehicular route network of approximately 250m c/c,

as also specified in the NMSH parameters, 2011. Additional pedestrian/ NMT thoroughfares should be provided as required.

iii. Road networks/ alignments need to be planned with minimum disruption of existing settlements/ structures and environmentally significant areas sensitive to such development.

iv. All roads to be cleared from impediments and developed as per street design regulations (Annexure-12.0 (I).

v. Area level parking management should be taken up as part of network improvement for effective utilization of the capacity of roads to augment the network.

vi. In urban extension, alignment of all right-of-ways should be based on ground realities to minimise disruption to existing settlements. The right-of-ways of zonal plan roads may be reconsidered as required, if network augmentation as per above criteria is achieved through a greater number of roads with smaller ROWs.

vii. All UERs to be designed and implemented with a mass transit system such as a Metro, LRT, BRT etc.

12.3.2. ROAD MAINTENANCE AND MANAGEMENT

Factors like achieving good level of service and removal of impediments go a long way in providing safety and usability and all vulnerable road users. Therefore, the institutional mechanism for long term, regular maintenance and management of roads needs to be strengthened by all road owning and maintaining agencies. Maintenance of road and transport infrastructure should be part of construction and retrofitting projects by all road owning agencies.

12.3.3. INTERSECTIONS AND CROSSINGS

Intersections and crossings are the most crucial components of a road network system as they allow directional traffic to move through the junctions, resulting in complex movements and conflict points for MV, NMV and pedestrian traffic. Intersections must be designed to reduce delays and increase safety for all road users, with a priority to non-motorized and public transport modes. The design of intersections with proper signalization and signage, markings etc. is very important for regulated and safe movement of all modes. Road owning agencies concerned shall be responsible for installing the appropriate road signages and markings, and maintaining them on regular basis.

In Delhi the average distance of signalized intersections allowing movement of all modes, is very large. This creates barriers to movement of pedestrians, cyclists and public transport users for crossing the road or interchanging between modes or accessing destinations. To facilitate easy interchange between modes and allow local trips to be made on NMT or foot, mid-block crossings need to be provided at approximately every 250 metres or less, as specified in NMSH parameters.

In addition, pedestrians including children, women, elderly and the differentially-abled, must be given the shortest possible direct route to cross the street, therefore the most preferred crossing for them is “at-grade” with signalization, both at intersections and mid-block crossings.

Pedestrian signals should be synchronized with the nearest traffic signals, for smooth movement of traffic along with safe pedestrian/ NMT crossing.

Foot Over Bridges (FOBs) are to be considered as an exception, not the rule. They are to

be provided only under circumstances where no at-grade crossings are feasible. For rapid transit corridors, grade separated crossings such as FOBs may be considered in case no other solution is possible at grade.

Grade separators may also be provided at junctions as per codes, where thoroughfare traffic may be in high volume. Care must be taken that local level connectivity at the ground level and safe at-grade crossings are provided for all modes as per the criteria of this Section. In any case, grade separator should not be implemented as a standalone project but as part of a comprehensive network plan with traffic circulation system and traffic management measures for an influence area around the junction.

12.3.4 REGIONAL NETWORK & CONNECTIVITY

The primary function of the regional road network is to provide strategic regional linkages for safe and efficient movement of both passengers and goods between the NCT and other regional centres. While this is essential, it is equally critical to ensure the mobility and safety needs of local communities and neighborhoods are not compromised.

In this regard, Regional Plan-2021 for NCR has proposed regional road connectivity and transportation connectivity like Regional Rapid Transit System (RRTS) which have been incorporated in the 'Sub Regional Transport Network Plan for Delhi' at (Annexure-12.0 (II) for providing strong linkages between Delhi and its neighbouring states, with an efficient transportation links for performing work and other trips in a regular manner. The following strategies may be adopted:

i) Discourage vehicular trips external to Delhi to go through the NCT.

ii) All national highways within the NCT boundary to be treated as urban arterial roads and retrofit as per street design regulations (Annexure-12.0 (I).

iii) To segregate passengers and goods movements to improve safety and efficiency.

12.4. MASS RAPID TRANSIT SYSTEM (MRTS)

Mass Rapid Transit System may be defined as any system with capacity to carry greater than 10,000 persons per hour per direction. The Metro Rail System is one of the most important component of a Mass Rapid Transport System (MRTS) in the City. The Metro Rail network for the entire city has been identified in various phases, which comprises of a network of underground, elevated and surface corridors aggregating to ***more than 300*** Kms. and is expected to carry 108 lakh daily passengers with an average trip length of 15 Km. by 2021.

Phase I and Phase II of the network are already implemented and operational. Phase III is under implementation and Phase IV is in the planning stages. All corridors (including Phase-IV) are shown in the comprehensive 'Sub Regional Transport Network Plan for Delhi' at Annexure-12.0 (II).

It is expected that about 60% of the urban area will be within 15-minute walking distance from the proposed MRTS stations, after full development of the system. Additional areas could come within easy access and connectivity with the Metro Rail through inter-linkages with other transport modes. About 15% of urban area of Delhi is likely to be directly affected, and may undergo a dramatic impact and change. Further, due to development of economic activities along the Metro Corridors and optimization of connectivity provided by it, the ridership on the Metro is expected to grow substantially over time. Correspondingly, it is expected that vehicular trips may also progressively shift from road-based transport to

MRTS, particularly, with reference to the longer trip lengths (greater than 10 Kms) within the city.

To achieve the above potential impact of the Metro Rail System a number of measures will be necessary. These will include the following:

i. Preparation of detailed plans to facilitate and encourage direct pedestrian access to the Metro Rail System/ Station.

ii. Preparation of detailed multi-modal transport plans with reference to each major Metro Station, with particular reference to bus transport routes, which could provide inter-linkages and feeder arrangements.

iii. Parking arrangements for all modes at Metro Stations, in particular for IPT and NMT modes along with all conveniences required for metro commuters.

iv. Provision of Park and Ride facilities at identified points from where feeder bus services would be available, or convenient direct pedestrian access would be feasible.

v. For any green open space/ recreational areas taken up by DMRC for construction purposes, adequate compensation of green space must be provided by DMRC by providing public spaces within the metro station plot/ premises, so that local population may also be served.

12.4.1. SYNERGY BETWEEN TRANSPORT AND LAND USE

The concept of the Master Plan for Delhi 1962 was based on a poly-nodal, polycentric, distribution of work centres, largely based on road transport nodes. A major fall-out of this has been distortion between infrastructure, transport and land use. To achieve spatial balance, development should take place according to new corridors of mass movement. This has implications in terms of land use planning along the Mass Rapid Transport / Transit System. This would not only help to solve, to some extent, the enormous problems of mass transportation, but would also generate a dynamic potential for growth and employment. This is particularly true for the Metro Rail System. In this context the MRTS corridors upto 500m depth on either side from centre line of MRTS would require selective re-development and re-densification / intensification of existing land uses based on site conditions. The concept of Transit Oriented Development (TOD) needs to be adopted such that maximum number of people can live, work or find means of recreation within walking/ cycling distance of the MRTS corridors/ stations.

TOD is essentially any development, macro or micro, that is focused around a transit node, and facilitates complete ease of access to the transit facility, thereby inducing people to walk and use public transportation over personal modes of transport.

TOD is generally characterized by compact, high-density, mixed use development near new or existing high quality public transportation infrastructure that provides housing, employment, entertainment and civic functions within walking distance of the transit system. Pedestrian-oriented design features of TODs encourage residents and workers to use their cars less and ride public transit more.

The primary goals of TOD are to:

1. Reduce/ discourage private vehicle dependency and induce public transport use – through policy measures, design interventions & enforcement.

2. Provide public transit access to the maximum number of people through densification and enhanced connectivity.

A dynamic city-level integrated transport-land use model for Delhi needs to be prepared to assess transportation and landuse planning needs of the city. It is proposed that

integrated redevelopment schemes of the influence area of MRTS stations be prepared based on TOD principles.

12.4.2 TRANSIT ORIENTED DEVELOPMENT (TOD) PRINCIPLES

i. Pedestrian & Non-Motorized Transport (NMT) Friendly Environment
   - Design for pedestrian safety, comfort and convenience.
   - Create street-level activity and vibrant urban spaces.
   - Provide amenities and infrastructure for pedestrians, cyclists, NMT and public transport users.
   - All streets and public spaces shall be universally accessible.

ii. Connectivity and Network Density
   - Disperse high traffic volumes of traffic over a network of streets rather than concentrating traffic on few major streets and junctions.
   - Provide the shortest direct route to pedestrians and non-motorized modes to station as well as between individual buildings/ complexes.
   - Integration of infrastructure development and travel demand management (TDM) strategies e.g. bus lanes, station plazas, intersections improvements, etc.

iii. Multi-Modal Interchange
   - Minimize travel time and cost for majority of commuters. Provide multiple mode options for all sections of society with safety and affordability. Ensure reliable, frequent and affordable public transport systems/ networks across the city. Minimize the number and time required for mode transfers for maximum number of commuters.
   - Prioritize pedestrians, public transport, IPT and NMT modes over private modes in design and management of urban spaces.

iv. Inducing Modal Shift
   - As far as possible, locate public transport stations, homes, jobs and civic facilities within easy access of each other, to incentivize walking and cycling/ NMT use especially for short distances.
   - Dis-incentivize private motor vehicle use. Limit supply and appropriately price private parking spaces to discourage private vehicle use in TOD Zones.

v. Placemaking and Ensuring Safety
   - Create a safe, vibrant, comfortable urban “place”, by providing round-the-clock active streets and incidental spaces to relax. Introduce mixed land use and other informal street activities like vendors, etc. to promote round-the-clock activity and also promote informal surveillance.
   - Minimize boundary walls and setbacks of compounds, and build to the edge of the street R/W. Street walls with transparency, built-to-edge buildings, minimum setbacks and non-opaque fences help provide natural surveillance of public spaces.

vi. High Density, Mixed-use, Mixed-Income Development near stations
   - Maximize densities within TOD, in order to facilitate maximum number of people walking or cycling, or use NMT or feeder services easily to access public transit facility.
   - In greenfield development, higher the density, lower the per kilometre infrastructure cost.

- Enable a balanced mix of jobs and housing along MRTS corridors coupled with caps on parking supply, higher housing affordability through design and technology options, and improved efficiency and equity in the resulting developments.

12.5. BUS

Apart from the Metro Rail System, buses will continue to be the other major public transport in the city. The Bus Transport system is presently estimated to carry around 23.40 lakh passengers per day (2002). Even after the introduction/ expansion of the Metro, major dependence will continue to be on Bus Transport as a form of comfortable and convenient public movement within the city. Therefore bus service needs to be made comfortable, affordable and reliable and safe so that is a viable alternative to private modes.

However, keeping in view the extension of road network in Delhi on one hand and the existing/likely congestion on the roads on the other, it is necessary to take steps for rationalization of Bus Transport. This would entail action on the following fronts:

i. Bus routes in Delhi need to be rationalized to connect to Metro/ MRTS/ RRTS stations as well as local/ city level destinations to provide convenience to all bus commuters.

ii. Park and ride facilities will have to be developed at important bus terminals.

iii. The quality and design of buses would have to be significantly improved with a view to provide comfort and universal accessibility to the riders thereby making bus travel a part of an efficient mass public transport system which could also help to reduce private vehicle usage.

iv. New bus terminals need to be planned and developed in strategic locations, except in Zone-O, to make the use of ***public transport*** convenient for all commuters.

v. On all new arterial roads, road owning agencies to incorporate provision for ***MRTS***, NMV lanes and footpaths, in addition to motor-vehicle lanes, as per the street design regulations (Annexure-12.0 (I).

12.6. INTERMEDIATE PUBLIC TRANSPORT (IPT)

There should be vigorous effort to reduce private vehicle dependency and increase facility of public transport in all areas of the city. In areas that are not served by buses within 500 M walking distance from homes, alternative planned IPT systems need to be introduced to better serve the population. Definition of IPT is provided in Annexure-12.0 (I).

12.7. NON-MOTORIZED TRANSPORT (NMT)

12.7.1. BICYCLE / CYCLE-RICKSHAW

Bicycle/ cycle-rickshaw could be an important mode of travel, particularly with reference to short and medium trip lengths. To the extent that it meets individual or public transport requirements, it is a non-energy consuming and non-polluting mode of transport. However, there are several issues which have to be kept in view while planning in respect of these modes.

With a mixed type of fast moving traffic on the roads, travel by bicycle and rickshaws is very unsafe. Data has shown that although approximate 35% of population of Delhi owns cycles, only a fraction of them use cycles for commuting due to the lack of safe cycling facilities or cycle-parking facilities.

In so far as rickshaws are concerned, apart from issues pertaining to the aspect of mixed traffic, this mode also provides employment to a very large number of unskilled workers residing in the city.

In view of the above, the following actions should be considered/ taken:

i. Prepare a cycling masterplan for the city that creates a network of routes integrating all arterial roads, eco-mobility corridors along nallahs, heritage routes, school precincts as well as other recreational routes.
ii. On all arterial roads fully segregated cycle/NMT tracks should be provided with provision for safe parking in park and ride lots. Wherever full ROW is not available, the cycles/ NMT may be allowed to flow in mixed-traffic condition.
iii. In urban extension, cycle tracks should be provided at the sub-arterial and local level roads and streets.
iv. In all areas of the city, the use of cycles/rickshaw as a non-motorised mode of transport should be consciously planned along with pedestrianisation.
v. Plan and implement city wide, affordable and accessible cycle sharing / rental schemes to encourage public transit users in particular and public in general to use cycle as a mode to perform their first and last mile journey as well as to make regular short trips without using private vehicles.

12.7.2. PEDESTRIANS

Walking is the most important and sustainable mode of transport. In Delhi, about 35% of the commuters of the city use walking as the only means of travel for short trips, in addition to public transport users. Therefore, the right to walk safely is a non-negotiable condition. For this, the following steps need to be taken:

i. All roads must provide proper footpaths as per street design regulations (Annexure-12.0 (I) and adequate share of walking space within ROW.
ii. All pedestrian facilities should be barrier free for universal access by all persons with reduced mobility including those with hearing and visual impairments.
iii. All impediments/ encroachments shall be removed from footpaths all over the city to create safe walking environment in all colonies, office /shopping areas, terminal areas etc which will encourage more people to walk.
iv. As mentioned in the NMSH Parameters (MOUD, 2011), at least five safe street-level crossing opportunities per kilometre of road with approximately 250m being maximum spacing between two crossings should be provided. Depending on context, these crossings may be signalized and/ or traffic calmed to reduce vehicular speed and increase safety.
v. Pedestrian Signals should be synchronized with the nearest full-traffic signals, for smooth movement of traffic along with safe pedestrian/ NMT crossing.
vi. Pedestrian oriented vehicle-free spaces throughout Delhi need to be created. Major work centres, where large number of pedestrian networks emerge and culminate, should have enhanced facilities for the pedestrians.
vii. New areas should plan for pedestrian zones, plazas, activity spaces based on locations of public transport nodes/ stations, employment centres, residential communities and local/city level destinations.
viii. Street-level activity and well-watched streets need to be created through mixed-use, avoiding opaque boundary walls, creation of hawking/vending zones and round-the-clock activities, to ensure a safe environment for pedestrians.
ix. Planning, design, implementation and maintenance of pedestrian routes and facilities needs to be prioritized.
x. As per NMSH parameters, to create active streets for pedestrian security and enjoyment: (1) Primary pedestrian access for buildings should be from the main street, with location as per shortest walking distance from nearest bus-stop; (2) The main building facade

should face the street, located on the property line without setback or with active use within set back and transparent edge that contribute to street safety. Commercial frontages should have facades with minimum 50% transparency (untinted) to facilitate visual surveillance of streets, Compound walls, if present, should be transparent above a height of 100cm. High security government buildings may apply for exemption.
(4) Vending spaces should be marked in addition and adjacent to the walking path, especially along high pedestrian volume areas to activate the street and make it safe. Space to be planned for utilities including drinking water kiosks and toilets, so that the walking space is enhanced but not compromised.

12.8. TRANSPORTATION FOR SPECIAL AREAS

Central congested areas of the Walled City, Sadar Bazar, Karol Bagh and other similar areas like certain Trans Yamuna areas are characterized by heavy traffic congestion. In order to address this problem a medium capacity Mass Transit system comprising of BRTS, Light Rail Transit System (LRT) and battery operated bus system may be considered on selected routes based on feasibility.

For proper functioning of above said systems a restraint on the use of private modes and provision of parking would be required. This would be necessary in order to revitalize the area and to improve its environment quality. This will also increase accessibility to such areas considerably.

In order to manage the additional traffic of Metro stations at Old Delhi, Chandni Chowk and Chawri Bazar, the following management measures are required to be taken:-

i. Need based traffic circulation schemes integrating various modes.

ii. Improvement of major road stretches and intersections like Ajmeri Gate, Fountain Chowk, Fatehpuri Chowk, Kaudia Pul, Khari Baoli, etc.

iii. Removal of encroachments from footpaths to facilitate smooth pedestrian movement.

iv. The movement of heavy vehicles will continue to be banned in the Walled City. However, for the servicing of this area light commercial goods vehicles may be allowed during the night.

12.9. RAIL

In the National Capital Territory of Delhi both intercity and intra-city passenger movements are being catered to by the existing rail network comprising the Regional and Ring Rail Systems respectively.

- The ring railway system is currently one of the most under-utilized public transport systems of Delhi. It is still a very affordable mode of transport for long distance commuters due to its speed and low cost. However due to bad connectivity to the station areas, lack of integration with Metro and bus stops, etc. it is not considered a desirable option for long distance commutes.
- Incentives such as TOD may be provided to ring railway at particular stations which may overlap with Metro stations or Railway terminals, in order to generate cross-subsidy for improvement of the system.
- Railways must cooperate with city agencies in facilitating better connectivity, access and multi-modal integration at all their stations within city limits.

In order to improve the rider-ship on Ring Rail, the following is proposed:

a) Restructuring land use around the following:
   i. Anand Parbat
   ii. INA Colony
   iii. Pusa Institute
   iv. Kirti Nagar

b) Accessibility improvement and augmentation of infrastructure on ring rail stations:
   i. Shivaji Bridge
   ii. Bhairon Marg
   iii. Kasturba Nagar (Sewa Nagar)
   iv. Lajpat Nagar
   v. Kirti Nagar
   vi. Shakur Basti
   vii. Sarai Rohilla

c) Provision of Halt Stations on ring rail at the following locations:
   i. Moti Bagh
   ii. Bhairon Road
   iii. Hans Bhawan (ITO)
   iv. Ganesh Nagar
   v. Preet Vihar
   vi. Shyamlal College

The interchange points of Regional Rail, MRTS, Ring Rail and any other future rail network should be developed as interchange stations/ convergence zone where guidelines for multi-modal integration are to be followed.. The change over facilities should integrate ISBTs/ local bus stands/ feeder buses/ IPT modes, wherever feasible, and they should also include approach roads, pedestrian walkways, parking areas for various modes including feeder buses/ IPT modes and adequate public conveniences, etc.

12.10. MODAL SPLIT

The transport network is based on the modal split for Delhi to cater to 280 lakh trips by the year 2021 as given below:

1. Present Scenario

As per Modal Split (2001) among the vehicular trips, maximum 60% trips are being performed by buses, which include chartered and school buses. The personalised modes of transport are carrying about 35.9% of vehicular trips. The modal split projected for the years 2011 and 2021 is as follows:

Table 12.1 Modal Split Projections

Mode	Modal Split (%)	
	2011	2021
Public Transport (including Rail/ Light Rail/ MRTS/ IRBT/ Bus/ Tram)	70.25	80.0
Personal modes (including Personal Fast Modes / Hired Fast Modes/ Hired Slow Modes/ Bicycle)	29.75	20.0

12.11. INTERCITY PASSENGER MOVEMENT

In 2001, on a normal weekday 56.46% of the commuters visited Delhi by Road, 42.67% by Rail and 0.87% by Air.

Table 12.2: Passenger Trips at Outer Cordons per Day

Medium	Total Passengers	Commuters
Road	15.98 lakh (56.46%)	9.59 lakh
Rail	12.08 lakh (42.67%)	9.06 lakh
Air	0.22 lakh (0.87%)	N.A.

12.11.1. RAIL

As per Regional Plan-2021 for NCR, the total of 625 trains including 253 long distance passenger trains and 176 EMU trains (suburban trains) were handled at the three major railway stations in Delhi viz. Old Delhi, New Delhi and Hazrat Nizamuddin. Apart from this, large number of goods trains move into and out of NCR. The commuter traffic in NCR is about 0.61 million per day.

Several directional Metropolitan Passenger Terminals (MPT) have been proposed to decongest the central area. These are:

i. Anand Vihar, East Delhi
ii. Bijwasan in Dwarka, South-West Delhi
iii. Holumbi Kalan in Narela, North Delhi
iv. Tikri Kalan, West Delhi
v. Hazrat Nizammudin, South East Delhi
vi. Kashmere Gate, North Delhi

It is proposed to integrate the Inter State Bus Terminals with the direction metropolitan passenger terminals.

National Capital Region Planning Board has prepared 'Functional Plan on Transport for NCR-2032' which recommended the following eight Regional Rapid transit System (RRTS) corridors in the National Capital Region (NCR) with high speed rail based commuter transit system along with up-gradation of the National Highways from the present level of 4-6 lanes to 8-10 lanes:

S.No.	Corridor	Length
1	Delhi-Ghaziabad-Meerut	90
2	Delhi-Gurgaon-Rewari-Alwar	180
3	Delhi-Sonipat-Panipat	110
4	Delhi-Faridabad-Ballabgarh-Palwal	60
5	Ghaziabad-Khurja-Aligarh	83
6	Delhi-Bahadurgarh-Rohtak	70
7	Ghaziabad-Hapur	57
8	Delhi-Shahdra-Baraut	56

Following three RRTS corridors have been prioritized:

i) Delhi-Sonipat-Panipat (111 km)
ii) Delhi-Gurgaon-Rewari-Alwar (180 km)
iii) Delhi-Ghaziabad-Meerut (90 km)

National Capital Region Transport Corporation (NCRTC) has been registered under the Companies Act to design, develop, implement, finance, operate and maintain RRTS in NCR.

RRTS stations should have direct interchange facilities with all integrated passenger terminals, metro stations and ISBTs to provide seamless travel facilities to commuters. Since RRTS is a Mass Rapid Transit System, Transit Oriented Development (TOD) along RRTS corridors shall be permissible as per the provisions of the Masterplan.

12.11.2. BUS

The total passenger trips per day catered by road-based transport are 15.97 lakh, out of which about 9.54 lakh (60%) are commuters. Majority of such trips are by bus.

Out of four new Interstate Bus Terminals (ISBT) as proposed in MPD-2001, only one at Anand Vihar in East Delhi has been developed as a part of Metropolitan Rail Terminal. The terminal at Dwarka (Bijwasan) has also been included in Dwarka Project. The remaining two terminals at Okhla (Madanpur Khadar) and Narela (Holumbi Kalan) are yet to be developed.

In order to cater to the additional passenger requirements, it is proposed to develop the following ISBTs (10 Ha each) along the Metropolitan Passenger Terminals:

i. At Bijwasan, Dwarka.
ii. At Holambi Kalan, Narela Subcity.
iii. At Sarai Kale Khan. The existing Bus terminal may be upgraded and be linked to Hazrat Nizammudin Railway Station.
iv. At Tikri Kalan.
v. At Kashmere Gate.
vi. At Anand Vihar.

Apart from above ISBT, it is proposed to identify exclusive bus terminal sites at the intersection points of NH and outer ring road/ ring road to cater to the passenger movement.

These may be developed at:

i. Dhaula Kuan.
ii. IFC Madanpur Khadar to relieve Intercity Passenger congestion at Ashram Chowk.
iii. Tikri Kalan to relieve Intercity Passenger congestion at Peeragarhi Chowk.
iv. Narela to relieve Intercity Passenger congestion at Outer Ring Road and G.T. Karnal Road Junction-Jahangirpuri Byepass.

A smaller Terminal at Narela Railway Station and ISBT along G.T. Road may be considered. This concept may be applied wherever possible to intercept Intercity Passenger Traffic at Arterial roads.

12.11.3. AIR

The International and Domestic air passenger movement in Delhi is catered to by Indira Gandhi International Airport and Palam Airport. This has been linked to other parts of the city and urban extension through the transport networks to facilitate fast movement.

Table: Distribution of Daily Air passengers (as per NCR Regional Plan-2021):

Passenger Traffic	International	30% of total passengers
	Domestic	70% of total passengers
Cargo Traffic	International	65% of total cargo
	Domestic	35% of total cargo

Indira Gandhi International Airport (IGIA) is the major airport in NCR. In terms of traffic volumes, it is second to Mumbai, and handles annually about 35.88 million passengers and 0.56 million tonnes of cargo traffic (2011-12). Presently it has three operational runways with a peak hour handling capacity of 75 aircraft movement. There are three separate terminal areas for domestic passengers, international passengers and cargo.

The Airport connects 60 destinations all over the globe through 51 international airlines. Of the passenger traffic, about 76% was generated within NCTD, 19% in NCR (excluding NCTD) and 5% beyond NCR. Besides, it is expected to handle a large quantity of cargo on commissioning of Delhi Mumbai Industrial Corridor (DMIC).

A strong and vibrant economy of Delhi Metropolitan Area provides a backdrop to a healthy demand for air travel. IGI Airport, Delhi has witnessed a phenomenal growth of traffic during the last few years both on account of business travel and leisure trips.

In order to meet the requirements of growing traffic and to upgrade the facilities to world-class standards, phased development of the airport has been initiated according to a Master Plan. The first phase of development has been completed in early 2010, in line with the Commonwealth Games. The airport has been connected by an expanded NH-8, as well as the MRTS by providing a rail station close to the passenger terminal to shorten the journey time. The development of the airport will also require augmentation of utilities serving the airport, particularly power supply, water supply and drainage facilities.

12.11.4. GOODS MOVEMENT

With the expansion of commercial and industrial activities in Delhi Metropolitan Area, the goods movement within urban area and outside has grown considerably, leading to environmental deterioration in the city.

In 2001, on an average day, the goods movement by various modes at outer cordons in Delhi was as under:

Table 12.4: Goods Traffic at Outer Cordons

Road	68808 vehicles/day
Rail	1463 wagons/ day
Air	644 tonnes/ day

1. Goods movement by Rail

Presently the goods are terminating as below: -

Iron and Steel	-	Tuglaqabad (Bahadurgarh) thereafter by road to Naraina
Food Grains	-	Delhi Cantt., Narela, Ghevra
Coal	-	Badarpur Border, Rajghat, I.P.Thermal Power Station.
Fruits and Vegetables	-	Naya Azadpur
Fuel	-	Shakur Basti
Cement	-	Shakur Basti, Naya Azadpur, Safdarjung Rail siding.

2. Goods movement by Road

Out of the total Goods traffic volume, major share is handled by the points at NH-8, NH-1,

NH-24 and Kalindi Kunj. On an average day in 2001, about 68,808 goods vehicles were entering and/or leaving Delhi.

Movement of incoming /outgoing goods traffic in 2001, on different highways and other major roads on average weekday, is given as under:

Table 12.5: Directional Distribution of Daily Goods Traffic in Delhi – 2001

Name of Location	No. of Goods Vehicles	Modal Share (%)
South and South East		
Kalindi Kunj	9948	14.46
Badarpur Border (NH-2)	5993	8.71
North and North East		
Singhu Border (NH-1)	8542	12.41
Loni Border	4881	7.10
West		
Tikri Border (NH-10)	4460	6.48
South West		
Sirhole Border (NH-8)	9139	13.28
Dundahera Border	4933	7.17
East		
Ghaziabad Border (NH-24)	7914	11.51
Chilla Check Post	2101	3.05
Jhundupura	1376	2.01
Gazipur	2220	3.22

12.12. INTEGRATED FREIGHT COMPLEXES

Integrated Freight Complexes have been recommended for the integration of goods movement by road and rail. These would consist of wholesale market, warehousing, road for trucks and rail transport terminals so as to curtail the movement of heavy vehicles within the city. The freight complexes are to be located in the places where they intercept the maximum possible regional goods traffic entering Delhi.

Based on the pattern of goods traffic movement in Delhi, following four sites for Integrated Freight Complexes (IFC), are presently at various stages of planning and / or development and one more new site is proposed in Urban Extension area. These freight complexes shall be dedicated to meet the demand of Delhi's needs and not cater to the distributive requirements of regional goods.

i. Madanpur Khadar (NH-2)

ii. Gazipur (NH-24)
iii. Narela (NH-1)
iv. Dwarka (NH-8)
v. New site in Urban Extension (Rohtak Road) Tikri Kalan

12.13. FUEL STATIONS

The environmental concerns have been constantly advocating identification of clean and environment friendly fuels. Presently, the main fuel types being used include: Petrol, Diesel and CNG. These fuels are being made available from Petrol Pumps and CNG stations.

With the advancement of technology some new types of clean fuels may also be used in future. CNG stations may be permitted in all use zones except in 'Regional Park/ Ridge', developed district parks and Zone 'O'. Petrol pumps are permissible in all use zones except in Zone 'O' and recreational use zone.

12.13.1. FUEL STATIONS IN URBAN AREAS.

Fuel Stations are permissible on Master Plan / Zonal Plan roads and shall not be permitted in absence of an approved Zonal Plan of the area.
At the time of preparation of layout plans of various use zones namely viz. residential commercial, industrial, PSP facilities and other areas, the location of Fuel Stations should be provided as per the norms given in Table 12.6.

12.13.2. DEVELOPMENT CONTROL NORMS AND PERMISSIBILITY

The regulations for locating the fuel stations -cum-service stations, the development control and permissibility shall be governed by the policy / decision by competent Authority / Government Notifications issued from time to time. Fuel stations shall be regulated by the following controls:

i. Fuel stations shall be located on roads of minimum 30m ROW.
ii. The plot size for fuel stations shall be minimum of 30m X 36m and maximum of 33m X 45m (75m X 40m for CNG mother station as per requirement).
iii. The minimum distance of plot from the ROW line of road intersections shall be as follows:
    a. For minor roads having less than 30m ROW- 50m
    b. For roads of ROW 30m or more- 100m
    c. Frontage of plots should not be less than 30m.
iv. Maximum Ground Coverage: 20%, Maximum FAR: 40
v. Maximum Height: 6m
vi. Canopy: equivalent to ground coverage within set back.
vii. Maximum 10 FAR permissible for non-inflammable, non-hazardous commercial activities subject to payment of conversion charges/ levies as may be prescribed by the government from time to time.
viii. In case of existing petrol pumps the provision of maximum 10 FAR for commercial activity would be permissible only to those fuel stations / petrol pumps which conform to the controls given in i, ii, and iii, above subject to payment of appropriate fees/ levies/ misuse, penalty and other charges.
ix. Dispensing capacity of CNG stations should be substantially increased to cater to the increasing demand from all types of CNG vehicles.

Table 12.6: Norms for Fuel Stations

S. No	Land Use/Use Premises	Norms
1.	Residential Use Zone	Two Fuel Stations (One Petrol Pump + One CNG station) per 150 ha. Of gross residential area
2.	Industrial Use Zone	Two Fuel Stations (One Petrol Pump + One CNG station) per 40 ha of gross industrial area
3.	Freight Complexes	Four Fuel Stations (Two Petrol Pumps + Two CNG stations) in each
4.	District Centres	Four Fuel Stations (Two Petrol Pumps + Two CNG stations) in each district centre
5.	Community Centre	Two Fuel Stations (One Petrol Pump + One CNG station) in each
6.	Public & Semi Public use zone	Two Fuel Stations (One Petrol Pump + One CNG station) in each PSP area.
7.	Security Forces Campus / Police/ Hospitals/Tertiary Health Care Centres/ Govt.	For captive use/ as per requirement.

12.13.3. CNG SERVICE STATIONS:

Already existing authorized CNG service stations for public transport vehicles may continue for this purpose alone, till regulations in this regard are notified or the Zonal Plans for such areas are finalized, whichever is earlier. While finalizing Zonal plans, efforts may be made to integrate such service stations in the Plan.

12.14. PARKING

With the phenomenal increase in personalized motor vehicles, one of the major problems being faced today is an acute shortage of parking space. In the absence of adequate organized parking space and facilities, valuable road space is being used for vehicular parking. The problem of parking in the city can be broadly divided into the following categories:

i) Along streets
ii) In planned commercial centres.
iii) In residential colonies.
iv) In the large institutional complexes.

Experience has shown that:

(a) The provisions relating to parking within the plot area are normally not adhered to resulting in vehicles spilling over on to the roads and adding to congestion; and

(b) The lack of enforcement and inadequate policy interventions has resulted in growth of parking demand along with growth of vehicles in the city.

In the above background, the whole subject of parking has become a matter of serious public concern and requires a carefully considered policy and planned measures to alleviate the problem to the maximum feasible extent in existing areas and for adequate provisioning with reference to future developments. As recommended by the Environment Pollution (Prevention & Control) Authority for the National Capital Region, the approach should be focused more on demand management (restricting vehicle numbers) through enforcement and pricing policy rather than only on increasing supply of parking.

Parameters for the National Mission on Sustainable Habitat (NMSH) of 2011 state that parking management strategies should be aimed at encouraging more efficient use of existing parking facilities, reduce parking demand and shift travel to non-private modes. Individual user of personal vehicle should pay for the use of the space for parking. Therefore, the 'user pays' principle should govern the pricing of parking. Parking is a consumer commodity, not a legal right. No subsidized parking is to be provided in public spaces. To ensure accessibility to maximum number of people, parking for para-transport / feeder modes/ NMT is to be prioritized and subsidized. In areas designated for public parking, short term parking must be prioritized over long-term parking, in order to maximize turnover and enable economic vibrancy. The parking policy for the Delhi aims to deliver the objectives of NMSH, through its vision, policies, following strategies and standards:

- Private vehicle must be parked on 'a fully-paid rented or owned' space, based on the 'user pays' principle.
- Parking management must be effectively used as a tool to reduce overall demand for parking space.
- Pricing and enforcement will be key drivers to eliminate or reduce long term on-street parking demand for private vehicles.
- Planning and design of public parking facilities (surface, underground or multi-level) in an area need to provide for all modes and include creation of pedestrianized areas/ public spaces in the area with necessary amenities.
- Parking is permitted in all use zones except Recreational Open space, which shall not be used or converted for parking. No environmentally sensitive lands shall be used/ converted for parking of any kind. Surface Parking would only be provided to meet the parking requirement of the park premise. Creation of underground parking structures within or under green recreational open spaces is prohibited under all circumstances.
- Parking spaces will be adequately provided on priority basis for IPT, pick and ride and feeder systems especially non-motorised transport and fully subsidized.

In this background, the following measures are proposed:

12.14.1. PARKING STANDARDS IN USE PREMISES

Parking is one of the utilities permitted in all use zones except in regional park/ ridge, recreational open space and parks as per the approved zonal plan/ layout plan. Parking standards have been prescribed in each use premises. However, where not prescribed, these will be followed as per standards given in Development Code section of the Master Plan. The standards given are in Equivalent Car Space (ECS) which include parking for all types of vehicles i.e. cars, scooters, cycles, light and heavy commercial vehicles, buses etc. as per Chapter 17: Development Code. Parking adequacy statement/study for large projects like Stadia, Shopping Malls, Multiplexes will be desirable. Mode-wise parking spaces are to be marked on drawings to be submitted for approval.

12.14.2. PUBLIC PARKING

Major efforts will have to come through the creation of public facilities in designated commercial/ work centres and other areas and corridors where significant commercial activity has developed by way of mixed use. In the context of the latter, it would also need to be linked to pedestrianisation within the identified areas. In the above context following steps would be necessary:

12.14.2.1. PARKING MANAGEMENT DISTRICTS

Parking Management District (PMD) provide comprehensive facilities for all modes

including pedestrians, NMT, cycle tracks, NMT and IPT parking, vending zones, bus stops, public amenities, etc. in addition to on-street and/or off-street parking for private vehicles. PMDs are to be planned to improve availability of on-street and off-street parking and promote greater walking, cycling and public transport use. A PMD provides more net available parking space in an area by increasing parking turnover through good design, management and pricing strategies. A portion of the revenue generated could be used for local improvement of footpaths, cycle-tracks, and maintenance of facilities with involvement of the local communities.

Parking facilities to be provided as part of the overall PMD plan incorporating all modes, with a clear cut community benefit strategy. However, in the absence of PMD plan or depending upon the local needs of the area and subject to the availability of land, multi-level parking plots may be developed. In such cases, the development control norms as per para 12.14.3.7 shall apply.

Municipalities and/or planning bodies should develop detailed parking management plans for such districts, with physical design and demarcation of spaces on ground and strict enforcement. The following strategy should be applied:

i. Total parking capacity of the PMD to be defined based on ground surveys, capacity analysis and Transport Impact Assessment if required.
ii. Encroachments and impediments to be removed to provide more space for pedestrians, NMT, vending zones and public amenities.
iii. 'Short-Term' and 'Long term' parking spaces with the PMD must be identified, demarcated and priced appropriately to reduce demand, and be managed by a single agency.
iv. Stringent provisions by way of fines and other penal actions need to be provided for violation of parking rules. Proper signage and markings must be provided to enable effective enforcement.
v. A graded parking fee structure should be evolved as a measure of parking demand management, and encouraging use of public transport.
vi. In congested areas, 'park and walk'/ 'park and ride' facilities may be planned in PMDs. Street improvements must be implemented in about 10-minute walking catchment of such facilities to make it comfortable and convenient for commuters/ shoppers.
vii. All existing areas of concentration of business/ commercial activity, where absence of adequate parking and congestion is visible, should be identified and listed based on studies of vehicle/ modal volumes. Comprehensive area level PMD plan must be prepared by local bodies in consultation with planning bodies, multi-disciplinary experts and local stakeholders.
viii. Major corridors along which commercial activity has grown over the years by way of mixed land use should be identified and taken up for redevelopment with a major objective being the identification and development of areas for parking, green development and pedestrianisation.
ix. In all new Commercial/ Business/ Industrial centres, adequate parking on the surface as well as below and above the ground must be provided.
x. The development of multi level parking facilities may be taken up, wherever, feasible

in a public private partnership framework, with private sector investment and involvement.

xi. Entire stretches of road or areas other than the demarcated/ designated/ managed parking areas, should be declared as 'no parking zones' in the PMDs. Enforcement agency/ traffic police to be responsible for penalizing, removing or taking action against violators.

xii. Advanced public information systems regarding parking supply availability should be provided though websites, on-ground display and digital media, to guide people in making travel/ mode choices.

xiii. The use of basement wherever provided for parking, must be strictly adhered to.

xiv. Serious consideration should be given to evolve a policy linking registration of new vehicles to availability of owner parking facilities.

xv. All encroachments on land earmarked for public parking should be removed.

xvi. Wherever feasible, space on roofs, under stilts and basements should be exploited to the optimum for parking so as to reserve the maximum ground space for landscape development, pedestrian movement, etc.

12.14.3. PARKING PRICING

The supply of free/ inexpensive parking at the final destination is a key decision factor for people choosing to drive a personal vehicle, rather than taking a bus, Metro, IPT, NMT, walk or carpool. It is suggested that the following pricing strategies be employed to manage and bring down public parking space demand:

i) Pricing of parking should be based on principle of 'user pay', reflecting the cost of the public good – precious urban space. Current parking rates in cities are low and act as a hidden subsidy to the car owners. Parking rates should be freed up and market driven. Parking revenue should be augmented and utilised to create a dedicated fund for public transport.

ii) No government subsidized parking for private motor vehicles is to be provided in public spaces or roads. High parking fee should be charged in order to make the use of public transport attractive. Cycle parking space should be fully subsidized.

iii) Implement localized variable scale of parking fee based on time, location and use based local demand and congestion levels. As a thumbrule – higher the congestion, higher the fee to be levied in the area to reduce parking demand.

iv) Curb Spillover Parking Impact: Spillover parking from high-priced areas should be minimized (through pricing and enforcement) as it may cause excessive congestion within neighbourhood streets making access difficult for emergency vehicles. Market-rate parking pricing is to be applied to this entire zone, not just a few streets. The entire area should be implemented as a PMD zone.

v) Actual Parking pricing rates may be taken up by ULBs from time to time as per their notifications based on the above suggested principles.

12.14.3.1. PARK AND RIDE

Apart from providing Park and Ride facilities with reference to integration between the Road and Metro Rail / Rail Transport systems, such facilities would also need to be provided to reduce the problem of parking on main arterial roads in the context of identified work and activity centres which may not be directly connected by the MRTS and to encourage use of public transport.

(i) Park & Ride facilities for private vehicles should be provided at peripheral locations abutting Highways and MRTS/BRTS/RRTS stations as per requirement, coupled with

excellent public transport linkages to the city centre and various work centres. Subsequently, highway entry tolls for private transport should be increased substantially to discourage private vehicle commutes and cross-subsidize public transport.

(ii) Subsidized park and ride facilities for bicycle users with convenient interchange at all MRTS stations are a mandatory requirement, to promote this sustainable mode of transport.

12.14.3.2. PARKING FACILITIES FOR BUSES IN DTC DEPOTS

There is an acute shortage of parking facilities for buses in the city. Therefore, the planning for bus depots and terminals capacity and future requirement needs to be done comprehensively.

i. As per norms of bus parking, adequate bus parking and terminal spaces in the city should be provided in the city.
ii. The selection and allocation of depot lands needs to be planned in sync with the routing of both DTC and cluster buses, so that dead mileage and other losses to the transport agency may be minimized.
iii. To ensure optimum utilization of land, multi-level parking for buses is to be prioritized. Norms for multilevel bus parking shall be as per 12.14.3.6 below.
iv. As far as possible, all bus depots must function as Terminals as well.
v. Large public parking facilities, underside of flyovers, wide arterial roads and underused areas of the city should be permitted for use in off-peak hours for parking of public/private buses and commercial vehicles, chargeable at appropriate rates.
vi. Planning and provision of space for private buses, private commercial vehicles, trucks and logistics terminals at the peripheries of the city, need to planned at the Zonal Plan level.

12.14.3.3. PARKING FOR NMT AND IPT

Fully subsidized parking facilities for IPT and NMT modes are mandatory at all terminals, stations and bus stops, on all roads of 18m and above (and not prohibited on any road), near all major public buildings and destinations. In areas where provision of adequate IPT/ NMT parking is not possible within ROW, setbacks of use premises may be acquired. Parking spaces for differently abled to be provided as per code.

12.14.3.4. PARKING IN RESIDENTIAL AREAS

Over the years a large number of the residential areas have been experiencing severe problems of vehicular congestion and shortage of parking space. Most of the parking is, in fact, being done on the road, which significantly reduces the carriageway width. The problem has been exacerbated by the traffic congestion generated by schools in residential use areas. Some measures required to alleviate the problem are:

i. Parking of all vehicles of any residential building, group housing, commercial building etc to be provided within the plot area/ building only. Parking outside the plot area (i.e. on the ROW of road, public spaces) will not be permissible and should be penalized. RWA with the help of local police may enforce the same.
ii. Road cross sections may be redesigned wherever possible to accommodate planned car parking along the residential streets, and also creating more surface movement space.
iii. Paid on-street and off-street parking to be developed for long term and short term parking provisions.
iv. Resident Welfare Associations will have to be called upon to participate in this process by raising contributions from the residents on the basis of objective criteria such as number of cars owned, etc.

v. Problem of congestion arising on account of the traffic generated by schools have to be specifically addressed, and the main responsibility for putting up the required additional facilities has to be borne by the schools themselves.

12.14.3.5. PARKING STANDARDS FOR PUBLIC PARKING

Public parking for all modes may also be provided at designated/ demarcated locations at off-street parking locations in form of surface, underground or multi-level parking. Short term and long term parking should be differentiated and provided based on local demand and provided as per comprehensively planned Parking Management Districts (Section 12.4.2.1).

On-street parking may be planned as per Street Design Regulations (Annexure-12.0 (I). Majority of on-street parking spaces should be for hired/ shared IPT and NMT modes. Only short-term parking for private modes may be provided on street.

Off-street parking may be provided as per the following:

12.14.3.6. BI-LEVEL PARKING FOR PUBLIC BUSES

Land is scarce and efficient use of land for bus parking is essential. At the same time, in order to reduce dead mileage and making buses travel to locations outside the city to depots in large plots of land, it is more desirable to provide them parking within developed urban areas in multi-use multilevel parking facilities with bus-parking in upper-basement and lower ground levels, and parking for smaller vehicles may be provided in other levels

Within developed urban areas, bi-level parking should be developed as mixed use projects with the following norms:

i. Minimum Plot Size – 20,000 sq.m.
ii. An FAR of 100 is permissible over 50% of plot area. Norms for podium based buildings shall be applicable as per Chapter 17: Development Code.
iii. Operational structures and circulation areas may cover 100% of the plot area and shall not be counted towards FAR. The site must accommodate at least the required bus parking space on site at the rate of minimum 1 bus per 70 sq.m.
iv. If the bus depot site lies with the MRTS influence zone, Norms as per 12.18.1-2 shall be applicable.
v. The maximum height shall be as per local constraints like flight paths, heritage zones, etc.
vi. There will be no restriction on the number of levels of basement subject to structural safety, or till minimum 1 m above post monsoon ground water level of the site or safe distance above post monsoon ground water table.
vii. In case of integrated schemes, development controls including height shall be as per approved scheme or as per local restrictions if any.

12.14.3.7. MULTI-LEVEL PARKING FOR PRIVATE MODES

Several multilevel parking projects have been implemented by local bodies/ agencies in the recent past. It has been seen that none of the parking lots are being used even to half their capacity due to availability of unlimited subsidized parking on streets/ public spaces in the vicinity of these projects. In other words, low-pricing of on-street parking is leading to failure of off-street multilevel parking facilities.

Therefore, multi-level parking projects should be integrated as part of comprehensive PMD schemes at designated locations. In order to ensure viability of the projects and optimum use, strict enforcement and appropriate pricing of on-street parking, is required. Preferably, on-street and off-street parking (including multi-level) should be managed and enforced by a single agency. All multi-level or exclusive parking facilities for private parking shall also provide at least 10% of total space provision for IPT modes, NMV and feeder buses, as per local requirement.

Detailed regulations and comprehensive parking policy may be worked out subsequently, in consultation with all stakeholders.

For plots for multi-level car parking already earmarked/ designated by local bodies, the existing development control norms will continue, as follows:

i. Minimum Plot Size – 1000 sqm.
ii. In order to compensate the cost of Multi-level parking and also to fulfill the growing need of parking spaces within urban area, a maximum of 25 % of gross floor area may be utilized as commercial / office space.
iii. In addition to the permissible parking spaces on max. FAR, 3 times additional space for parking component shall be provided.
iv. Maximum FAR permissible shall be 100 (excluding parking area) or as per the comprehensive scheme. However, no FAR shall be permissible in plots / existing buildings where 5% addl. ground coverage is permissible (Refer para 8 (4) i) Parking Standards, Chapter 17.0 Development Code).
v. Maximum ground coverage shall be 66.6%. The maximum height shall be restricted to permissible height of the land use in which the plot falls. There will be restriction on the number of levels of basement subject to structural safety.
vi. In case of comprehensive schemes, development controls including height shall be as per approved scheme.
vii. Number of basements - No Limit, subject to adequate safety measures.
viii. For development of Multilevel Parking, models should be worked out to encourage the private sector initiative with restricted commercial component, not exceeding 10% limited to FAR 40 on the plot.
ix. Specific proposals requiring relaxation in above-mentioned norms for already designated sites would be referred to the Authority.

12.15. REGISTRATION AND LICENSING

The aspects of registration and training of transport operators / drivers needs to be viewed as an important element of the overall transport plan and policy. Licensing system should be made strict to create awareness about traffic rules and regulations among road users.

12.16. BARRIER FREE ENVIRONMENT

A major consideration in the planning and design of outdoor and indoor movement should be such that people with disability, older persons women and children may move about without help from others. This requires that:

i) All public spaces, paths and pavements shall be flat, uniform, non-skid and free from unnecessary obstacles with necessary features required as per codes for barrier-free movement.

ii) Orientation points, guide routes, universal signage and auditory signals should be provided for the differently disabled;

iii) Information and warning signs must be understandable, clear and well lit.

12.17. TRAFFIC IMPACT ASSESSMENT (TIA)

The goal of a traffic impact assessment is to determine potential impacts of traffic changes caused by large proposed developments on city level transportation infrastructure i.e. capacity of roads and transit systems, and to identify any infrastructure and transit improvements or mitigation measures needed to ensure that transport networks will operate acceptably and safely upon completion of the proposed development. Comprehensive policy about Traffic Impact Assessment (TIA) should be prepared and placed before the Authority.

The benefits of Traffic Impact Assessment are:

i. Providing decision makers with a consistent basis on which to assess transportation implications of proposed development applications.
ii. Providing a rational basis on which to evaluate if the type and scale of the development is appropriate for a specific site and what improvements may be necessary to provide safe and efficient traffic, pedestrian, cycling and transit flow.
iii. Providing a basis for determining existing or future transportation system deficiencies that should be addressed.
iv. Addressing transportation related issues associated with development proposals that may be of concern to neighbouring residents, businesses and other stakeholders.
v. Providing a basis for negotiations for improvements and funding in conjunction with planning applications.
vi. A traffic impact assessment may vary in scope and complexity depending on the type and size of the proposed development.

Table 12.7: Development Controls for Transportation

S. No.	Use Premises	Activities Permitted	Development Controls (4)			
			Area under Operation (%)	Area under building (%)	FAR *	Floor area that can be utilised for passenger accommodation
1.	Airport	All facilities related to Airport / Aviation Passengers as decided by Airport authority of India including watch & ward		-NA-		
2.	Rail Terminal/ Integrated Passenger Terminal Metropolitan Passenger Terminal	All facilities related to Railway, Passengers, operations, Goods handling, passenger change over facilities, including watch & ward, Hotel, Night Shelter.	All Rail Terminals / Integrated Passenger Terminals/ Metropolitan Passenger Terminals may be developed as per TOD norms, subject to traffic and transportation studies related to surrounding road network.			
3.	Rail Circulation	All facilities related to Railway Tracks, operational Areas including watch & ward.		-NA-		
4.	Bus	All facilities related to	50	50	100	25%

	Terminal/ Bus Depot	Bus & Passengers, parking including watch & ward, Soft Drink & Snack Stall, Administrative Office, Other Offices, and Hotel, Night Shelter, Commercial, Social infrastructure, Residential, Service Apartments, hostels.	(100 in case of multilevel parking)	*A* Multilevel bus parking is permitted in all Use Zones except Recreational Open Space and environmentally sensitive areas. *B* Site must accommodate at least the required number of bus parking space on site at the rate of minimum 1 bus per 70 sq.m. *C* Additional multi-level bus parking norms shall be as per Section 12.14.3.6. *D* All bus depots/ terminals within Influence Zone of MRTS corridors excluding in Zone-'O' to be developed as per TOD norms (Section 12.18) except for those corridors lying within the land pooling area and Low Density Residential Area (LDRA) of Urban Extension.
5.	ISBT	All facilities related to Bus & Passengers, parking including watch & ward, Bus Terminal, Soft Drink & Snack Stall, Administrative Office, hotel, Night Shelter, Commercial, Social Infrastructure, Residential, Service Apartments, Hostels	a. Maximum Ground coverage:40% b. FAR: 100, subject to the following: (i) FAR shall be available on a maximum area of 10 ha. or area of site whichever is less. (ii) ISBT, including operational structures Maximum FAR 70 (iii) Hotel / passenger accommodation and facilities Maximum FAR 30. c. Parking: In addition to the requirement of parking for ISBT / buses, parking for Hotel/ passenger accommodation and facilities shall be at the rate of 2 ECS per 100 sq.m. of floor area. d. The development shall be undertaken in a composite manner. e. However, ISBTs within Influence Zone of MRTS corridors to be developed per TOD norms (Section 12.18) except for those corridors lying within the land pooling area and Low Density Residential Area (LDRA) of Urban Extension.	
6.	Toll Plaza	Toll collection booth, utilities, facilities and required infrastructure.		-NA-
7.	Road Circulation	All types of road, street furniture, vending zones, bus shelters, underground & over ground services utilities, signals, metro tracks as part of R/W, sub-ways, under-passes, ROB & RUB including watch & ward.	Development of roads shall be as per Street Design Regulations (Chapter 12, Annexure-12.0 (I)	

8.	Metro Yards	Idle parking of coaches, washing and cleaning facilities, maintenance related facilities, watch & ward and staff related facilities.	80%	20%	100	15%
			In case the Metro Yard falls within the Influence Zone of MRTS corridors, it may be developed as per TOD norms (Section 12.18.1&2) only if more than 50% of the Yard area lies within Influence Zone of MRTS corridors and/or they are developed as multi-storey yards.			

* The F.A.R. is to be calculated on the Building Plot. Area under Bus Shelter not to be included in FAR.

Development Controls for Metro Stations and Railway Stations/ Terminals:

1. Metro Stations along with property development (composite development) up to a maximum area of 3.0 ha shall be permitted in all Use Zones, except in Recreational and Regional Park / Ridge Use Zone, Lutyens' Bungalow Zone and Heritage Zones.
2. This enabling provision of property development would have the following broad development controls:
   i. TOD norms as per Section 12.18 and 17.0 Development Code shall apply to all property development of metro/ railway stations, except for those corridors lying within the land pooling area and Low Density Residential Area (LDRA) of Urban Extension.
   ii. Within about 500m of the metro station, pedestrians, public transport users, IPT and NMT modes need to be prioritized over private modes. The following guidelines for multi-modal integration may be followed:

Table 12.8: Guidelines for multimodal integration at metro stations

Approx. walking distance from exits	Facility/ amenity and preferred location:
Within 100 m	Bus stops; vendor zones; convenience shopping; cycle-rental station, high occupancy feeder stop/ stand, public toilets; pedestrian-only plazas.
Beyond 100 m	Private car/ taxi "drop-off" location only; validated car parking facility for metro users (park & ride) may be provided.
Within 500m	Cycle-rickshaw stand; cycle-parking stand; IPT/ auto-rickshaw stand, improved lighting, proper signage, information for modal interchange and way-finding; interchange between any two mass rapid transit modes (Railway, Metro, RRTS, etc.)

   iii. The development shall be undertaken in a composite manner and DMRC shall obtain approval of all the concerned local bodies/ agencies.

3. The following structures shall be treated as operational structures:
   i. All Metro Stations and tracks supporting at grade, elevated and underground including entry structures, ancillary buildings to house DG sets, chilling plants and electric substation, supply exhaust and tunnel ventilation shafts etc.
   ii. Depots and maintenance workshops.
   iii. Traction sub-stations.

iv. Operational Control Centers
v. Police Station.
vi. Recruitment and Training Centers for operational and maintenance staff
vii. Housing for operational staff and Metro security personnel only
viii. Rehabilitation work to be undertaken for the construction of Metro Project
ix. Shops in Metro Stations to cater to the public amenities
x. Structures above platform over the foot print of the Metro Stations

12.18. DEVELOPMENT CONTROL NORMS FOR TRANSIT ORIENTED DEVELOPMENT (TOD)

The Influence Zone of MRTS Corridors (as per Section 3.3.1 A) shall be designated as Transit Oriented Development (TOD) Zone where the following development control norms shall apply:

12.18.1. FAR and Density:

a. TOD norms of FAR and density may be availed through the preparation and approval of comprehensive integrated scheme of minimum size 1 Ha, with maximum ground coverage of 40%. In case of MRTS/ Government Agencies, the minimum plot size for development shall be 3000 sq.m., but all other development norms apply as per this Chapter.

b. Cluster Block approval may be given to DE for a minimum area of 3000 sq.m. only if an approved influence zone plan or integrated scheme for the area exists.

c. For any integrated scheme, a max. FAR of 400 and a maximum density of 2000 persons per hectare (PPH) is permissible. The entire amalgamated plot will be considered for calculating the FAR and density. EWS FAR of 15% over and above shall be applicable. Additional FAR may be availed through TDR only, for schemes larger than 1 Ha.

d. All residents residing in that scheme area shall have to be accommodated within the same scheme only, with no induced displacement of existing residential population.

12.18.2. Mix of Uses:

In all integrated schemes, a minimum of 30% of overall FAR shall be mandatory for Residential use, a minimum 10% of FAR for commercial use and minimum 10% of FAR for community facilities. Mix of uses and FAR utilization for the remaining 50% FAR shall be as per the land use category designated in the Zonal Plan.

Table 12.8: Indicative FAR utilization and mix of uses
within various land use categories falling within TOD Zone (except Recreational):

Landuse as per ZDP (At Least 50% of total FAR to be as per ZDP Use)	Indicative Mix of Uses within FAR Utilization			
	Minimum Residential*	Minimum Commercial**	Minimum Facilities**	Indicative Mix of Uses within remaining 50% FAR, as per ZDP landuse
RESIDENTIAL	30%	10%	10%	• Of the remaining FAR, at least 20% or more (upto 70% of total) is for Residential use. • Other uses are permitted upto 30%.

COMMERCIAL	30%	10%	10%	• Of the remaining FAR, at least 40% or more is to be for commercial use. • Other uses are permitted upto 10%.
INDUSTRIAL	30%	10%	10%	Remaining 50% of FAR to be for Industrial use.
GOVERNMENT	30%	10%	10%	Remaining 50% of FAR may be for any Government use.
TRANSPORTA-TION	30%	10%	10%	Remaining 50% of FAR may be for any use after meeting all operational requirements for transportation facilities. Additional norms as per Table 12.7 are applicable.
PUBLIC AND SEMIPUBLIC FACILITES (PSP)	30%	10%	10%	Of the remaining FAR, at least 40% or more is to be for PSP use. Other uses are permitted upto 10%.
MIXED-USE	30%	10%	10%	Remaining 50% of FAR may be for any use.

Notes:

*1. The mandatory residential component shall comprise of 50% units of size ranging between 32-40 sq.m. and the balance 50% comprising of homes ≤65 sq.m. EWS FAR of 15% over and above the permissible FAR will be applicable.

**2. The mandatory facilities and commercial component shall include the requirements of the residential population in that land parcel.

3. DMRC/ RRTS/ Railways (MRTS) to be exempted from providing the minimum 30% Residential component which is part of the TOD norms applicable to all other DE. In case residential is provided in MRTS projects, the mix of dwelling unit sizes (for middle income group) may not be made applicable to DMRC/ RRTS/ Railways. Minimum scheme area for development to be relaxed to 3000 sq.m. for DMRC/ RRTS/ Railways (MRTS) agencies.

12.18.3. Roads:

i. Of the area taken up for development as integrated scheme, at least 20% of land shall be handed over as constructed roads/ circulation areas to the local body/ road owning agency for public use. However FAR can be availed on the entire amalgamated land parcel.

ii. Land to be surrendered as built roads/ public spaces to the extent of at least 10% shall be along one side, to be consolidated with the adjacent plot wherever applicable.

iii. The roads handed over to govt. will be designed, developed, maintained and kept encroachment free by the DE and will remain open for general public at all times. Efforts shall be made to provide appropriate property tax rebates to Developer entities for keeping the roads/ public spaces encroachment free.

iv. Road Networks to be planned with a vehicular route network of approximately 250m c/c and pedestrian network of approximately 100m c/c. Additional thoroughfares should be provided as required.

v. The Authority will prepare/approve plans for TOD Zones indicating the ROW's, public spaces, build-to lines and connectivity links to Metro Stations and probable areas where

amalgamation can take place with land parcels of 1Ha or more. The regulations/ guidelines for creating arcades, boulevards, paseos, woonerfs and other active streets shall be tentatively indicated in the influence zone plans prepared/approved by the Authority.

12.18.4. Green Public Open Space Provision:

i. 20% of the area of the amalgamated plot shall be designated as green Public Open Space which shall be designed, developed and maintained by the DE/agency and will remain un-gated and open for general public at all times, failing which it will be taken over by Public agency. The location of such space will be tentatively indicated in the plan as mentioned in clause 12.18.1.
ii. The location and design guidelines for such spaces shall be tentatively indicated in the influence zone plans prepared by the Authority.
iii. In addition to the above, at least 10% of plot area shall be in the form of Green/ Recreational area for the exclusive use, including circulation and common areas. In plots less than 1 Ha, this may be provided in the form of accommodation reservation i.e. as part of common terraces, rooftops, podiums, etc. .
iv. Areas indicated as Master plan level/ Zonal Level Recreational will remain unchanged.

12.18.5. Social Infrastructure:

i. Social Infrastructure may be allocated the required built-up area within planned re/development schemes in the form of Accommodation Reservation, instead of individual plots.
ii. Open area requirement of the social infrastructure uses shall be accommodated/ integrated into the multi-use Public Open spaces provided in the area. For example, school playgrounds may be provided within the Neighbourhood Play Area.
iii. After approval of the integrated scheme and demarcation of civic/PSP sites and recreational open space, change of use shall not be permitted.

12.18.6. Green Buildings

i. The entire development has to be with minimum 3 star or gold rating as per approved rating agencies and appropriate rebate in the property tax may be applicable.
ii. As the TOD development will take place through redevelopment and reconstruction, no levy on additional FAR is applicable except additional services charges.

12.18.7. Impact Assessment

Once the Influence Zone plans for TOD areas are prepared by DDA indicating the street networks, indicative amalgamations areas, location of public spaces, active edges, etc. a complete assessment of traffic generation and its dispersal, requirement of services, mitigation measures for environment impact will be done and got approved from bodies concerned so that the redevelopment process through TOD can be effective and beneficial for general public. Challenges arising during implementation need to be addressed progressively.

Street Design Regulations:

Based on the overall Mobility, Safety and Environmental Goals for the City, the following Regulations must be followed for design, execution, management and maintenance of all Roads:

1. To Promote Preferable Public Transport Use:
   - 1A. Streets should be Retrofit for equal or higher priority for Public Transit and Pedestrians.
   - 1B. Prohibit street parking or enforce high parking charges for private vehicles on public streets and spaces, in order to encourage use of other modes.
   - 1C. Provide dedicated lanes for high occupancy vehicles (HOVs) and carpool during peak hours.
   - 1D. Provide transit-oriented mixed landuse patterns and redensify city within walking distance of MRTS stops, wherever permissible.
2. For Safety of All Road Uses by Design:
   - 2A. Limit speed by design on urban arterial roads and sub-arterial streets to 50kmph and on collector and local streets to 30kmph. Street design should be used as a means of limiting speed where possible aided by enforcement in the case of higher speed limit.
   - 2B. Traffic calming of all streets with ROW of 12m or less, through narrowing of driveway and meandering path with use of trees, islands and street furniture. Speed should be limited to 20km/hr by design.
   - 2C. Maximum kerb height shall not exceed 150 mm, as higher kerbs are difficult to climb for pedestrians causing them to walk on carriageways. Higher kerbs are also dangerous for speeding vehicles during off-peak hours as they may cause overturning of vehicles, accidents, etc.
     - Final road level should be fixed for all streets in the city. When repaving roads, previous layers must be scraped such that final road level remains the same.
     - Footpath level should never be more than 150mm above adjoining carriageway level.
   - 2D. Intermittent buffers, bollards and other physical elements should be used to protect footpaths from encroachment by motor vehicle parking. However, such elements should not form a barrier, such as continuous railings, that constrain access to pedestrians. Active enforcement is required to protect encroachment of footpaths.
   - 2E. Corner radius of Kerb should not exceed 12 m, in order to control speeding of vehicles at blind turns and intersections, causing accidents. No slip roads or free left turns should be provided on Collector or Local Streets. In case slip roads or turning pockets are provided on Arterial roads, safe at-grade pedestrian crossings with traffic calming and signalshould be provided.
   - 2F. Multi-Utility Zone (MUZ) of minimum 1.8 m width should be provided on all Collector and Arterial Roads, to accommodate bus stops, street utilities, trees, street furniture, planting for storm water management; IPT/NMT stands, paid idle parking, etc. so that these don't encroach upon the carriageway or safe pedestrian movement spaces.
   - 2G. Secure parking facilities and services for cyclists/ NMT should be provided on all Collector and Arterial Roads.
   - 2H. Provide Accessible Public Toilets at every 500-800 M distance – preferably located close to bus stops for easy access by pedestrians and public transport users.

3. For Pedestrian Safety, Comfort and Convenience on All Streets:

3A. Pedestrians should remain at ground level with comfortable and safe access and minimum detours from the most direct path, unless there is no other alternative.

3B. A continuous unobstructed footpath on each side of all streets with ROW wider than 12m. Minimum width of footpath should be 1.8m (with clear height 2.4 m.) in addition to space for trees/greenery/vending spaces and surface utilities. Width of footpath shall be determined based on pedestrian volume and have to be wider than 1.8m wherever required.

3C. Frontage Zone or Dead Width: For sidewalks in shopping areas, an extra 1m should be added to the footpath width. In residential areas, a dead width of 0.5m may be added.

3D. On streets with ROW of 18m or less, if pedestrian traffic is greater than 8000 per hour in both directions together, the entire ROW should be notified for pedestrianization. Streets may be considered for pedestrianization even if pedestrian traffic is lower than 8000 per hour depending on the potential to improve economic activity and/or safety and convenience.

3E. Elevation of footpaths over the carriageway at all times should be <150 mm and adequate cross slope for storm water runoff. The elevation should be low enough for pedestrians to step onto and off of the footpath easily.

3F. All facilities and amenities should be barrier free for universal access by all persons with reduced mobility including those with hearing and visual impairments.

3G. At least 5 safe Street-Level Crossing Opportunities per kilometer of street with 250m being maximum spacing between two crossings. Depending on context, these crossings may be signalized and/or traffic calmed (through raising crosswalk over street level by 150mm) to reduce vehicular speed.

- Pedestrian refuge with a minimum width of 1m at each street crossing location after crossing 7m of one way motor vehicle carriageway or 10m of two way motor vehicle carriageway at non signalized midblock crossings. Pedestrian refuge width may be expanded to 1.75m where possible to accommodate a bicycle.
- Grade separated structures (foot-overbridges and pedestrian-subways) should be avoided to prevent unnecessary detours to reach destinations.
- If grade-separated pedestrian crossings are unavoidable due to presence of highways in peripheral zones of urban areas, then such crossings structures should be frequent. There must be at least 4 crossing opportunities per kilometer in areas with development at edges. Every crossing should be universally accessible.

3H. Natural Surveillance or “eyes on the street” should be enabled on all roads by removing setbacks and boundary walls and building to the edge of the street ROW, wherever permitted as per norms. This would allow people from inside to look out on to the pavement, thus discouraging harassment of women on footpaths, bus-stops and public spaces.

- The main building facade should face the street, located on the property line without setback or with active use within set back and transparent edge that contribute to street safety. Commercial frontages should have facades with minimum 50% transparency (untinted) to facilitate visual surveillance of streets.
- In case enclosure of sites is required, transparent fencing should be used above 300 mm height from ground level.
- Vending spaces should be marked in addition and adjacent to the walking path, especially along high pedestrian volume areas to activate the street and make it safe.

Space to be planned for utilities including drinking water kiosks and toilets so that the walking space is enhanced but not compromised.

3I. Provide adequate low-mast Street Lighting for pedestrians and bicycles, in addition to any high-mast lighting provided for the carriageway. . Approx. 20 lux level is suitable for non-shopping areas and footpaths and 25-30 lux-level is required for shopping areas, bus-stops, Metro station exits and any areas where pedestrians are expected to gather or wait.

3J. Provide Dustbins, post-boxes, signage and other public amenities at street corners for high usability.

4. For climatic comfort for all Road Users:

4A. Trees are an essential component for all streets – to provide shade to pedestrians/cyclists and reduce solar gain.

- At least 125 trees per km for streets with ROW smaller than 12m. At least 125 trees per km per footpath on streets with ROW greater than 12m. Spacing of trees at no place should be greater than 12m except at intersections.

4B. High albedo (diffuse reflectivity) materials should be used for paving to reduce urban heat island effect.

4C. Built to Pavement Edge Buildings with overhangs and arcades provide good protection to pedestrians.

5. To ensure universal accessibility and amenities for all street users:

5A. All facilities and amenities should be barrier free for universal access by all persons with reduced mobility including those with hearing and visual impairments, as per Codes.

5B. Continuous barrier free pavement should be provided for ease of movement for elderly/ persons with disabilities. Pavement height of the footpath should be maintained at a constant level of 150 mm all along the ROW, for proper provision of table-tops/ ramps, etc. at various locations such as entry to properties, crossings, etc.

5C. Provide at-grade crosswalks (and foot-over-bridges on highways or BRT corridors) at intervals of approx.70-250 M, aligning with location of transit stops, type of street / landuse activities and neighbouring building entries and destinations.

5D. Provide Accessible Public Toilets should be provided every 500-800 M distance, preferably located close to bus stops for easy access by pedestrians and public transport users.

6. To reduce Urban Heat Island Effect and Aid Natural Storm Water Management:

6A. Decrease impervious surfaces through permeable paving, tree planting zones, etc. to increase ground water infiltration & prevent seasonal flooding.

6B. Integrate Natural Storm Water filtration and absorption into street design through bio-filtration beds, swales and detention ponds.

6C. Decrease Heat Island Effect (HIE) by increasing greenery, planting trees, using reflective paving, etc.

7. Intermediate Public Transport:

Intermediate Public Transport (IPT) are hired/shared modes of transport that may serve as feeders to trunk public transport systems or as another alternative to private transport use. IPT includes cycle-rickshaws, auto-rickshaws, e-rickshaws, taxis and any other vehicle type serving as a shared mode/ feeder service that is also prescribed under the Motor Vehicle Act. Taxis play an important role in providing an integrated transport service which should also be available on road like all other metro cities for people who choose not to use a car and combine taxi with

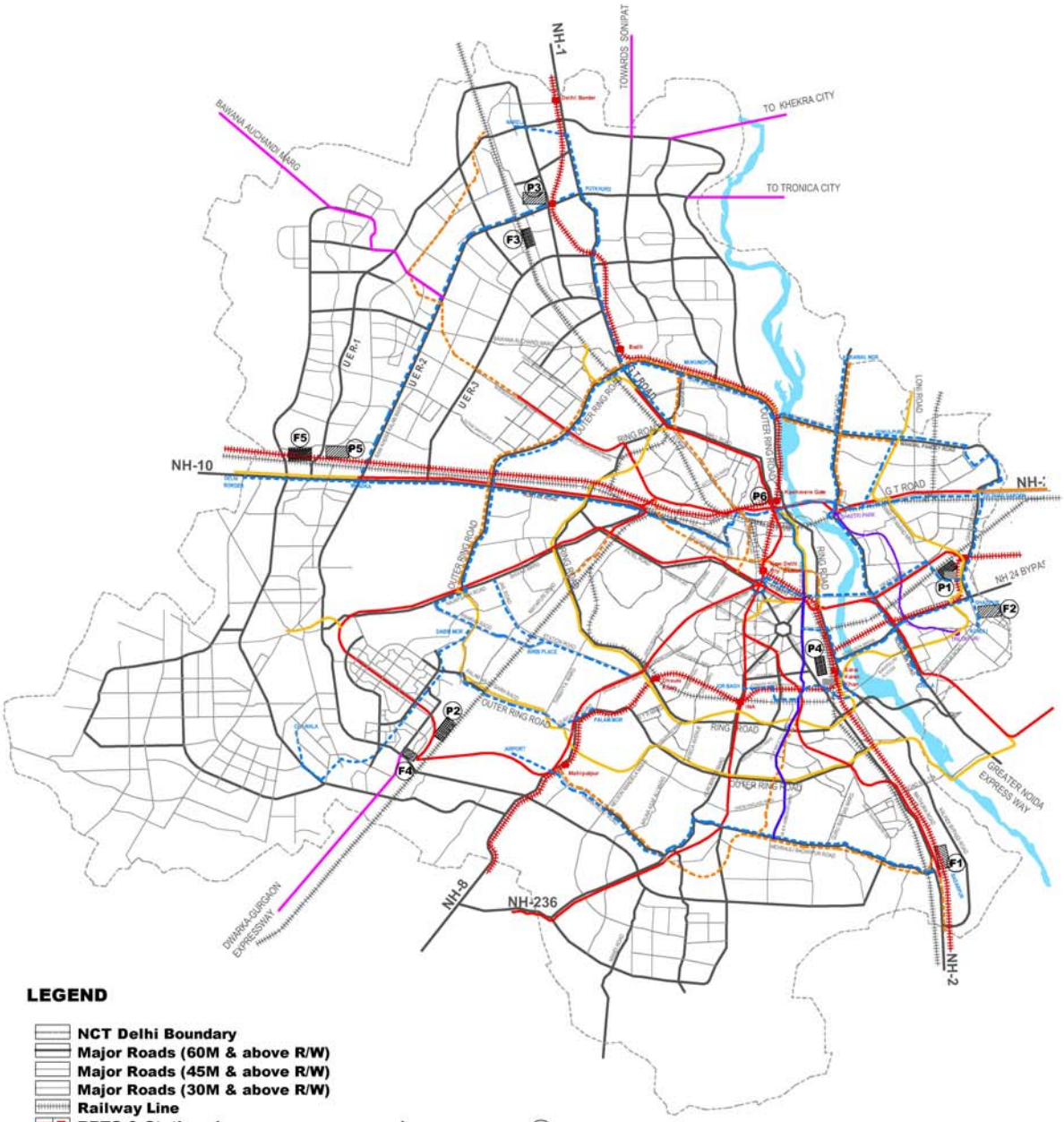
public transport for certain trips. Auto-rickshaws also play an essential role as a shared or hired mode of public transport which provide door-to-door connectivity for a variety of trips and provide an affordable alternative to private modes. Adequate space for IPT, Bus, private bus, truck and commercial parking must be provided on all Layout Plans.

8. Definition of Mass Rapid Transit System (MRTS):

Mass Rapid Transit System (MRTS) may be defined as any public transit system having the capacity to carry more than 10,000 peak hour peak direction trips (PHPDT).

Annexure- 12.0 (II)

Sub Regional Transport Network Plan for Delhi



LEGEND

- NCT Delhi Boundary
- Major Roads (60M & above R/W)
- Major Roads (45M & above R/W)
- Major Roads (30M & above R/W)
- Railway Line
- RRTS & Stations (Approved in 36th GBM dated 10.412)
- MRTS Ph- I & II
- MRTS Ph- III
- MRTS Ph- IV (Proposed)
- MRTS (Proposed)
- Monorail (Proposed)
- Integrated Transport Corridor/BRTS
- Integrated Transport Corridor/BRTS (Proposed)
- Integrated Passenger Terminal
- Interstate Bus Terminal
- Integrated Freight Terminal
- Proposed Inter-State Roads (60M & above R/W)

- F1 Madanpur Khadar Integrated Freight Complex
- F2 Ghazipur Integrated Freight Complex
- F3 Narela Integrated Freight Complex
- F4 Dwarka Integrated Freight Complex
- F5 Tikri Kalan Integrated Freight Complex
- P1 Anand Vihar Metropolitan Passenger Terminal
- P2 Bijwasan Metropolitan Passenger Terminal
- P3 Holumbi Kalan Metropolitan Passenger Terminal
- P4 Hazrat Nizamuddin Metropolitan Passenger Terminal
- P5 Tikri Kalan Metropolitan Passenger Terminal
- P6 Kashmere Gate Metropolitan Passenger Terminal

N

0 1 2 3 4 5Km

MAP NOT TO SCALE
FOR REFERENCE PURPOSE ONLY

Modifications to Chapter 15.0 Mixed Use Regulations, MPD-2021		
15.4 General Terms and Conditions Governing Mixed Use **Other terms and Conditions**		
S. no	**Existing Provision**	**Proposed Amendment**
1	**(v)** Parking @ 2.0 ECS per 100 sqm built up area shall be provided within the premises. Where this is not available, cost of development of parking, shall be payable by the plot allottee / owner to the local body concerned. This condition shall apply even if residential premises are used only for professional activity. **(vi)** Common parking areas would be earmarked on notified mixed use streets taking into account the additional load on traffic and parking consequent upon notification of the street under Mixed Use Policy. If no parking space is available, land/ plot on the said street may be made available by Traders association, wherever possible, or acquired for construction of parking facilities, preferably, multi level parking. Development of such parking facilities shall be done by either the traders Association or by local bodies and may include public-private partnership as model for implementation.	**(v)** Parking @ 2.0 ECS per 100 sqm built up area shall be provided within the premises. **Residents/ traders' organizations/ private parties shall be responsible for providing for their own private parking facilities.** This condition shall apply even if residential premises are used only for professional activity. **(vi)** Common parking areas would be earmarked on notified mixed use streets taking into account the additional load on traffic and parking consequent upon notification of the street under Mixed Use Policy. If no parking space is available, land/ plot on the said street may be made available by Traders association, and **public shared parking facilities provided before approval/ notification of the said building/ project/ street as mixed-use.** **(vii) Issues related to mixed-use streets for which conversion charges have already been levied by local bodies needs to be addressed by the concerned local body.**

Modifications to Chapter 17.0 DEVELOPMENT CODE, MPD-2021		
S. no	**Existing Provision**	**Proposed Amendment**
1	**CLAUSE 4.0 USE ZONES DESIGNATED** (New Use Zone Added) • **TOD ZONE** **The TOD Zone shall be delineated in all relevant Zonal Plans as per 3.3.1.1A. This Zone shall allow flexibility in provision of a mix of various uses within the same plot, with the exception of polluting and potentially hazardous uses and activities as per C2 and PS2. Norms shall be applicable as per 12.18.**	
2	8(3) REGULATIONS FOR BUILDING CONTROLS WITHIN USE PREMISES (New rows and notes added)	

Table 17.1: Minimum Setbacks (Other than Residential Plotted Development)

S.No.	Plot size (in sq.m)	Minimum Setbacks			
		Front (m)	Rear (m)	Side (m) (1)	Side (m) (2)
1	Upto 60	0	0	0	0
2	Above 60 & upto 150	3	1.5 (avg.)	-	-
3	Above 150 & upto 300	4	2 (avg.)	-	-
4	Above 300 upto 500	4	3	3	-
5	Above 500 upto 2,000	6	3	3	3
6	Above 2,000 upto 10,000	9	6	6	6
7	Above 10,000	15	12	12	12

Minimum Setbacks for integrated TOD schemes:

S. No.	**Plot/ scheme size (in sq.m)**	**Minimum Setbacks**			
		Front* (m) (for all edges facing a public ROW of 18m+)	**Rear (m)**	**Side (m) (1)**	**Side (m) (2)**
			Setback to be handed back to local body as public roads (at least 20% of plot/scheme area)		
8	**Above 3,000 upto 10,000**	**0**	**6**	**6**	**6**
9	**Above 10,000**	**0**	**12**	**12**	**12**

Note:

i) In case the permissible coverage is not achieved with the above given setbacks, the setbacks of the preceding category may be **allowed.**

ii) **TOD schemes** shall be located on existing roads **having** a minimum width of 18m ROW (12m ROW for redevelopment areas, Slum Rehabilitation / Special Area and Villages).

iii) The setbacks are subject to requirements of height and ventilation as per building byelaws. **However, TOD Schemes shall be planned as per above setback norms, while endeavouring to ensure that all dwelling units get a minimum 2-hour solar access in at least one habitable room on the shortest winter day, and have the option for natural ventilation. Relevant additions to building bylaws shall be made.**

iv) In case a layout is sanctioned with more**/less** than the minimum prescribed setbacks, the same shall be followed in the sanction of the building plans.

v) The Technical Committee of DDA may relax setbacks, ground coverage and height in special circumstances.

vi) ESS wherever required to be provided within the plot, is allowed by shifting of side /rear setbacks.

vii) ***In TOD schemes, any edge of plot facing an existing public ROW >18m shall**

be considered as "front".

viii) For integrated TOD schemes, the main building facade(s) shall face the public street(s) without setback and have an active frontage as per Table 17.2 below, to facilitate visual surveillance of streets.

Table 17.2: Minimum Active Frontage* and built-to ROW line requirements.

Facing Street Right-of-Way	Minimum Percent of Building Frontage at built-to R/W Line to have Active Frontage:
R/Ws of ≥ 12 m	≥ 50%
R/Ws of < 12 m	No minimum requirement

***Active frontages include arcades, shop-fronts, entrance doorways, access points, entry/exits and transparent windows of active areas facing the main street. Commercial frontages shall have minimum 50% transparency (untinted) at ground floor level. The ground floor of all parking structures/ podiums or stilts must be lined with active frontage facing the main streets.**

i) Access and all other provisions shall be made as per Delhi Fire Service Act.

ii) In the new layouts, underground pipelines for fire hydrants on the periphery, exclusively for fire fighting services shall be provided. Necessary provisions for laying underground/ over ground fire fighting measures, water lines, hydrants etc. shall be made by Authority/ local body.

iii) In all TOD projects, boundary walls along any edge facing a public open space viz. pathway, road, park, etc. shall be prohibited. In case enclosure of sites is required, translucent fencing shall be used.

3 **8(4) PARKING STANDARDS**

Parking Standards have been prescribed in each use premises however, where it is not prescribed, it will be followed as given in the Table 17.2.

Table 17.2: Parking Standards

S.No	Use Premise	Permissible Equivalent Car Spaces (ECS) per 100 sq.m. of floor area*
1	Residential	2.0
2	Commercial	3.0**
3	Manufacturing	2.0
4	Government	1.8
5	Public and Semi-Public Facilities	2.0
6	**All Use Premises within TOD Zone**	***1.33***

Notes:

***Additional parking may be created within integrated schemes only as paid, shared parking facilities accessible to general public at all times.**

***** Planned commercial centres may be developed/ redeveloped as per integrated schemes, in which mixed use component may be introduced along with comprehensive PMD plans, feeder systems, public spaces, etc. In such cases, parking norms may be rationalized and ECS norms for mixed use may be applied***

subject to approval of Technical Committee of DDA. Activities permitted shall be as per Table 5.1 of the Masterplan.

(Following Notes Added)

v) Parking is one of the utilities permitted in all use zones except in regional park / ridge, **Recreational Open Space** and parks as per the approved zonal plan/ layout plan.

vi) The standards given in Equivalent Car Space (ECS) **shall** include parking for all types of vehicles i.e. cars, scooters, cycles, light and heavy commercial vehicles, buses etc. Parking adequacy statement/study for large projects like Stadia, Shopping Malls, Multiplexes will be desirable. Mode-wise parking spaces are to be marked on drawings to be submitted for approval.

Table 17.4: Indicative On-site Parking (ECS) Requirements for projects*

Mode	ECS Standard by mode	Area in Sq.m. (including circulation)	*Distribution* by mode - *per 1 ECS*/100 sq.m. of Built Up Area for all projects	*Distribution* by mode per *1 ECS*/100 sq.m. of Built Up Area within TOD Zone.
Cars/ Taxis	**1**	**23.00**	**0.60**	***0.60***
2 Wheelers	**0.25**	**5.75**	**0.25**	***0.10***
Cycles	**0.1**	**2.30**	**0.05**	***0.10***
Buses/ Shared Vans	**3.5**	**80.50**	**0.05**	***0.10***
Commercial vehicles	**3.5**	**80.50**	**0.05**	***0.10***
Total			**1.00 *ECS***	**1.00 *ECS***

***The above figures are indicative and may be customized on case to case basis. However minimum proportion of cycle parking is mandatory.**

Modifications to Chapter 19.0 Land Policy, MPD-2021

Para 19.7 Other terms and conditions

S. no	Existing Provision	Proposed Amendment
1	19.7.1 (i) Land Pooling to be permitted as per this policy in the urbanisable areas of entire urban extension for which Zonal Plans have been approved. However, **development along TOD corridors in these areas will be as per TOD policy.**	19.7.1 (i) Land Pooling to be permitted as per this policy in the urbanisable areas of entire urban extension for which Zonal Plans have been approved. **Transit Oriented Development (TOD) policy would not be applicable to the influence zone of MRTS corridors lying within the land pooling areas.**

Under Secreatary
Govt. of India
(F.No. K-)