

CHAPTER - 7

TRANSPORT

The Transport is regarded as a backbone of urban infrastructure and the lifeline of the city. A robust and organized transportation system accelerates economic growth. The running developments ratio of Delhi Should be balanced with respect to the Transport System. The urban transportation system has to be developed to cater to the burgeoning population growth. The implementation of the Integrated Multi - Modal Transit Systems for Delhi will be on full gear. The objective of good Transport system is to facilitate the city resident for day today activities within our city. This is sought to be achieved by:

- Construction & redesigning of Roads for better traffic management, Road Bye-Pass, Express Corridors and Construction of RUB/ROB/Flyovers to make major roads signal free to improve the traffic flow on all major roads as well as barrier free pedestrians moments may be taken up.
- Construction of new Foot Over Bridges (FOBs) and maintenance of existing FOBs may be included for better result.
- Improvement of Bus Transport System by replacement of old fleet of DTC buses by new semi low-floor buses, making functional of Corporate Sector Bus Operating System in all 17 Clusters and construction of new BRT Corridors, Operation and Maintenance of existing BRT Corridor.
- Encourage greater use of public transport and non-motorized modes by offering financial assistance for this purpose.
- Construction of Multi-level Parking lots, new Bus Depots & Terminals, construction of new ISBTs/Redevelopment of existing ISBTs to improve the quality of Bus Transport system in Delhi.
- Building capacity (institutional and manpower) to plan for sustainable urban transport and establishing knowledge management system that would service the needs of all urban transport professionals, such as planners, researchers, teachers, students, etc.
- Raising finances, through innovative mechanisms that tap land as a resource, for investments in urban transport infrastructure.
- Reducing pollution levels through changes in traveling practices, better enforcement, strict norms, technological improvements etc.
- Addressing concerns of road safety and trauma response with special focus on pedestrian safety.

[₹ in crore]

Sector	Annual Plan 2014-15		Annual Plan 2015-16		Annual Plan 2016-17
	Revised Outlay	Expenditure	Approved Outlay	Revised Outlay	
PWD	1700.00	1694.83	1525.00	1610.00	1943.00
North DMC	180.00	30.25 [155.00]	165.00	50.00	165.00
South DMC	84.00	62.47 [48.75]	65.00	41.63	70.00
East DMC	5.00	4.19 [NIL]	30.00	0	30.00
Transport Department	1702.00	1098.21 [NIL]	1910.00	2004.37	1735.00
Total	3671.00	2889.95 [2996.79]	3695.00	3706.00	3943.00

I. Public Works Department

Annual Plan Outlay 2016-17: ₹ 194300 Lakh

1. Flyovers /Grade Separators/ Bridges/ RoBs/ RuBs

The work is in progress on flyovers at outer ring road while road over Barapullah Nallah is also in pipe line of progress. Due to Rapid increase in volume of road traffic, number of intersections having single carriage way flyover needed to be added with dual carriage way flyover. Some of the selected flyovers for this concept will be taken on priority.

1.1 Signal free movement on outer Ring Road from Vikas Puri to Wazirabad (20 km) and on Ring Road from Azadpur to Prembaripul (2.10 km.)

As per Delhi MPD 2021 goals, for signal free movement on Outer Ring Road (ORR) and Ring Road (RR), which are the main arterial roads of Delhi, feasibility studies were carried out by PWD from Vikaspuri to Wazirabad (approx. 20km) on ORR in four different stretches, and from Prembari Pul to Azadpur (approx. 2.10 km) on RR taking into account the existing flyovers / underpasses already constructed. These stretches of road have got number of intersections which remain always chocked due to very heavy traffic on ORR and RR. These were approved by Governing Body of UTTIPEC.

Based on above, Preliminary Estimates (6 nos.) for different stretches of above schemes, total amounting to around ₹2385 crore have been framed. This is one of the major roads Project of PWD under implementation during 12th Five Year Plan.

Elevated corridor from Mangolpuri to Madhuban Chowk, Madhuban Chowk to Mukarba Chowk on Outer Ring Road and from Azadpur to Prembari Pul on Ring Road have been completed in 2015-16 and opened to traffic.

The status of these works in progress is details below:-

The Major components of Project are as under:-

S. No	Name of Stretch with length	Length of Elevated Corridor / Details of flyovers	Cost (in crore)	Progress Mar'2016
(i)	Vikas Puri to Meera Bagh (4.30 km) on ORR	Elevated road : 3.30km	559.60	75%
(ii)	Mangolpuri to Madhuban Chowk (3.90 km) on ORR	Elevated road : 2.60km	423.05	completed
(iii)	Madhuban Chowk to Mukarba Chowk (3.80 km) on ORR	Elevated road : 2.61km	421.79	Completed & opened to Traffic
(iv)	Mukarba Chowk to Wazirabad (8.00 km) on ORR	4 Flyovers & 2 loops Total length: 4.09km. Also a new 6 Lane parallel 8.00 Km long divided road on other side of drain.	633.17	70%
(v)	Mukarba Chowk to Wazirabad (parallel road from SGT Nagar to Wazirabad chowk)	Parallel road along NH-1	200.27	97%
(vi)	Prembari Pul to Azadpur (2.10 km) on RR	Elevated road : 1.60 km	245.54	completed
	Total Cost		2483.42	

1.2 Corridor improvement of Outer Ring Road from IIT to NH-8-1. (Part-A & Part-B)

The project of Construction of (Part-A) Flyover on portal structure linking existing Munirka Flyover in the east to the point beyond Army RR Hospital in the west on the Outer Ring Road and (Part-B) Underpass at junction of BJ Marg and Inner Ring road has been approved at the cost of ₹313.67 crore. The work has been started and it will be completed by the next year. A provision of ₹ 130 Crore has been kept for the year 2016-17 for the said Scheme.

1.3 Construction of Half Flyovers

To avoid traffic congestion, this scheme for construction of half flyovers has been launched in the last financial year with a provision of ₹ 2500 lakh under Annual Plan 2016-17.

2. JNNURM Projects

13 PWD projects approved under JNNURM by Govt. of India, out of which 9 projects have been completed, one project (Karkari Mor) has been fully dropped, 1 project at Noida Mor has been partially dropped wherein, phase-I of this project has been completed while Phase-II of it has been dropped. The remaining two projects as mentioned below are in progress: -

2.1 C/o Signature Bridge and its approach over River Yamuna downstream of the existing Bridge at Wazirabad, Delhi

Due to tremendous increase in population of Trans-Yamuna Area, there is pressing demand for additional East-West corridors over River Yamuna. The existing two lane wide barrage-cum-bridge at Wazirabad has been serving as a vital link between Delhi and UP areas for the last fifty years. There is tremendous increase in the volume of road traffic using this bridge, which has far exceeded its designed capacity. There have also been large scale developments in the trans-Yamuna areas which further resulted in tremendous increase in traffic volume. Therefore, a new bridge is proposed on the down-stream of existing bridge-cum-barrage at Wazirabad. The bridge will connect NH-1 (Road No. 45) on Western bank and Wazirabad Road (Road No. 59) on Eastern bank of the river Yamuna. This East-West corridor over River Yamuna will cater to the needs of commuters from Yamuna Vihar, Gokulpuri, Nandnagri, interstate traffic from Ghaziabad, Sahibabad on the eastern side and Timarpur, Burari, Mukherjee Nagar, Mall Road & North-West Delhi etc on the Western side.

The bridge will have a signal free approach from NH-1 (Road No. 45) on western bank and Wazirabad Road (Road No. 59 Khajuri Khas intersection) on the Eastern bank for entry & exit of traffic in two directions. Planning of the project was started on 27.4.2004 which was approved by DDA's Technical Committee on 14.06.06 and by DUAC on 20.10.06. Modified recast estimated cost of the project for ₹ 1131 crore was approved by Govt. of NCT of Delhi on 26.02.2010. Order to start the main bridge has been issued accordingly. Work on approach roads on both the eastern & western ends were taken up earlier against the previous sanction and are presently at 99% progress. Entire project is likely to be completed by December 2016.

The overall progress is 85% (Pkg.-I 99% Pkg.-II 87%) 16 nos. Well Foundations and piers of main flyover completed. Fabrication of pylon and main girders is in progress. 163 nos. pre-cast deck panels have been placed in position. 68 Nos. main girders, 122 nos. cross girders also erected. R.P.E for ₹ 1500 crore has been submitted for sanction of cabinet. Sum of ₹ 223.12 crore has been

received from G.O.I. as A.C.A. and also utilized. A provision of ₹ 200.00 crore has been made for this scheme under Annual Plan 2016-17.

2.2 Alignment over Barapulla Nallah Project Phase-I & II

The project aimed to provide an efficient connectivity for general public by passing through busy Lala Lajpat Rai Path & Mathura road and connecting ring road. It was exclusive corridor for the sports personnel between the Games village and Jawahar Lal Nehru Stadium during CWG-2010. The work involves construction of an elevated road corridor of about 3.8 km starting from **Sarai Kale Khan to Jawahar Lal Nehru Stadium in phase- I** has been completed and further connectivity **from JLN stadium to INA market in Barapullah Phase-II**. Total cost of the project is ₹1202 crore, out of which Phase-I have already been completed within the sanction cost of ₹ 530.00 Cr in October 2010. A provision of ₹ 100.00 crore has been kept for this scheme for Phase-II under Annual Plan 2016-17.

Two connectivity's with this elevated road have also been provided. One descending to Lala Lajpat Rai Marg commissioned recently in March-2012 and the other ascending from Sunheri Nallah is to be completed by June-2015. Execution of work in Phase-II i.e. Jawahar Lal Nehru Stadium to Aurobindo Marg is in progress and around 87% works has been completed.

3. Alignment over Barapulla Nallah Project Phase-III

On the other hand, for Barapullah, Phase-III stretch from Sarai Kale Khan to Mayur Vihar Phase-I has been sanctioned for Rs. 1260.63 crore and the work is in progress at about 9%. The provision for Barapullah Nallah Ph-III of ₹ 300.00 crore has been kept under this project for the year 2016-17 and it is not the part of the JNNURM.

4 Road Works

4.1 Road Strengthening

Works relating to road strengthening are covered under this scheme. Presently, (i) Strengthening of Road No.37, (ii) M.P Road/VARIOUS ROADS IN M-2 are in progress.

4.2 Road Widening

Works relating to road widening on various roads are in progress such as (i) WIDENING OF NEW PATPARGANJ ROAD C/o RCC box under pass for crossing of vehicle and pedestrian and diverting the road and other allied works. ROB36 (ii) Widening of Mehrauli-Mahipal Pur Road (iii) Widening of Road No. 13-A upto Kalindi Kunj.

4.3 Road Maintenance

(i) Resurfacing by Hot-in-Situ Recycling Technology

Many important PWD Roads including Ring Road have been resurfaced by Recycling Technology, which is a New Technology. The existing milled material is recycled and laid by adding about 25% to 30% new material. The depth of the road surface does not increase to that extent and therefore avoids disturbing the footpaths & Kerb stones. A provision of ₹ 500.00 Lakh has been kept for the year 2016-17 under R/o hot-in-situ recycling service road.

(ii) Micro Surfacing

Certain roads which had been resurfaced about 2 to 3 years back have developed fine cracks due to constant wear & tear. Micro surfacing technology is a thin layer of asphalt mix with very small size aggregate which virtually fills the cracks and seals the entire surface at top to make it more resistant to withstand future load. Usually, Micro surfacing is done after three years from the completion of the road. Many important roads which are due for such treatment have been proposed to be micro-surfaced.

(iii) MCD Road taken over by PWD

780 MCD roads of 60 feet and above width having length of 778 Kilometre have been taken over by P.W.D. PWD has taken up maintenance and improvement of the condition of all such roads taken over from MCD. A provision of ₹106.00 crore has been kept for this Scheme in the year 2016-17.

5. Signage

The signage has been provided for entire city on PWD roads. It has been proposed for the maintenance /repairs/retrofitting of these signage damaged due to vandalism, accidents etc. Under this scheme, Signage on Road No.40, 37,317,318 & 319 are in progress.

6. Foot Over Bridges

Under this scheme, Foot Over Bridges are being constructed on important roads like Ring Road and Outer Ring Road as per the requirement of pedestrians at particular locations. Subway Committee of Govt. of Delhi examines the requests for construction of FoBs depending upon the actual requirement and feasibility. A provision of ₹ 800 lakh has been made in Annual Plan 2016-17.

Lifts will help use by even disabled persons. 75 No's FOBs have been completed so far. 5 FOBs are in progress during the year 2016-17. Pre-qualification Bids have invited for maintenance of F.O.Bs including providing Public Utilities in-lieu of Advertisement rights to the agencies.

It is proposed to Construct Skywalk at ITO for movement of pedestrians and crossing busy intersections.

7. Projects at different stages

The two elevated BRT corridor project, one along Anand Vihar Terminal to Peeragarhi (East-West Corridor - 29 Kms) and the other from Wazirabad to Airport (North - South Corridor - 24 Kms) are to be taken up in 2016-17. Appointment of consultant for conducting feasibility study and preparation of 'detailed project report' for corridor improvement plan has been initiated and proposal has been sent to UTIPEC for approval. On successful implementation of the 'east-west' and 'north-south' elevated BRT corridors, the model will be implemented across Delhi.

Other four stretches of elevated corridors, one underground tunnel from NH 24 bypass to Lodhi Road and corridor improvement of road from Khajuri Khas to Bhopura border will be taken up in 2016-17.

8. Kalindi Bypass

Kalindi Kunj –Palla By-pass project is an important road project of Govt. of Delhi conceived in 1990's to reduce traffic load on NH-2. The DDA Technical Committee approved the scheme in June, 1993. Studies were carried out by CWPRS, Pune, and based on its study; Yamuna Standing Committee constituted by Central Water Commission accorded its approval to the alignment on 13.11.2003.

The total length of the road is 42.5 Km, out of which 27 Km has already been constructed by HUDA and 1.8 km from Badarpur to inside of Haryana is to be constructed by Haryana Govt. Balance 13.7 Km was required to be constructed by PWD in two phases.

Work was taken up in Phase I, construction of 6.5 Km of Express way connecting NTBCL Interchange and Road No. 13-A (Kalindi Kunj Road) in 2002 at a cost of 100.14 crores (including cost of land amounting to ₹ 33.45 Cr). However, the work could not proceed due to following exceptional and unusual problems faced after the start of work:

- i) Objections of Noida Toll Bridge Company to the clover leaves of Kalindi Bypass.
- ii) Objection of U.P. Irrigation Department due to the alignment passing through Yamunotri Parisar and land ownership.
- iii) Objection of U.P. Forest Department- Bird Sanctuary.
- iv) Order of Hon'ble High Court of Delhi that no road be constructed within 300m from edge of River Yamuna, which was later, reduced to 120 m by the Hon'ble Court.

In the meeting held on 13.4.2010 at Raj Niwas, it was decided by Hon'ble LG that Kalindi By-pass project should be reviewed. Hon'ble Lt. Governor also gave his

approval for going ahead with the appointment of consultant for construction of entire 13.7 km long Kalindi Bypass from DND flyover near Maharani Bagh, Delhi to Badarpur border under PPP model. Details are as below:

- i) DND flyover to Kalindi Kunj : 6.30 km
- ii) Kalindi Kunj to Badarpur border : 7.40 km
- Total : 13.70 km**

The project is being reviewed afresh by the Govt. because of the land issues involved and a consultant is being appointed to conduct feasibility studies.

In addition to this feasibility study of 22 No. corridors improvements in Delhi have been taken up and proposal sent to UTTIPEC for approval.

9. Service Duct

The envisaged project will accommodate utility services such as power & communication cables in ducts known as duct bank. It will have another soft corridor running parallel on both sides; to accommodate water supply & gas pipe lines on one side and sewage on other side. The concept of service duct is initiated at Connaught Place. However, preparation of service duct on full swing in city would definitely required huge amount of investment.

10. New Schemes/Projects to be taken up by PWD in 2016-17.

(i) Street-scaping of roads

Roads in Delhi needed improvements to make user friendly by providing street furniture and other amenities side by side creating good landscaping & horticulture works. The stretches of roads were identified in consultation with various road owning departments.

11 important stretches of roads have been identified for taking up improvement for providing barrier free pedestrian and other amenities and creating good landscaping and horticulture work. The Budget provision of ₹ 50 crores has been kept for 11Nos. of identified Roads (70 Km) and ₹ 9 crores has been kept for Other PWD roads (150 Km) under this scheme in 2016-17 to initiate the work on pilot basis in few roads.

(ii) Comprehensive Maintenance of Roads

PWD roads are being maintained by three wings (i) Civil (ii) Electrical and (iii) Horticultural. Road maintenance contracts are generally being drawn by the three wings separately at the level of Executive Engineer/Deputy director of Horticulture or

Superintending Engineer, in a peacemeal manner. This is leading to a situation where multiple agencies of the same discipline (i.e. Civil, electrical or horticulture) and different disciplines are working simultaneously on the same stretch of road, sometimes to the detriment of each other.

Further, another issue which is affecting the citizen of Delhi is high air pollution levels, particularly fine suspended particulate matter (PM 10 and PM 2.5). One of the major factors contributing to this pollution is the dust raised by the vehicles running on the roads. This dust is usually gathered on the roads due to improper or non-cleaning of roads. Manual sweeping of roads contributes to more air pollution as fine particles fly off during sweeping and remain suspended thereafter.

Hon'ble Supreme Court has also directed Delhi Govt. to start cleaning of roads w. e. f. 1st April 2016 in its orders dated 16.12.2015 in the case of WPC no. 817 of 2015 and others. Hon'ble Chief Minister, while reviewing the orders passed by NGT on 16.12.2015, has also directed that PWD shall be carrying out vacuum sweeping of roads from 1st April 2016.

In order to ameliorate this situation, a comprehensive maintenance contract system is proposed to be introduced in PWD in which the work on a group of PWD roads shall be awarded to a single contractor, who will be responsible for attending all the maintenance needs of those roads including mechanized sweeping, civil, electrical and horticultural maintenance. The contract period shall be five years. A provision of ₹100 crores has been kept in 2016-17 for this comprehensive maintenance work.

(iii) LED Screens

It is proposed to install LED screens at road crossing and other important locations for displaying Government messages and information for general public. These LED screens will be used for the displaying the information regarding pollution level/social messages/traffic messages and any other information in the public interest as approved by the competent authority time to time. The ownership of project will be with PWD.

A Provision of ₹137 crores has been kept in this financial year i.e. 2016-17.

(iv) CCTV

It is proposed to install CCTV at various locations in streets, market and common public places for general safety of public and especially for safety of women. Provision of ₹ 200 crores has been kept in the year 2016-17. The work shall be completed in this financial year.

(v) Dark spots on Roads

About 40,000 dark spots have been identified on 421 road stretches in Delhi. The Work of reducing dark spots on roads is in progress and shall be completed in this financial year. Provision of ₹ 114 cr. has been kept in this financial year i.e. 2016-17.

II. DELHI MUNICIPAL CORPORATIONS

1. ROADS & BRIDGES

Annual Plan Outlay 2016-17 : ₹ 15000 Lakh

[₹ in Lakh]		
S. No.	Agency	Plan Outlay 2016-17
1.	North Delhi Municipal Corporation	10000
2.	South Delhi Municipal Corporation	4000
3.	East Delhi Municipal Corporation	1000
	Total	15000

To overcome the frequent traffic congestions and chaos, it is proposed to construct over bridges, grade separator, subways, widening of roads, improvement in riding quality, construction of central verge, footpath, improvement of geometric of intersections, signalization of intersections etc.

Physical Targets and Achievements: -

Item	Unit	Anticipated Achievement 2015-16			Annual Plan 2016-17 Targets		
		North DMC	South DMC	East DMC	North DMC	South DMC	East DMC
Road/Path	KM	60	75	22	60	75	30
Drain	KM	12	15	12	12	15	20

2. CRF: ROAD PROJECTS

Annual Plan Outlay 2016-17 : ₹ 2700 Lakh

[₹ in Lakh]

S. No.	Agency	Plan Outlay 2016-17
1.	North Delhi Municipal Corporation	1200
2.	South Delhi Municipal Corporation	1000
3.	East Delhi Municipal Corporation	500
	Total	2700

Under CRF, works approved by MORT&H, Government of India are being implemented. CRF Scheme is a project specific schemes and funds received from CRF from Govt. of India on reimbursement basis.

Physical Targets and Achievements

Item	Unit	Anticipated Achievement 2015-16			Annual Plan 2016-17 Targets		
		North DMC	South DMC	East DMC	North DMC	South DMC	East DMC
Road/Path	KM	100	110	2	100	110	5
Drain	KM	10	15	1	10	10	5

3. C/o ROB/RUB

Annual Plan Outlay 2016-17 : ₹ 4300 Lakh

Physical Targets and Achievements

[₹ in Lakh]

S. No.	Agency	Plan Outlay 2016-17
1.	North Delhi Municipal Corporation	2800
2.	South Delhi Municipal Corporation	0
3.	East Delhi Municipal Corporation	0
	Total	2800

The main objective is to improve Traffic Movement. A Scheme for Construction of 17 ROB/RUBs amounting to ₹ 42800 lakh was included in year 2008 by MCD. Following 17 Railway level crossings to be converted into ROB/RUBs.

(i) Vivek Vihar (ii) Sarai Kale Khan (iii) Sewa Nagar (iv) Bijwasan (v) Nihori Road, Narela (vi) Shakur Basti (vii) Kirti Nagar – Prem Nagar (viii) Samaypur Badali (ix) Swarn Park (x) Rampura (xi) Zakhira (Daya Basti (xii) Mundka (xiii) Sanjay Gandhi Transport Nagar (xiv) Mangolpuri (xv) Sultanpuri (xvi) Roshanara garden and (xvii) Kirari Narela.

Out of 17 ROB/RUBs, 2 projects have been dropped and for remaining 15 ROB/RUBs, 12 ROB/RUB have been constructed by North DMC and 2 RUB/ROB by South DMC and only 1 by East DMC. The estimated cost of works is ₹ 430 crore, which has been revised to ₹ 625 crore, out of which 50% cost is being shared by Railways and rest 50% money is being contributed by Govt. of NCT of Delhi in the form of Grant-in-aid.

4. **JNNURM – ROAD PROJECTS**

Annual Plan Outlay 2016-17 : ₹ 6000 Lakh

[₹ in Lakh]

S. No.	Agency	Plan Outlay 2016-17
1.	North Delhi Municipal Corporation	2500
2.	South Delhi Municipal Corporation	2000
3.	East Delhi Municipal Corporation	1500
	Total	6000

11 MCD Roads projects have been approved by GOI under JNNURM. In North DMC there are 6 Nos. of project amounting to ₹ 490.00 crore are approved by GOI (i) Multilevel underground car parking, (ii) RMC of roads having ROW 60ft & above, (iii) Traffic management Plan around Civic centre & 3 Grade Separators. Out of 6 projects, 3 projects are in progress and 3 are held up due to UTTIPEC.

III. **TRANSPORT DEPARTMENT**

1. **PLANNING AND MONITORING CELL**

Annual Plan Outlay 2016-17 : ₹ 1 Lakh

It is proposed to strengthen this cell in the areas of Transport Planning and Research. The main activities proposed are collection, compilation and publication of transport related statistics and their analysis for policy changes and new policy initiatives, appraisal of schemes/projects. In this regard a detailed review of all the studies commissioned by the Transport Department will be carried out for formulating the plan of action.

As far as scientific approach in planning for long term and short term measures, it is necessary to have a validated data base which is regularly updated. The Planning and Monitoring Cell will maintain data such as vehicle registration, traffic volume, trip information, parking, movement of public transport, pollution level norms, accidents, enforcement and all other aspects of transport.

2. **MOTOR DRIVING TRAINING SCHOOLS**

Annual Plan Outlay 2016-17: ₹ 10 Lakh

The objective of this scheme is to impart training in driving skills to potential drivers and also upgrade the skills of existing drivers on scientific lines by employing modern equipments and highly trained instructors. Annually the licensing authorities

in Delhi issue about 3 lakh driving licenses. In view of this, during the 10th Plan a new initiative was taken by the Transport Department for establishing premier motor training schools in the Delhi in the PPP mode. So far 2 schools have been established under this scheme:-

1. IDTR (Institute of Driving Training and Research), Loni Road, jointly with Maruti Udyog Ltd.
2. MDTS (Sarai Kale Khan) as an extension of IDTR Maruti Udyog Ltd. Loni.
3. MDTS (Burari) as an extension of Ashok Leyland Ltd.

In the 12th Plan the above initiative will be continued to open more Premier MDTS in PPP mode. During 2015-16, it is proposed to initiate action to set up a world class MDTS with state of the art facility. Already DDA has allotted land at Dwarka and Zhulzhuli Najafgarh). In addition to the above, it is also proposed to assist DTC for upgrading its Drivers Training School at Nand Nagri.

All Heavy Vehicle Driving License holders have to compulsorily undergo a refresher course at MDTS before getting the licenses renewed after 3 years. MDTS will be conducting suitable training programmes for which assistance will be provided under this scheme.

3. COMPUTERISATION OF RECORDS

Annual Plan Outlay 2016-17: ₹ 400 Lakh

The prime objective of this scheme is to implement the e-governance plan for delivery of citizen services of department efficiently using Information Technology. Following activity charted out under the e-governance plan:-

- Registration of private & commercial vehicle on smart card.
- Driving license for private & commercial vehicle on smart card.
- Issuance of PSV badges on smart card.
- Online services for tax payment and various fees.
- WAN and LAN connectivity of all zonal offices.
- GPS System.
- Purchase of computer hardware and its peripherals.
- Maintenance of installed computer hardware and peripherals.
- Up-gradation of existing services.

For Registration of vehicle NIC designed and developed software called 'VAHAN' is being implemented in all zonal offices for issuance of smart card based

registration certificate. For issuance of Driving License, PSV badges and permits on smart card, transport department outsources the project to 'DIMTS' for delivery of license, badges, permit on smart card. Driving license is being issued on centralized system. Applicant can apply for Driving License from any of the zonal offices of Transport Department.

4. ROAD SAFETY & GIA to NGOS

Annual Plan Outlay 2016-17: ₹ 8500 Lakh

Awareness building on the importance of Road safety through all available medium for communication is the objective of this scheme. But the focus is more on civil society participation and in particular school children. Observance of the National Road Safety Week, participation in Perfect Health Mela, Meri Delhi Utsav, India International Trade Fair (IITF) and Bhagidari Mela will be important events. Road safety material/Road sign charts/hoardings/sign boards will be prepared and distributed in above-said events and other agencies for publicity. The Road Safety advertisements will be released through Newspaper & Print Media, TV channels, etc. Government of NCT of Delhi is taking various initiatives such as construction of pedestrian lanes, foot over bridges at traffic intersections, conducting Road Safety campaigns at schools and college level, educating the general public about the road safety and other measures.

State Road Safety Council has been constituted under the chairmanship of Commissioner (Transport) with members from Traffic Police, local bodies, DDA, PWD, DTC etc. for formulation & implementation of road safety programs in the NCT of Delhi. Hon'ble LG of Delhi has constituted the District Road Safety Committee in each revenue district in NCT of Delhi under the chairmanship of concerned DC/DM.

Under this scheme, Delhi Govt. has decided to depute Home Guards/Civil defence in all DTC & Cluster buses to allay the fear of crime and assure the women commuters of safety and security. These Home Guards/Civil defence will not only check the incidence of eve teasing and violence against women but also build confidence among them to use public transport.

5. STRENGTHENING OF TRANSPORT DEPARTMENT

Annual Plan Outlay 2016-17	:	₹ 2250 Lakh
Revenue	:	₹ 750 Lakh
Capital	:	₹ 1500 Lakh

A. Direction and Administration:

Annual Plan Outlay 2016-17 : ₹ 750 Lakh

Each Zonal office is headed by a Motor Licensing Officer, who is in-charge of all the registration/licensing work related to area jurisdiction of the zonal office. Apart from specified duties related to Licensing/Registration, the M.L.O has to inspect premises of Motor Driving Training Schools, self-registration dealers, workshops etc. Beside they are also deputed for various drives conducted by the Department.

STRENGTHENING OF ENFORCEMENT BRANCH

Enforcement Branch of this Department is required to enforce the provisions of Motor Vehicle Act and Rules. Mobility is a major constraint in the absence of vehicles for the movement of the teams. But in order to optimise on both staff as well as vehicles it is proposed to introduce Radio Frequency Identification Device for strengthening the enforcement work with better coordination with other branches like STA, Operation Branch, PCD and Computer Branch etc.

Follow up of challenged cases with technology reforms: Presently 31 vehicles assigned with enforcement teams are fitted with GPS, Wireless, Lights and the monitoring of teams is done (24x7) from the control room of transport department. Transport department have purchased 40 devices (Touch-book) from Panasonic Company last year for E-CHALLANING.

SETTING UP OF A LEGAL CELL IN TRANSPORT DEPARTMENT

The Department files a large number of challans in the competent courts. Due to lack of staff the pairavi in these cases is grossly inadequate. There is a need for a dedicated team for this purpose for effectively protecting the interests of the Department. This will also reduce litigation with effective and timely follow up.

B. Construction / Renovation of Zonal Office

Annual Plan Outlay 2016-17 : ₹ 1500 Lakh (Capital)

At present, work related to issue of driving licenses and registration of vehicles is being done through all Zonal Offices. The Zonal Offices will be requiring additional staff for managing. The construction/renovation work of Zonal offices is carried out under this scheme. Zonal office in Sukahdev Vihar will be constructed during this year. CCTV cameras will be installed in all zonal offices. Under this scheme

6. INSTALLATION OF CCTV CAMERAS IN DTC & CLUSTER BUSES

Annual Plan Outlay 2016-17	:	₹ 9000 Lakh (State share)
		₹ 1000 Lakh (Central share)

A scheme for installation of CCTV cameras in DTC & Cluster Buses has been introduced to strengthen women safety and security in the buses. A pilot scheme for installation of CCTV cameras in 200 DTC buses has already been launched. A provision of ₹ 9000 lakh under state plan and ₹ 1000 lakh under CSS has been made in Annual Plan 2016-17.

Transport Department GNCTD has requested to Ministry of Women, Child & Development, Govt. of India (GOI) to grant funds under the “Nirbhaya Fund” for installation of CCTV devices in DTC and Cluster buses under the CSS during 2016-17.

7. MASS RAPID TRANSIT SYSTEM (MRTS)

Annual Plan Outlay 2016-17	:	₹ 76277 Lakh
Revenue	:	₹ 30000 Lakh
Capital	:	₹ 32327 Lakh
Loan	:	₹ 13950 Lakh

The Plan Outlay for 2016-17 is as under:

(₹ in lakhs)	
Details	Plan Outlay 2016-17
MRTS	
Equity	32327.00
Subordinate Debt:	43950.00
i) Reimbursement of VAT	30000.00
ii) Land Acquisition	3950.00
iii) Reimbursement of Central Taxes	10000.00
TOTAL	76277.00

The basic objective is to provide the much needed mass rapid transport infrastructure facility for entire Delhi areas and also to provide the interchange facility from peripheral routes to the radial metro routes.

The third phase of Delhi Metro would be completed and made functional in the Twelfth Plan. On its completion 103.05 Km of Phase III of new metro line and extensions of 14.524 km would be added to make the total metro network of 307.574 kilometres.

The proposed lines of Phase-III & Extensions are : -

S. No.	Corridor	Length Kms.	Cost (₹ in crore) with taxes	Target date for completion
1.	Mukundpur - Shiv Vihar	58.41	35523.78	December, 2016
2	Janakpuri west Munirka - Kalka Ji - Kalindikunj	33.49		December, 2016
3.	Central Sectt. - Mandi House - Kashmiri Gate	9.37		December, 2016
4.	Jhangirpuri - Badli	4.49		Commenced
5.	Dwarka - Najafgarh	5.50	1070.00	December, 2016
6.	Delhi Portion of Bahadurgarh (Mundka to Bahadurgarh)	6.307	1079.00	December, 2016
	Total	117.57	37672.78	

Out of the 103.05 km of phase III, 41.04 Km is underground and 62.01 km is elevated/at grade. The capital cost of these corridors including taxes will be ₹ 35242/- crore for 103.05 Km stretch while the overall cost of 117.567 stretches will be around ₹ 37672.78. Phase III and Phase IV plans to increase the metro line to 245 km approximately by 2021. As per the physical progress of Phase-III project is concerned more than 80% of the work has been completed by the end of may 2016 and the whole Phase-III project is expected to be completed by end of the year 2016. For improving the metro ridership feeder services are also being strengthened by DMRC.

8. MODERNISATION OF INFRASTRUCTURE FOR CERTIFICATION OF ROAD WORTHINESS OF VEHICLES

Annual Plan Outlay 2016-17	:	₹ 200 Lakh
Revenue	:	₹ 100 Lakh
Capital	:	₹ 100 Lakh

Under the provisions of Motor Vehicle Act, 1988 all Commercial Transport Vehicles are required to carry a valid "Certificate of Fitness" for road worthiness of vehicles without which the registration of the vehicle is treated as invalid. This Certificate is required to be obtained annually from the Competent Authority. Currently there are about 1, 81,000 transport vehicles which require the Certificate of fitness annually. This number will increase to about 3, 50,000 vehicles by 2017. This intent to introduce more automated testing lanes so that every transport vehicle may be annually inspected on these automated lanes. The test data generated is

automatically stored in computer without revealing test results to the operator to avoid subjective bias. All test equipments are networked.

9. Control of Vehicular Pollution from exhaust of motor vehicles

Annual Plan Outlay 2016-17 : ₹ 388 Lakh

This scheme is being implemented with the following objectives:

- To control pollution caused by motorized vehicles plying in Delhi.
- To create awareness amongst the motoring public in particular and public in large about the effects of various vehicular pollutants.
- To enforce the statutory provision (prescribed in the Central Motor Vehicles Rules, 1989) for periodical pollution control certification on the motor vehicles plying in Delhi.
- To provide adequate pollution checking and certification facilities in Petrol Pumps and Workshops.
- To promote Environment friendly fuels viz CNG, LPG, etc.
- To facilitate enforcement of pollution control related orders of Supreme Court and environment pollution (prevention & control) Authority for the NCR region.

9.1 Creation of Public Awareness

Following mass awareness activities are proposed for complying with the aims and objectives mentioned above:

- Advertisement in newspapers
- Installation of boards/ panels/kiosks on buses, bus shelters, etc.
- Printing of hand bills and other educational materials
- Holding of educational talks, seminars, workshops, street plays, exhibitions etc.
- Any other activity connected with creation of mass awareness.

9.2 Authorization of PUC Centres and Regulation Thereof

Rule 115(1) of CMV Rules, 1989 requires that every vehicle shall be maintained and driven as to comply with the standards prescribed in Rule 115(2) of CMV Rules, 1989. Rule 115(7) of CMV Rules, 1989 makes it compulsory for every motor vehicle more than one year old to carry a valid PUC Certificate by an agency authorised for this purpose by the State Govt. Petrol pumps and Workshops numbering approx. 580 have been authorised to check the exhaust emission tuning

of pollution vehicles and issue of Pollution Under Control Certificate for both petrol and diesel driven vehicles.

10. RE-STRUCTURING/ REVIVAL OF DTC

Annual Plan Outlay 2016-17 : ₹ 15000.00 Lakh (Capital)

DTC is the largest public transport entity in the NCR transporting about 40 lakh passengers and covering 9 lakh km per day. DTC operates 41,000 trips per day on about 578 city routes and 18 NCR routes. DTC has world largest eco-friendly CNG based fleet.

In Delhi, DTC will continue to play pivotal role in the multi-modal transit system of public transport apart from metro-rail. It has existing infrastructure of 43 depots. DTC has a current fleet size of 4344 buses out of which 563 are Standard buses. For the comfort and convenience of the public, DTC has introduced Low Floor 1275 AC Low Floor buses and 2506 Non-AC Low Floor buses.

Modernizing of the Fleet

- In the fleet of 4344 buses, 563 are Standard buses which have almost completed their economic life cycle and are required to be scrapped in order to reduce the running expenditure.
- In order to maintain a healthy transport fleet, DTC has initiated the proposal for the procurement of the 3064 buses under cluster scheme including 1000 midi buses.

11. Development of Alternative Mode of Transport

Annual Plan Outlay 2016-17 : ₹ 1223.00 Lakh (Capital)

The only solution to tackle the present urban transport problems in Delhi is by creating sustainable multi-modal transport such as HCBS, Monorail and LRT to supplement the Metro Rail and the present DTC and other bus services. Accordingly a plan known as the Integrated Multi-Modal Transit Systems has been approved by the Delhi Govt. for implementation by 2021.

(i) Bus Rapid Transit (BRT)

Annual Plan Outlay 2016-17 : ₹ 1123 Lakh (Capital)

For this programme, seven corridors have been identified. For smooth operation of buses, such road stretches, that create bottlenecks in the running of buses, would be systematically improved through road re-engineering, route by

route, for better bus turn-around time and improvement in the quality of service. Preferential traffic signalling for HCBS buses, at intersections, shall be provided to avoid delay at crossings.

(ii) **MONO RAIL**

Annual Plan Outlay 2016-17 : ₹ 100 Lakh (Capital)

It has been decided by GNCT Delhi that DMRC will execute the first monorail project in Delhi.

DMRC has prepared DPR of the mono rail project for the proposed corridor from Shastri park metro station to Trilokpuri. DMRC has reviewed both the options i.e. (i) Shastri Park to Trilokpuri with Dept at Sanjay lake (11 km) (ii) Shastri Park – Trilokpuri to Mayur Vihar with Dept at Mayur Vihar (15.18 km). The completion cost of option (i) and option (ii) respectively comes to ₹ 2222/- crore and ₹ 2850/-crore. Both the options of funding of this project i.e. DMRC's pattern of funding as well as PPP/BOT mode of execution of this project have been mentioned in DPR.

12. Delhi Unified Metropolitan Transport Authority (DUMTA)

Annual Plan Outlay 2016-17 : ₹ 1.00 Lakh

In Delhi, there is a multiplicity of authorities dealing with transport like PWD, MCD, NDMC, DDA, Traffic Police, Railways, Delhi Metro Rail Corporation, NHAI, Transport Department and DTC etc. They are engaged in different activities like construction and maintenance of roads, subways, over bridges, providing of traffic signals, road furniture, enforcement of the Motor Vehicles Act, 1988 and the Rules framed there under etc. In order to bring forth effective coordination amongst various agencies the Central Government in the Ministry of Urban Development has proposed the setting up of a Unified Metropolitan Transport Authority to be called the Delhi Metropolitan Transport Authority through legislation. A draft bill was sent to Ministry of Home Affairs after approval of the Council of Ministers, Delhi. Ministry of Home Affairs took the comments from Ministry of Urban Development, Govt. of India and submitted back to the Transport Department, GNCTD with their suggestions. Now, Transport Department has incorporated the comments of MoUD & MHA for the approval of council of Ministers, Delhi.

13. Studies and Consultancy Services

Annual Plan Outlay 2016-17 : ₹ 250.00 Lakh

For the implementation of MPD 2021, Restructuring of DTC and planning for integration of roads and study of transport demand forecast and development of an integrated multi modal public transport network for NCT of Delhi, number of studies and consultancies will have to be awarded during the 12 Five year plan. These studies will be funded under this scheme.

The study is being conducted on route plan for optimum utilization of public transport having last mile connectivity in Dwarka Sub-city under this scheme. The work has been awarded to M/s DIMTS Ltd.

14. Development of Bus Terminals and Depots

Annual Plan Outlay 2016-17 : ₹ 17500 Lakh (Capital)

The objectives of the scheme are to create bus transport infrastructure for the benefit of the bus commuters. The scheme envisages purchase of land for bus terminals & bus depots and construction of terminals & depots over there. With the new acquisition of bus fleet under cluster scheme (DTC and private entities), Transport Department will require additional bus depots. Due to scarcity of land, the statutory authorities are pressing hard to have multi-level bus depots in place of the conventional bus depots. Improvement of existing depots and terminals are also supported under the scheme.

15. Loan to DTIDC

Annual Plan Outlay 2016-17 : ₹ 1000 Lakh (Loan)

At present, three ISBTs Kashmere Gate, Anand Vihar and Sarai Kale Khan are controlled by DTIDC.

The Anand Vihar ISBT will be rebuilt as per new norms integrating the Bus Stand with Rail and Metro. The old ISBT at Sarai Kale Khan is being rebuilt as a modern ISBT with the change in the development control norms in MPD 2021, the lay out transport integration plan is under consideration of UTTIPEC. Two more new ISBTs, on modern lines, are proposed to be constructed (i) in South-West at Dwarka and (ii) in North Delhi at Narela on PPP basis. Land for both the new ISBT's has been allotted by the DDA. The provision has been made for balance payment of ISBT Kashmere Gate and for up-gradation of ISBT Anand Vihar and Sarai Kale Khan. 25% of total expenditure on up-gradation of ISBT Anand Vihar and Sarai Kale Khan has to be met by the Company and 75% loan is promised by NCRPB.

16. Operation and Control Centre – Private Bus Clusters & PIS

Annual Plan Outlay 2016-17 : ₹ 100 Lakh

Delhi Integrated Multi-modal Transit System Ltd (DIMTS) has been appointed by Government of Delhi to work as Integrated Mechanism under the overall supervision of Department of Transport, Govt. of NCT of Delhi to monitor and manage the restructured private stage carriage bus operations. Operational & control centre is established at ISBT Kashmere Gate to receive real DATA feed from automatic vehicle location system on real time basis. The buses are equipped with GPS device having GPRS connectivity to send real time data to the OCC. From this, location of the bus at any time can be ascertained and this information will be used to give the commuters expected time of arrival of the bus and also used for prosecution purpose whenever any violation is noticed. GPS/GPRS System are being implemented in taxis and TSR in Delhi. The system will help for security of the passenger and location of the vehicle will be traced immediately.

17. Viability Gap Funding towards Cluster Buses:

Annual Plan Outlay 2016-17 : ₹ 40000 Lakh

The Government of NCT of Delhi initiated the Scheme for Corporatization of Private Stage Carriage Service to substitute the Blue line private stage carriage system under Public Private Partnership (PPP) model. Under this scheme, 457 stage carriage bus routes of Delhi have been divided into 17 distinct clusters. Presently 1450 cluster buses are operational in 9 clusters and also by the end of this Financial Year, another 50 buses will be added in the cluster scheme.

The cluster system is based on a gross-cost model where fleet owners are remunerated on the basis of operational parameters irrespective of the fare box inflow. At the same time, the contract has in-built mechanisms to apply performance deductions in case of non-adherence to clearly enunciated performance benchmarks and also to reward efficiencies above clearly defined levels of performance. The average higher earning of cluster buses (by 10-15%) compared to DTC buses on the same routes is chiefly attributable to state-of-the-art IT enabled monitoring.

Operational efficiencies and observance of performance benchmarks are monitored by DIMTS as the state government's IM (Integrated Mechanism) at the depots, on the street and at the Operations Control Centre with real-time data from the GPS/GPRS enabled AVLS (Automatic Vehicle Location System) on the location, speed, bus-stop dwell-time etc. of the buses. GPS data and real-time data from individual ETMs (Electronic Ticketing Machines).

18. Encouragement of pedestrian & Non Motorised Vehicles

Annual Plan Outlay 2016-17 : ₹ 100 Lakh (Capital)

A sustainable transport system must provide mobility and accessibility to all urban residents in a safe and environment-friendly mode of transport. This is a complex and difficult task as the needs and demands of people belonging to various income groups are not only different but also often conflicting. The pedestrians, bicyclists and non-motorized rickshaws are the most critical elements in mixed traffic. If the infrastructure design does not meet the requirements of these elements all

modes of transport operate in sub-optimal conditions, it is possible to redesign the existing roads to provide a safe and convenient environment to non-motorized modes. This also results in improved efficiency of public transport vehicles and enhanced capacity of the corridor when measured in number of passengers per hour per lane.

New Schemes

19. Car free day

Annual Plan Outlay 2016-17: ₹ 100 Lakh

To decongest the traffic as well as to minimize the vehicular pollution in Delhi, the Government of NCT of Delhi has been making efforts to control the situation and to minimize the pollution. For this Govt of NCT of Delhi has been decided to observe a Car Free Day on every 22nd day of the every month on various stretches of Delhi to encourage the citizen of Delhi to use the Public Transport Vehicles to minimize the vehicular Pollution.

20. Pollution ANPR

Annual Plan Outlay 2016-17: ₹ 100 Lakh

Automatic Number Plate Recognition (ANPR) is a technology used for law enforcement purposes by the enforcement division of Transport Department, GNCTD. A provision of ₹ 100 Lakh has been kept under this scheme for the current financial year 2016-17.

21. Feeder Bus Service/ Electronic Vehicle

Annual Plan Outlay 2016-17: ₹ 100 Lakh

To promote the use of electric vehicles, the Government will give exemption from payment of road tax on registration of electric vehicles. For ensuring the last mile connectivity, Govt. of NCT of Delhi decided to introduce / regularize e-rickshaws and feeder service. A provision of ₹ 100 Lakh has been kept under this scheme for the current financial year 2016-17.