Session – I

Urban Development and Management: Indian Experience

Session - I

MAKING CITY WORK – DELHI 2021

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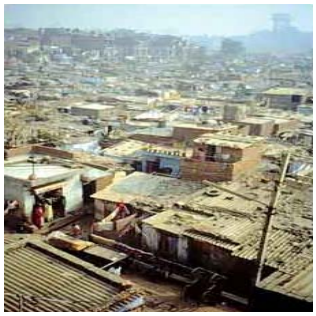
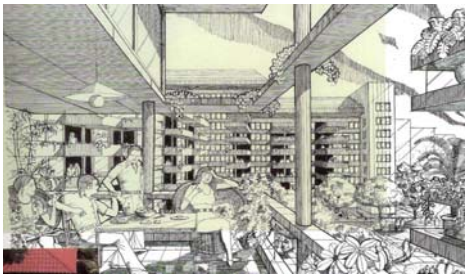
- Today more than 2000 million people live in cities, 1/3 of worlds population.
- In 50 years time more than 60% of humanity-5000million will live in cities.
- There are 20 cities with population of 12 million plus and more than 50 cities with a population of 5 million plus.
- **DELHI IS ONE OF THOSE 20 CITIES AND WILL GROW TO 23 MILLION+ BY 2021.**
- City of Delhi is at its very BEST and very WORST.
- It is inspiring social, technological and artistic innovations.
- Creating collection of poverty, disease and crime.

Shanghai – home for 13 million

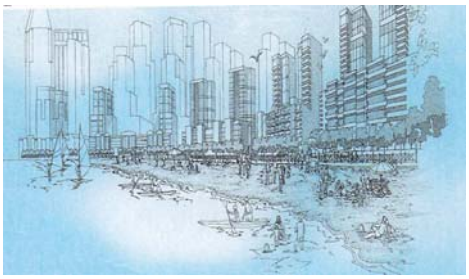
Tokyo- home for 26 million

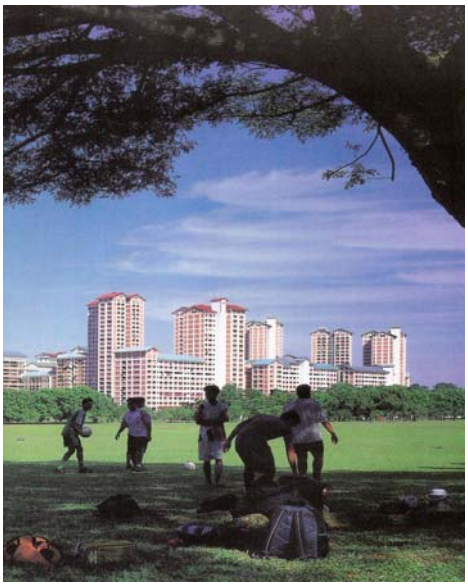


Delhi – home for 14 million today!



Delhi – home for 23 million tomorrow
Can we do this ?
"YES" ***We require progressive, pragmatic out of the BOX Approach***





Delhi – home for 23 million tomorrow
Can we do this ?
"YES" ***We require progressive, pragmatic out of the BOX Approach***

Asian Cities Survey For 40 Cities By ASIAWEEK

- Quality of life ranking
- Fukuoka 1
- Tokyo 2
- Bangalore 27
- Delhi 31
- Mumbai 33

Eranst & Young 2007, Growth and New Destinations.

Ranking of Delhi compared to other Indian Cities by Index.

- City prosperity no.1.
- Urban Governance no. 2
- Business environment no.1
- Infrastructure no. 1
- Quality of Life no.2
- Overall Index no. 1

- What we have achieved
- Homes for over 1 million households

- Enviable creation of open spaces and sports complexes

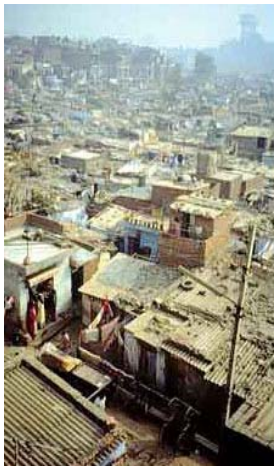
Extensive network of roads and grade separators

Delhi – Down sides

- Pollution – Delhi is worlds one of the polluted cities.
- River is the backyard and filthiest place.
- Social alienation – increasing gap among rich and poor.
- Urban blight.
- **The decay of city center.**
- The urban sprawl.
- Gridlock and road rage.
- Crimes against women and old citizens.

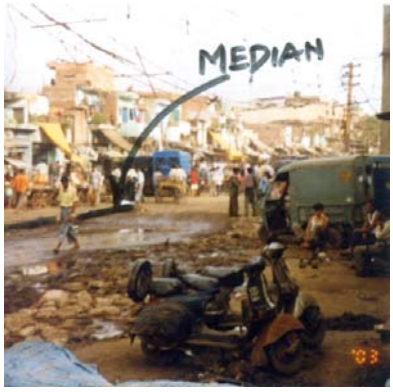
SHELTER

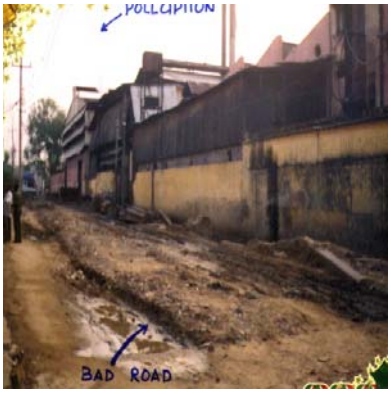
- There are more than **1500 squatter settlements** spread all over the city.
- There are more than **1400 unauthorized colonies** in Delhi.
- Even after 4 decades of planned development **50% of Delhi's population lives in sub standard settlements.** Where decent human living is just not available.
- Urban villages have unauthorized FAR of over 400 to 500 and under utilization in planned areas.



- The economic base remained neglected.
- The result was that more than 1.19 lakh industries came up in the non conforming areas.
- Industries in planned industrial areas – 25,000
- Industries in unplanned areas – 1,19,000
- During the implementation of plan 2021 growth of industries was phenomenal.
- No new industrial area was developed during the plan period of 2001.
- Delhi emerged as a center for small scale industries in North India.

Existing planned industrial areas are the neglected lot reflecting lack of governance, maintenance. The conditions are deteriorating rapidly.





These areas have a great redevelopment potential – located along major transport corridors- road, rail and MRTS.

- Land Policy - Delhi adopted large scale land acquisition, development and disposal policy for implementation of the plan.
- The initial stages of plan implementation showed good results.
- Over the period it could not keep pace with the demand for serviced land due to rapid growth.
- The inherent delay in acquisition led to large scale growth of squatters, unauthorized colonies and unprecedented growth of villages. All are substandard, hazard prone additions in the city.
- The unauthorized colonisation is a frustrated reaction of that untapped human and monetary resource which could have been channeled in planned development.

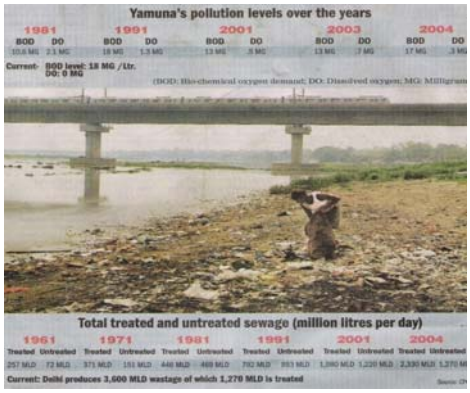
WHERE TO GO FROM HERE

- Do we continue with land banking and repeat the past?
- Can we adopt new initiatives which has been successfully applied in other states ?
- Should one agency monopolize the land assembly development and disposal?
- Can we opt a mix of land pooling / reconstitution, acquisition and assembly by private sector?

INFRASTRUCTURE

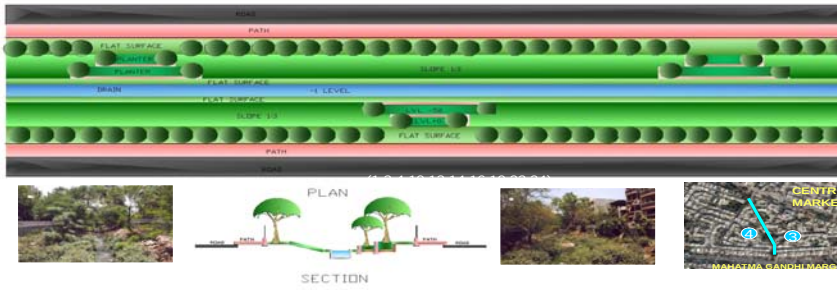
- Water demand 2021-1840 MGD. Supply at present-650MGD.Supply to be increased to 919MGD by 2021. Still there would be gap of 921 MGD.
- Can we reduce wastage from 30% to 10% so as to make available 188MGD?
- Can we further rationalize the norms, adopt techniques and methods so as to reduce the use of treated water?
- How much water can be made available through harvesting and recycling?
- Can we go for WATER BOOTHS on the lines of mother dairy booths to supply safe drinking water?

- 55% of Delhi is covered by organized sewerage system.
- Sewage disposal demand 2021-1472MGD,treated only 512MGD as on date, To be increased to 805 MGD by 2021. This leaves wide gap of untreated sewer of over 667MGD.
- Are we going to live with free flowing open sewers and the same filthy river Yamuna?
- Instead going for large treatment plants can we adopt segregated sewage disposal plants for 15 to 20 lakh persons and avoid deep sewers and pumping stations?
- Decentralized sewage systems have already been initiated by sewerage board for rural villages.



- Storm water drains - Open sewers
- Can these drains converted into beautiful green areas and lung spaces as Osho has done in Pune? It has to be done as there is every possibility that about 40% of the sewerage going to remain untreated by 2021.

- DTTDC has undertaken the project of Barapulla Nala to convert it into green areas. This is the initiative to convert storm water drains in green lung spaces.

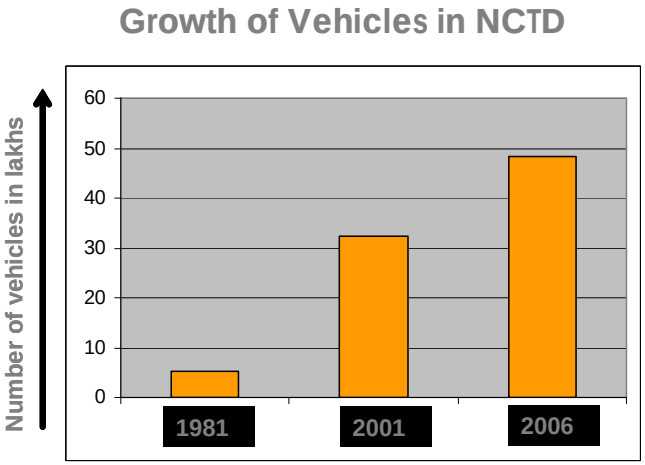


- Sanitary landfill sites have been converted into large recreational areas.
- These areas then can be used as cycle tracks, joggers path, pedestrian linkages, informal shops so that they remain used and lively.

- Electricity is a perpetual irritant
- Demand 11000MW-2021. (CEA)
- Present availability 3170 MW. Add. Demand of 7830 to be met through augmentation of local generation, improved transmission and distribution.
- Number of steps have been initiated through PPP for generation of electricity so that the gap is narrowed down to the barest minimum.
- Solar energy needs to be utilized to its maximum possible extent for lighting of common areas in all types of buildings, open spaces, street lights and advertising.

TRANSPORTATION

- One thing which will have greatest influence on urban life all over the world in next 100 years is **CAR.**
- 1900 – 100,000 cars in the world
- 1950 – 50 millions cars in the world
- 2000 – 500 million cars in the world
- 2050 – Likely to exceed 1000 million
- Finding Balance Between Car and Pedestrians in The City presents a challenge.



Classification of vehicles in 2006	
Cars and jeeps	1471858
Motor cycles & scooters	3078660
Auto rickshaws	74188
Taxi	20646
Buses	25111
Others	26269
Goods vehicles	128193
Total	4825325

- Delhi has one of the highest area under circulation among the Indian Metropolises. Still the situation on roads chaotic -WHY?
- Encroachments on roads is birth right of Delhites whether poor or rich.

- Planting trees and grass/shrubs in the right of way is sure and safest way of encroachment under the name of "environment".
- Mis-match between uses and densities along major transport corridors.
- Non development of full cross section of roads.
- Under utilization of the roads 30mt wide and above due to frequent accesses as service roads either not provided or fenced or encroached.
- Too much fencing and grills on roads.
- Ill designed road cross sections and road geometric.
- Lack of traffic management.
- Delay in development of integrated road and rail terminals are increasing pressure on roads.

Entertainment and Art & Culture.

- New entertainment centers need to be provided in various parts of Delhi to provide cinemas, theaters, performance venue, music and dance halls, thematic shopping centers and novel dinning outlets.
- Spaces for artists and art groups for ambitious production, experiment in trying variety of art forms.
- Creation of art centers lyric theatres concert halls small indoor theatres and outdoor performing areas.

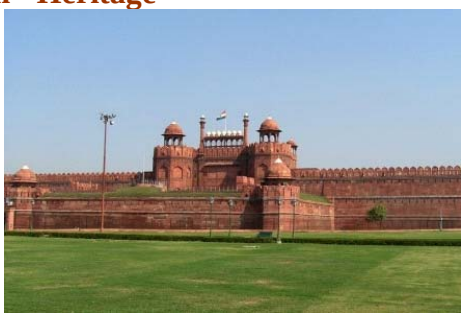
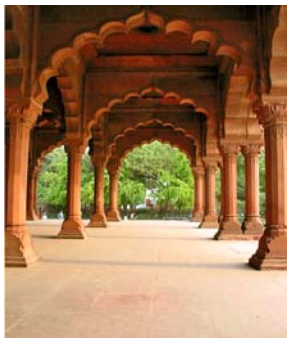
Delhi – A historic city

Delhi has a long planning history. It was ruled by several dynasties at different times. The six earlier cities are in form of ruins / heritage structures but the 7th city i.e. Shahjahanabad is a living city Planned by Mughal Emperor Shahjahan in 17th Century and is today's city core bustling with high economic activities. Lutyens New Delhi was ready in 1930 which is Capitol Complex, today.

Delhi : A heritage city

1208 monuments have been recognized based on their importance in terms of size, history etc. and 170 monuments have been given status of protected by Archaeological Survey of India (ASI), the remaining have been taken care and inbibed in planning along with recreational areas to give them appropriate surroundings, ensuring preservation.

Delhi - Heritage



Heritage conservation

- Delhi has several layers of culture, civilisation, history and built fabric.
- There are about 1200 monuments in Delhi. With INTACH, DDA has documented all these monuments in a form of a book.

- In 1993 Urban Heritage Award was constituted to encourage, appreciate, preserve and to take pride in cities rich heritage.
- Master Plan 2021 has specific policies for conservation of the built heritage.
- Compatible use of heritage precincts/buildings.

Towards sustainable development

- Vision "SEE"
- Social equality
- Economic vitality
- Environmental integrity

Master Plan 2021 initiatives

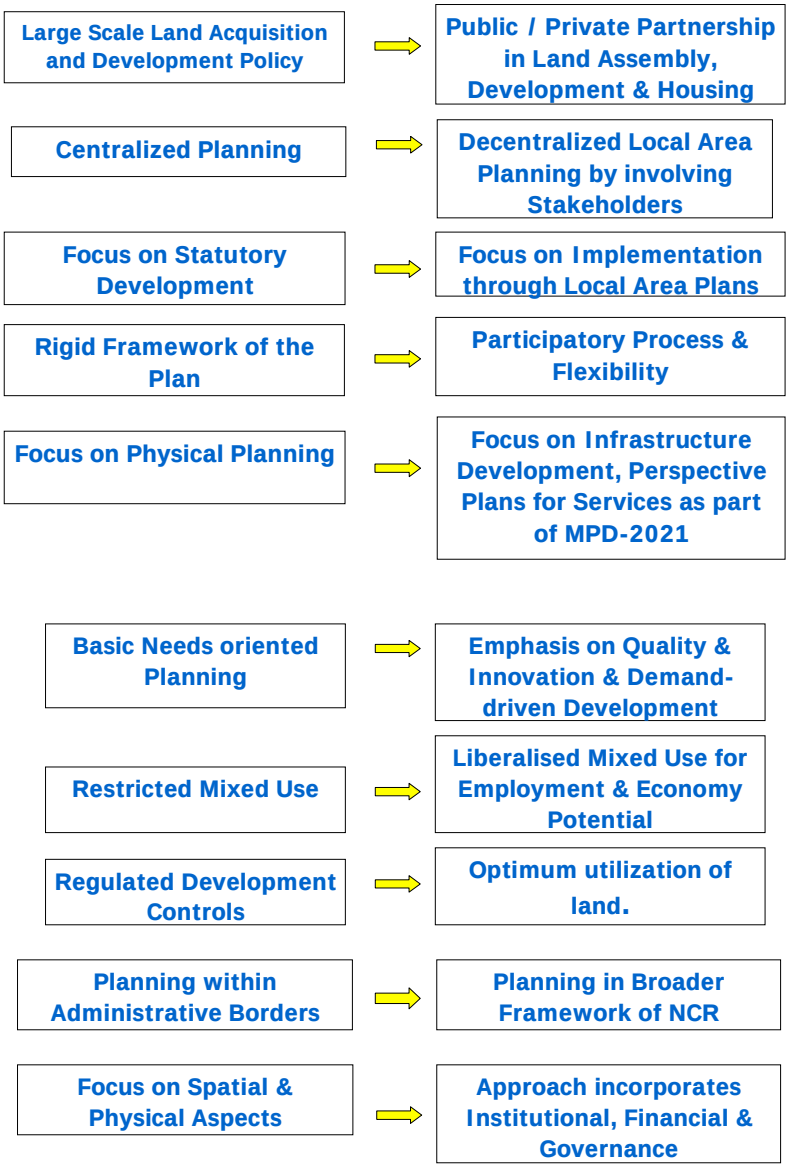
- 24 lakh additional DU's needed by 2021.
- Compact form of residential development.
- Mixed land use. Promotion of high tech industries and flatted factories.
- Heritage conservation.
- Unified metro transport authority.
- Disaster management.
- Innovative measures in infrastructure development, use of alternative energy.
- Decentralized local area planning by participatory approach.
- In situ slum rehabilitation.
- Private sector participation in development and redevelopment.
- Emphasis on public transport.
- Use of wind and solar energy.
- Protection and use of natural hydrologic systems.
- Protection of wetlands, woodlands stream valleys.
- Reuse recycling of waste material.
- Redevelopment to be major element of city development :
  i) Planned areas
     - ❖ Influence zone along MRTS & major transport corridor
     - ❖ Underutilized/low-density areas.
     - ❖ Old areas
     - ❖ Special area

  ii) Unplanned areas
     - ❖ Villages
     - ❖ Unauthorized colonies
     - ❖ JJ clusters
- Area under existing rural use to be gradually absorbed as urban extension from time to time for balanced Development.

Master Plan 2021 initiatives - Transportation

- Integrated Multimodal Transportation System and traffic plan.
- Road and Rail based mass transport system to be a major mode of public transport.
- Optimal use of existing road network & development of full right of way and missing links.
- Restructuring of existing network through expressways, arterial roads, distributors and relief roads.
- Development of efficient transport network between N.C.R. & N.C.T. Delhi.
- Development of passenger and goods terminals with adequate infrastructure at the periphery.
- Establishment of a unified metropolitan transport authority.

Paradigm shifts in MPD-2021

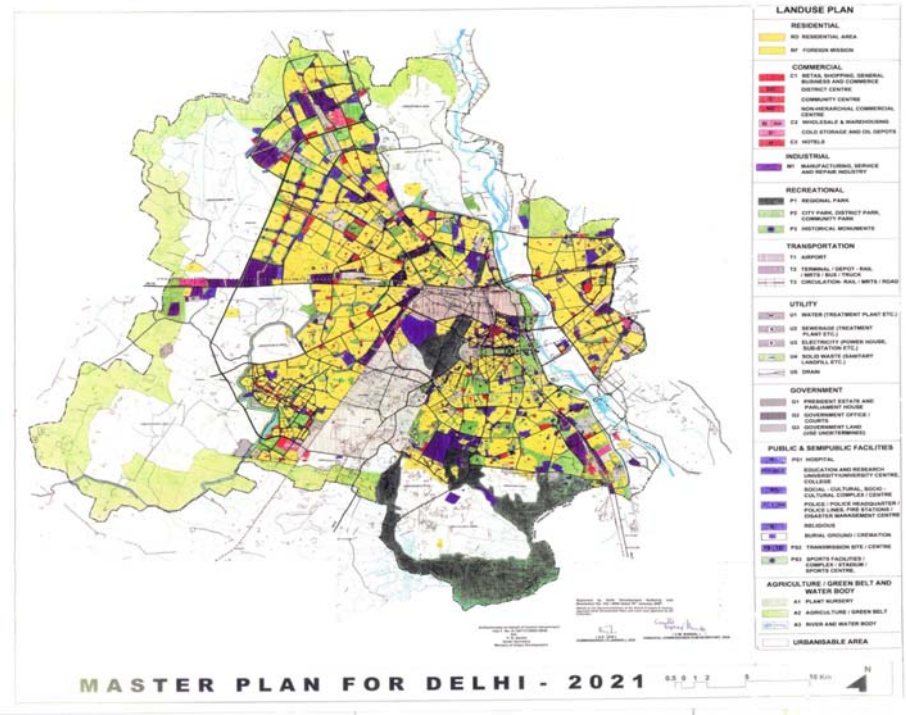


Redevelopment & Urban Renewal	Redevelopment of Old City, Villages, Unauthorized Colonies, Industrial Clusters & Commercial Centers
Shortage in EWS / LIG Housing	In-Situ Slum / JJ Rehabilitation. Land as a resource , PPP in Housing. Mandatory provisions for EWS Housing, Homeless,
Lack of recognition of Informal Sector of Trade	Mandatory provisions for Informal Sector of Trade
Inadequate provision for Vulnerable / Disabled	Provisions for Elderly, Disabled & Vulnerable Groups
Lack of Facilities for Repairs & Services	Provisions for Service Markets
Sports as part of Recreational Use	Norms & System for Provision of Sports Facilities.
Parking as part of Transportation Planning	A new Parking Policy & Strategy
Heritage as a Marginal Issue	Area based Conservation of Heritage as a Major Strategy

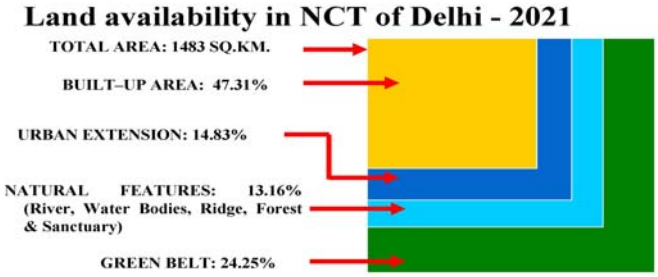
- The first step towards modern planning in India, aimed at integrated development of Delhi.
- Formulated for plan period 1962-81, came in force from 1st September, 1962.
- Land for urban development : 45,000 ha
- Projected population : 53 lakh
- Achieved population : 62 lakh

- Extensive modifications to cater increased population & changing requirements of the city for period 1981-2001.
- Proposed land for urban development 20,000 – 24,000 ha
- Projected population : 128 lakh
- Achieved population : 137.8 lakh

MPD - 2021 : Landuse Plan



Land availability in NCT of Delhi – 2021



Urban extension 2021: 220 sq.km. @250 pph (City level density)

Green belt : upto depth of one peripheral revenue village boundary along border of NCTD

Average space would be 40 sq.m. Per person covering about 920 sq. Km for 230 lakhs population.

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Session - I

URBAN DEVELOPMENT AND MANAGEMENT: INDIAN EXPERIENCE

J.B. Kshirsagar, Chief Planner,
Town and Country Planning Organisation,
Ministry of Urban Development, New Delhi, Government of India.

PLANNED DEVELOPMENT OF URBAN SETTLEMENTS

- Planned development of urban settlements has witnessed a sea change since independence.
- During 1950's, the focus of development was largely on rehabilitation of migrants due to the partition.
- In 1960's, a beginning was made to build infrastructure in the form of dams, iron and steel plants and public sector townships.
- With the green revolution in 1970's, efforts were made to develop Mandi towns along with augmentation of infrastructure in small and medium towns
- 1980's saw a spurt in employment opportunities in the urban areas thereby leading to unprecedented migration to large cities.
- 1990's may be perceived as watershed in the planned development of urban settlements as the decade marked the initiation of reforms.
- Now a more proactive approach in urban development has been taken up as fast track reforms laden JNNURM has been launched which is likely to have large-scale implications on the planned development of urban settlements.

URBAN SECTOR IN INDIA

- Second largest urban system in the world.
- Comprises of over 3700 urban local bodies (Municipal Corporations, Councils, Nagar panchayats etc.)
- About 27% of the total population resides in Urban areas.
- Two-thirds of the above live in Class I (One lakh plus) cities.
- Metropolitan (million plus) cities have increase from 5 in 1951 to 35 cities in 2001.
- About 1/3rd of the urban population lives in these cities.
- Cities are perceived as engines of productivity and growth in the country and contribute about 60-65% to the GDP.
- While the number of urban centres doubled between 1901 and 1991, the urban population increased eight-fold, resulting in a top-heavy urban hierarchy.
- Decentralization of municipal governance has not led to increase in budgetary allocation.
- Greater reliance is now being placed on institutional financing and capital markets for resource mobilization and on private sector for service delivery.
- Disparities in infrastructure between large and small urban areas have always been prevalent, but these disparities are expected to accentuate significantly in future years.

FUTURE URBANIZATION SCENARIO

- By 2051, India would be most populous country with 1.70 billion people and per capita land availability would be 0.19 ha.
- By 2051, 820 million people will live in urban settlements constituting about 48 % of the total population.
- There would be 6500 urban settlements (15 mega cities, 85 metro (million plus cities) by 2051.

Sl. No.	Census Year	Urbanization	Trends
1.	2001	27.78 % or 285 million	Sustainable planned development through Urban land use –cum-transportation-cum-services integrated frameworks, transcending urban boundaries, Metropolitan and larger settlements growing beyond their managerial capacities.
2.	2011	31.5% or 320 million	Development of Urban Settlements of new forms-SEZ, Hi-Tech Cities, Growth Centers in view of liberalization and Globalization
3..	2021	35.6% or 530 million	Continued development of new settlements with large scale residential development under private sector in view new kind of industries
4..	2031	42.4% or 670 million	Urbanisation head towards stabilization and half of the population will start residing in the urban settlements and drastic decline in the per capita availability of land
5.	2051	Estimated at 48% or 820 million	Land a scarce resource. High densities through an integrated urban transport-cum-services-cum-land use frameworks and plans through State vision, District and Metropolitan frameworks and Local Bodies development plans for socio-economic investments through regulated projects facilitating.

ELEVENTH FIVE YEAR PLAN (2012):TARGETS/CHALLENGES

XI Five Year Plan (2007-12) document states that extent and magnitude of the urban population calls for extra efforts by city planners and managers to cope up with the ever-growing strain on the urban infrastructure.

Hence the challenges are:

- Delivery of services like water supply, drainage, sewerage and solid waste management in terms of 100% population coverage.
- Ensure *equity and inclusiveness in delivery of the services and get citywide service networks including slums and low income settlements.*
- Sustain operation and maintenance of the urban services in an efficient manner. Delivery of services like water supply, drainage, sewerage and solid waste management in terms of 100% population coverage.
- Sustain operation and maintenance of the urban services in an efficient manner.

TARGETS

Urban Water Supply	100% population coverage
Urban Sewerage and Sanitation	100% population coverage (which includes 70% population to be provided with sewerage and sewage treatment and 30% population with low cost sanitation, septic tanks etc).
Solid Waste Management	100% population coverage with appropriate Solid Waste Management facilities.
Drainage	100% population coverage to provide comprehensive drainage system in towns / cities wherever needed to help control flooding of urban centres due to rainfall and overflow of sewage over streets.

XI PLAN REQUIREMENTS FOR PROVISION OF BASIC INFRASTRUCTURE

Sl.No.	Sub-Sector	Estimated Amount
(i)	Urban water supply	53,666.00
(ii)	Urban sewerage & sewage treatment	53,168.00
(iii)	Urban drainage	20,173.00
(iv)	Solid waste management	2,212.00
(v)	Management Information system (MIS)	8.40
(vi)	R & D and PHE training	10
	Total	1,29,237.4 Say Rs.129 Lakh crores

Source: Report of the Steering Committee on Urban Development for Eleventh Five Year Plan (2007-12)

PROPOSED FLOW OF FUNDS

Source of funding	Amount (in Rs. Crore)
Central Sector outlay	70,000
State Sector outlay	35,000
Institutional Financing	10,000
Assistance from External Support Agencies	10,000
FDI & Private sector	4237
Total	1,29,237 Or Rs.129 lakh crore

Source: Report of the Steering Committee on Urban Development for Eleventh five Year Plan (2007-12)

MASTER PLAN FOR CMA-2026 & MPD-2021

VISION

Master Plan for Chennai Metropolitan Area-2026 focuses on the prime metropolis which will be more livable, economically vibrant and environmentally sustainable and with better assets for future generations.

MPD-2021 has a megapolistic vision as the city is set to attain a population of 2.3 crore by 2021 with a view to develop Delhi as a world class city, humane, livable, modern and eco-friendly with adequate and sustainable infrastructure and adopts far sighted vision plan to meet immediate and long term physical, social, financial and commercial needs and strives to achieve quality built environment through participatory planning.

COVERAGE

Master Plan for CMA -2026 has regional focus comprising the area covered by Chennai City Corporation (Chennai District), 16 Municipalities, 20 Town Panchayats and 214 villages forming part of 10 Panchayat Unions in Thiruvallur and Kancheepuram Districts.

Whereas

MPD-2021, covers an **1483** sq km out ,entire NCT Delhi of which Delhi Urban Area is of **702 sq km.(now about 888 Sq.Kms) making it city-centric plan**

DEMOGRAPHY

Population growth rate of the constituents of CMA is showing declining trend. Chennai city annual population growth rate has declined from 1.58% in 1981-91 to 1.23% in1991-2001.

Whereas

During 1991-2001, the urban population of Delhi increased @ 3.87 % annually.

Assessment is done on the **basis of population holding capacity,** the projected population of **230 lakh** by the year 2021 is to be accommodated within the existing urbanizable limits of Delhi Urban Area-2001 which consists of the planning zones A to H and the Dwarka, Rohini, Narela Sub-city projects. Population holding capacity of A to H zones is to be

In Master Plan for CMA-2026,Demographic analysis has been done on scientific basis covering all the constituents of CMA.

Whereas

MPD-2021 has stressed on the holding capacity and how the additional population can be accommodated on the basis of density prescriptions in various planning zones .

ECONOMY

For Master Plan,CMA,2026 ,analysis has been done in terms of economic scenario in the state as a whole, industries, trade and commerce in CMA,banking,employment in various sectors and employment projections .

Whereas

MPD-2021, focuses on the development norms/permissibility of activities under the industries and trade and commerce.MPD-2021 comes up with the future development strategy as per the prescription of norms and standards. It is more strategy oriented.

SHELTER

For Master Plan,CMA,2026 analysis of Housing scenario has been done along with socio-economic profile of Households and physical profile of buildings with mention of amenities and tenure. Details of planning permission, layout approvals, housing delivery by public and private sector, and schemes of site and services have also been given.

Whereas

MPD-2021 has done precise analysis of housing need along with spelling out housing strategy. It has also highlighted the strategy for redevelopment, unauthorized colonies, Rehabilitation of Slums and JJ Cluster and **new housing for urban poor(15% of FAR or 35%of dwelling units earmarked for EWS/Community –cum-Service personnel).**

PHYSICAL INFRASTRUCTURE & SOCIAL FACILITIES

Both the Master Plans have made detailed estimates for the requirement of physical infrastructure, however,

In Master Plan,CMA,2026 detailed analysis has been done regarding availability of educational and health facilities and assessment of requirement of these facilities as per the UDPFI Guidelines,1996.

Whereas

In MPD-2021 Norms have been prescribed for social amenities; however, no detailed analysis of the existing scenario of social amenities is indicated.

TRAFFIC AND TRANSPORTATION

Master Plan,CMA,2026 has done analysis in respect of road and rail network, bus and goods transport, sea port terminal(Cargo Traffic),Air Terminals. Future Travel Trips and Future Transport Strategy have also been highlighted

Whereas

MPD-2021 emphasizes on need for Integrated Multi-modal Transportation System, Establishment of Metropolitan Transport Authority, Hierachy of Roads, Metro Rail, Synergy between transport and landuse, Modal Split and provision of parking facilities.

ENVIRONMENT AND DISASTER MANAGEMENT

Master Plan,CMA,2026 devotes a separate chapter on Environment and Disaster Management. As far as environment is concerned, detailed analysis has been done for air and water pollution and action to be taken for environmental management.

Whereas

MPD-2021, has a separate section on Natural Resources Conservation which includes water, air, river Yamuna, regional park, green / recreational areas. However, special mention of Urban Design has been made which has identified significant areas of built environment like Connaught Place, Walled City and District Centres unlike Master Plan for CMA,2026 .

INVESTMENT PLAN

In Master Plan for CMA-2026, **Investment plan** has made detailed cost estimates for traffic and transportation, housing, water supply, sewerage, storm water drain, solid waste management and electricity.

Investment plan includes both short term and long term programme of investment. Further, it has also discussed funding **under the JNNURM**.

Whereas

MPD-2021 has not discussed Investment Plan. However, it discusses about plan review and monitoring and setting targets upto 2021 for new housing, physical infrastructure, social infrastructure, trade and commerce, transport, MRTS network, industries, government offices and environment.

LANDUSE PLANNING AND STRATEGY

Master Plan for CMA, 2026 mentions about landuse planning and strategy which gives detailed analysis of landuse both existing and proposed. It also deals with Landuse Regulations and Development Control Rules.

Whereas

In MPD-2021, no detailed break up has been given for land use for different categories; however, it has quoted availability of urbanizable land in NCT Delhi for 2021 which is based on NCR Plan-2021.

DEVELOPMENT CONTROL REGULATIONS

Building Bye Laws have been incorporated in the Master Plan for CMA, 2026

Whereas

Building Bye laws are not a part of MPD-2021.

MAJOR CHALLENGES-CHENNAI

- Augmentation of water supply.
- Provision of housing to EWS.
- Increase overall density of the Chennai Metropolitan Area from the present 59 persons per hectare to 105 persons per hect.
- Extension of the Transfer of Development Rights concept for lands taken up for development to solve problems of land acquisition for housing and infrastructure.
- Accomplishment of proposed investments in Drainage, Sewerage, Roads, Civic Amenities, Water Supply and Solid Waste Management.

MAJOR CHALLENGES-DELHI

- Regularization of Unauthorized colonies
- Redensification of the areas to accommodate additional population.
- Augmentation of the infrastructure in view of Commonwealth Games.
- Mixed Land Use issues.
- Identification of landfill sites.
- Parking, Traffic congestion and completion of Metro Rail Project.

LESSONS MAY BE DRAWN UP FROM BOTH THE MASTER PLANS

- Master Plan for Chennai, 2026, is a comprehensive document with emphasis on detailed analysis of the existing scenario in all the sectors wherein Spatial Analysis has been attempted and digital format maps are available.
- Master Plan for Chennai, 2026 is innovative in incorporating the Investment plan, projects have been related to JNNURM and mention of 74th CAA is made with regard to constitution of MPC by amending T&CP Act. This may be adopted by all the cities which are in process of revising the Master Plan.
- MPD-2021 is a more of a strategy document and norms/standards centric. Master Plan for new towns can follow this model as norms/standards needs to be adhered to right from inception stage.
- As a follow up of the notification of MPD-2021 and Hon'ble Supreme Court directions, all Zonal Development Plan(ZDP) are to be prepared within a year from the date of notification. Hence, DDA has gone ahead in preparing the same .All cities may also follow the example of ZDPs. Accordingly, Chennai and other cities may also prepare ZDP so as to detail out the Master Plan proposals.
- Both the Plans were subjected to extensive public hearing and there was adequate scope for stakeholder consultation. Accordingly, the Plans have accommodated the needs of the people without compromising the provision of facilities/amenities in an inclusive manner.
- Master Plan for Chennai, 2026, has also indicated Annual Programme in the Chapter of *Investment Plan* which enables the city authorities to ascertain short term requirements and action to be taken over in short term period.
- Master Plan for Chennai, 2026, has also mentioned about the Institutional Arrangements in Development planning clearly specifying the responsibility and jurisdiction of the agencies in executing the development works. This is necessary as cities in the country are often plagued with multiplicity of agencies with overlapping functions.

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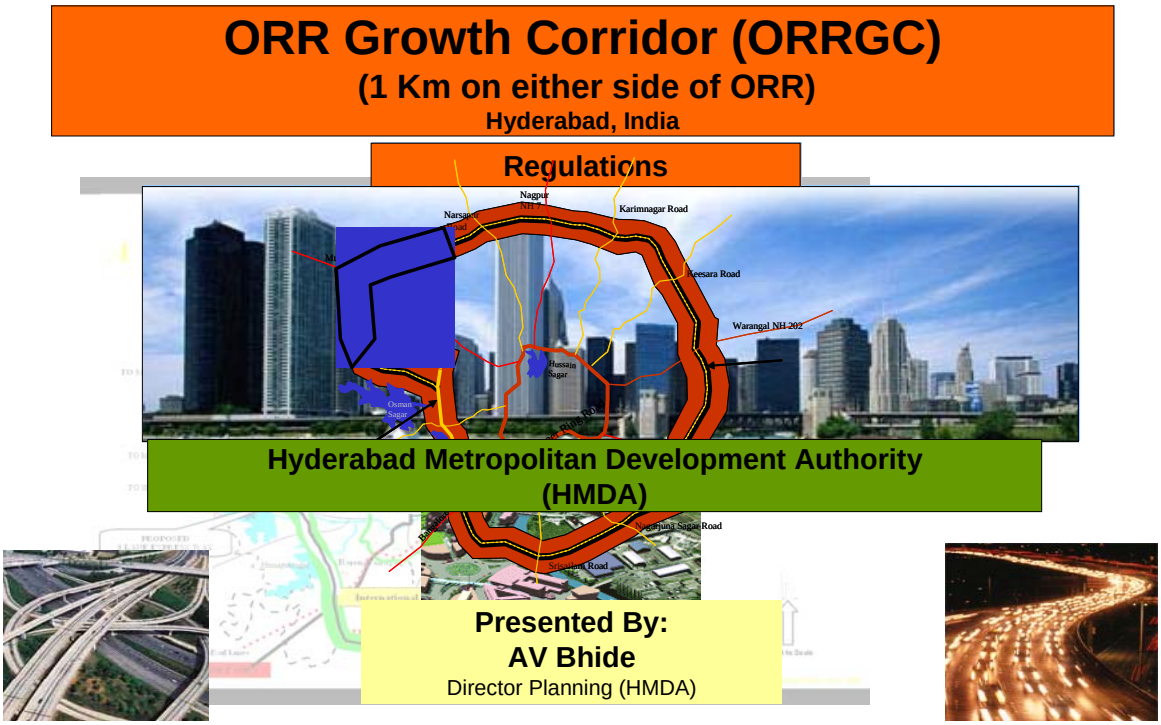
Session - I

ORR GROWTH CORRIDOR (ORRGC)

AV Bhide
Director (Planning),
Hyderabad Metropolitan Development Authority, Hyderabad

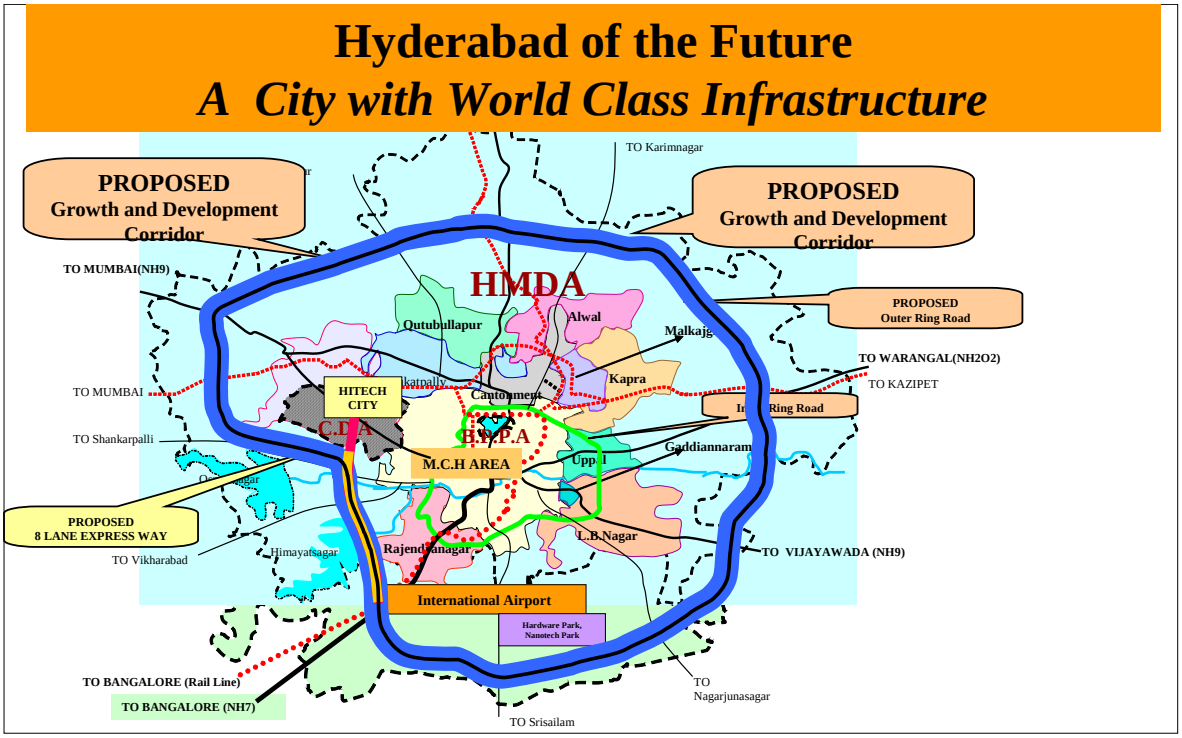


Statistics

- **Total Length of ORR : 162 kms**

Stretch	Length	Right of Way
Phase I Part A	**3kms**	75 mtrs
Phase I Part B	**19kms**	125 mtrs
Phase II	**140kms**	150 mtrs
Total	**162 Kms**	

- **Growth Corridor: 1 km on either side from the outer edge of the ORR ROW**
- **Total ORR Growth Corridor Villages : 113**
- **Total Area of growth corridor : 87,000 Acres (app)**



Need for planning the growth corridor

- **ORR - A high speed world class road**
  - For Intra City-within Hyderabad Urban Area connecting major locations
  - For Inter City Connectivity- as a bypass
- **ORR will have restricted entry**
  - Entry to main corridor is from specific locations
- **To avoid ribbon development**
  - No Building to open directly on the service road
- **Grid Iron Circulation Plan required to channelize traffic**
  - Efficient Circulation
  - Entry only at specified locations (*at average intervals of 1 Km on the Service Roads*)
- **Special Zoning Regulations**
  - High potential due to proximity of ORR can be utilised for introducing innovative regulations.
  - Totally greenfield area therefore new regulations can be enforced easily.
  - High growth scenario can be utilised for resource mobilisation through special charges/impact fee and can be channelised for infrastructure development
- **ORR - A high speed world class road**
- **ORR will have restricted entry**
  - Entry to main corridor is limited

- **To avoid ribbon development**
  - No Building to open directly on the service road
- **Grid Iron Circulation Plan required to channelize traffic**
  - Efficient Circulation
  - Entry only at specified locations (*at average intervals of 1 Km on the Service Roads*)
- **Special Zoning regulations**

Objectives of the ORR Growth Corridor

- Planned development around the immediate surroundings of the ORR
- High quality of Urban Living by creating and directing new growth
- To channelise any traffic to selected junctions/points on to the ORR for smooth and efficient traffic flow.
- To develop an aesthetically appealing urban built form within the proposed growth corridor
- To help decongest the core city area of Hyderabad by fuelling outward growth and attracting new growth
- To ensure environmental conservation and extensive greening as much as possible an plan for accessible and usable open spaces
- Propose incentives, special regulations (like Integrated Townships, Special Economic Zones etc) that would complement and supplement the growing economy
- Encourage the role of private enterprise in land and infrastructure development through the route of Public Private Partnerships (PPP), through innovative models for development & incentives never before proposed.
- Linking the infrastructure development with land development
- Keep the plan flexible for the future

Concept in a GIST of the ORR Growth Corridor

- Modern
- Prosperous
- Environmentally Friendly
- Aesthetically Done
- People should get value for their land
- Encourage Vertical expansion and not Horizontal
- No height restrictions-to attract investment
- Liberal Norms but enforceable

Action taken

- Consultant engaged for preparing Special Regulations
- Dedicated team of Planners within HMDA & ORR Office
- Series of discussion/consultations held with Planning & Technical Teams

- Similar Corridors in other developed countries studied
  - Sydney Metropolitan Strategy, Route 99, California (USA); Highway 41(USA), Idaho; Halifax-Moncton Corridor (Canada)
- Discussions held with Senior officers of various departments.
- Discussions, Workshops held with technical personnel, senior planners from CIDCO, Mumbai and Haryana Urban Development Authority (HUDA)

Highlights

- **Special Development Zone-Single Multipurpose Flexible Land Use**
  - *1 km Inside the inner edge of ORR ROW towards city side named as SDZ1*
  - *1 Km Outside the outer edge of ORR ROW away from city named SDZ2*

The categories of zoning in the SDZ are

S No.	Name	Constituent Uses permissible
1.	Special Development Zone	1. • Residential (new growth as well as existing settlements) 2. Commercial (Commercial activity shall be allowed at all locations only on roads 18 mtrs wide and above). 3. • Social Infrastructure 4. • Institutional 5. • Work Centres excepting industries 6. • Any other non polluting non hazardous use not specified.
2	Open Space , Recreational, Water Body	Regional Parks, green buffers, lakes, nallahs, reserve forests, plantation zones.
3	Transportation & Circulation	Roads, Parking areas, truck terminals, warehousing, whole sale market yards, stockyards of various materials including constructions material, loading unloading areas, any other specific non conforming uses.
4	Public Utilities and Amenities Zone	Utilities and amenities like police station, fire, electric sub stations and other public utilities.

- **Grid-Iron Circulation Network**
- **Common Building Line**
  - 15 mtrs on the ORR (rear setback)
  - 12 mtrs on the Radial Roads within the ORR-GC Area
  - 9 mtrs on the 30 mtr road (no service road, therefore higher setback)
  - 7 mtrs on the 36 mtr road (service road, therefore minimum setback)

- **Development only as per HMDA Norms/Regulations**
  - For development outside approved layouts minimum independent developable plot 1000 sq mtrs
  - Minimum area for plotted development/ layout 4 Ha

- 10% for Open Spaces (Including 2.5% for Social Amenities)
- 5% of the developable land to HMDA for resource mobilisation or 1.5 times basic value of land in lieu to be paid to HMDA
- **Reservation for LIG, EWS**
  - 5% of developable land for EWS (maximum Plot Size 50 sq mtrs)
  - 5% of developable land for LIG (maximum Plot Size 100 sq mtrs)
  - If not possible within site then equivalent land within 5 kms radius to be handed to HMDA.
- For areas less than 4 Ha acres projects like apartments, cluster housing commercial complexes to be encouraged by giving direct approvals for buildings.
- For group housing schemes/Built up projects Minimum area 4000 sq mtrs
  - 3% of the developable land to HMDA for resource mobilisation or 1.5 times basic value of land in lieu to be paid to HMDA
  - **Reservation for LIG, EWS**
    - 5% of total units for EWS with a maximum plinth area of 25 sq mtrs
    - 5% of total units for LIG with a maximum plinth area of 40 sq mtrs
    - If not possible within site then equivalent land within 5 kms radius to be handed to HMDA.

Height and Setbacks for High-Rise Buildings within ORR-GC

Height of building	***Minimum abutting road width required (in meters)***	***Minimum open space on remaining sides (in meters)***
18 metres & Up to 21 mtrs	12.2	8
Above 21 mtrs. & up to 24 mtrs	12.2	9
Above 24 mtrs & up to 27 mtrs	18	10
Above 27 mtrs & up to 30 mtrs	18	11
Above 30 mtrs & up to 35 mtrs	24	12
Above 35 mtrs & up to 40 mtrs	24	13
Above 40 mtrs & up to 45 mtrs	24	14
Above 45 mtrs & up to 50 mtrs	30	15
Above 50 mtrs	30	17

Special Impact Fees Applicable in the ORR GC

(A) FOR BUILDING HEIGHTS UPTO 15 Meters
(Rate in Rupees per sq m of built up area)

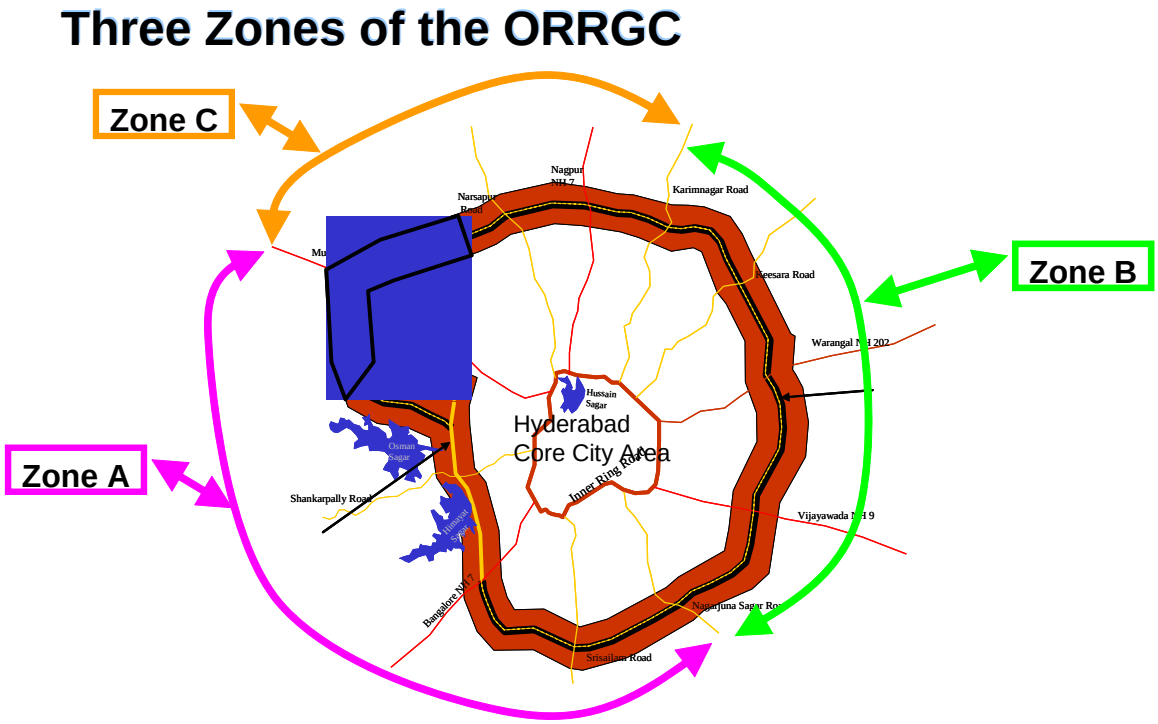
Use	Building Height	Zone A		Zone B		Zone C	
		SDZ 1	SDZ 2	SDZ 1	SDZ 2	SDZ 1	SDZ 2
Residential and all other non-commercial uses	Upto 10 metres	150	100	100	80	80	60
	Above 10 meters and upto 15 metres	200	150	150	100	100	80
Commercial, ITES	Upto 10 metres	300	200	200	150	150	100
	Above 10 meters and upto 15 metres	400	300	300	200	200	150

(B) FOR BUILDING HEIGHTS ABOVE 15 METRES

Stretch of ORRGC		Rate of Special Impact Fee leviable
Zone A (From Muttangi Junction on NH9 to Bongulur Junction,on Nagarjuna Sagar Highway)	SDZ 1	1.50 times the rate given in Table in Rule 17 of GOMs No. 86 MA dt 3.3.06
	SDZ 2	1.40 times the rate given in Table in Rule 17 of GOMs No. 86 MA dt 3.3.06
Zone B (From Bongulur Junction, on Nagarjuna Sagar Highway to Shamirpet – Upparpalli Junction,on Karimnagar Highway)	SDZ 1	1.30 times the rate given in Table in Rule 17 of GOMs No. 86 MA dt 3.3.06
	SDZ 2	1.20 times the rate given in Table in Rule 17 of GOMs No. 86 MA dt 3.3.06
Zone C (From Shamirpet – Upparpalli Junction, on Karimnagar Highway to Muttangi Junction on NH9)	SDZ 1	1.10 times the rate given in Table in Rule 17 of GOMs No. 86 MA dt 3.3.06
	SDZ 2	Same as rates Table in Rule 17 of GOMs No. 86 MA dt 3.3.06

CITY LEVEL INFRASTRUCTURE IMPACT FEES APPLICABLE as per GO 86- Simplified Building Byelaws

Occupancy / Use	Height of Building (in meters) and rate in Rs. per Sq. m of built up area			
	Above 15 m & upto 21 m	Above 21 m & upto 30 m	Above 30 m & upto 50 m	Above 50 m
Residential	Municipal Corporation Area			
	500	750	1500	3000
	Other areas of UDA Area			
	250	500	1000	2000
Commercial, Offices, ITES	Municipal Corporation Area			
	1000	1500	2500	5000
	Other areas of UDA Area			
	500	1000	2000	4000
Institutional, Educational & other (except Industrial sheds)	Municipal Corporation Area			
	300	500	1000	2000
	Other areas of UDA Area			
	100	200	400	800



Development Deferment Charge (per annum): on Vacant land, undeveloped/unbuilt land

- 1 year grace period from the date of notification
- 2nd Year Onwards Rs. 2/- per sq mtr
- 3rd Year onwards Rs. 5/- per sq mtr
- from the date of operationalisation of traffic on ORR 10/- per sq mtr

Incentives for large projects

- Incentives for large projects are as follows:

(a) **Large integrated townships**

i. **40-100 acres-** 10% discount on rates as given in regulation 16 above

ii. **100-200 acres-** 20% discount on rates as given in regulation 16 above

iii. **Above 200 acres-** 25% discount on rates as given in regulation 16 above

(b) **IT/ITES projects, Education Institutions/Universities, Hospitals**

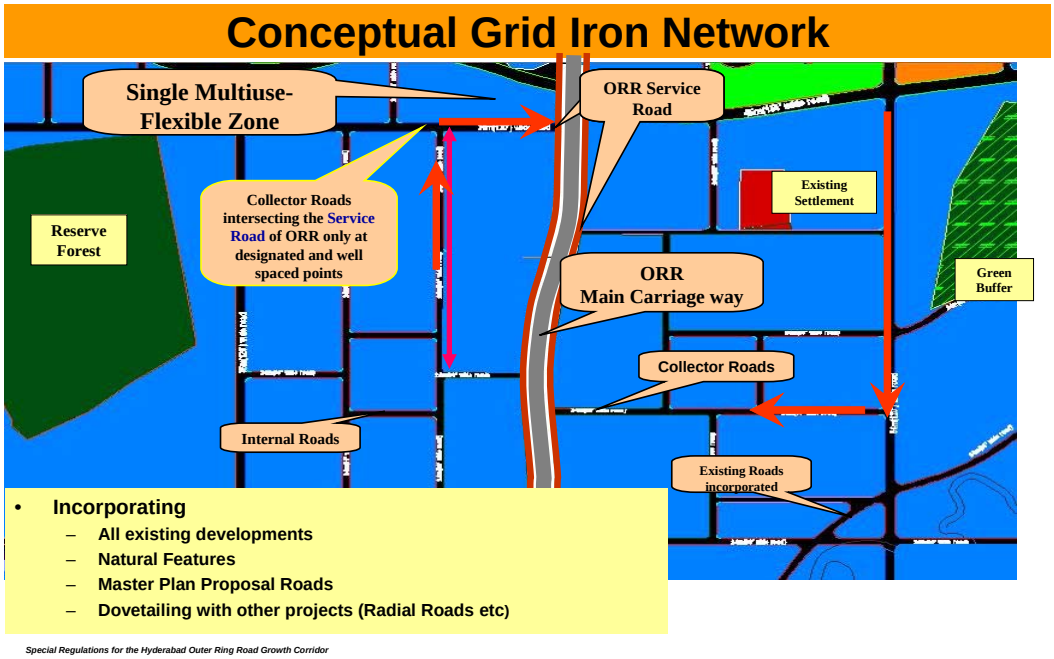
i. For all projects above 50 acres there shall be a 20% discount on rates as given in regulation 16 above

ii. For all projects above 100 acres- 30 % discount on rates as given in regulation above

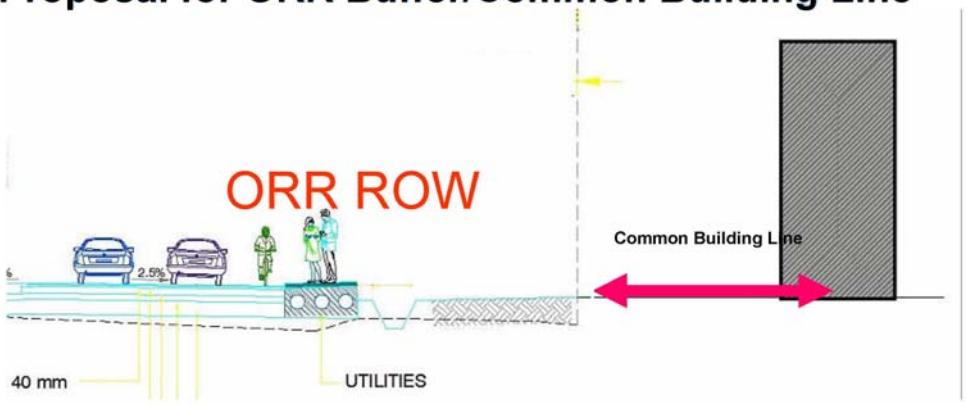
Other highlights

- **Digital Plans**
  - All layout drawings be submitted in digital format after geo-referencing it (preferably in .shp, .tab, .dxf file formats).
- **Grounding of the Circulation network:**
  - The Competent Authority shall undertake the marking of the proposed circulation network within the ORRGC area on ground and complete the same within three months from the date of issue of these Regulations.

Network of Wide Roads



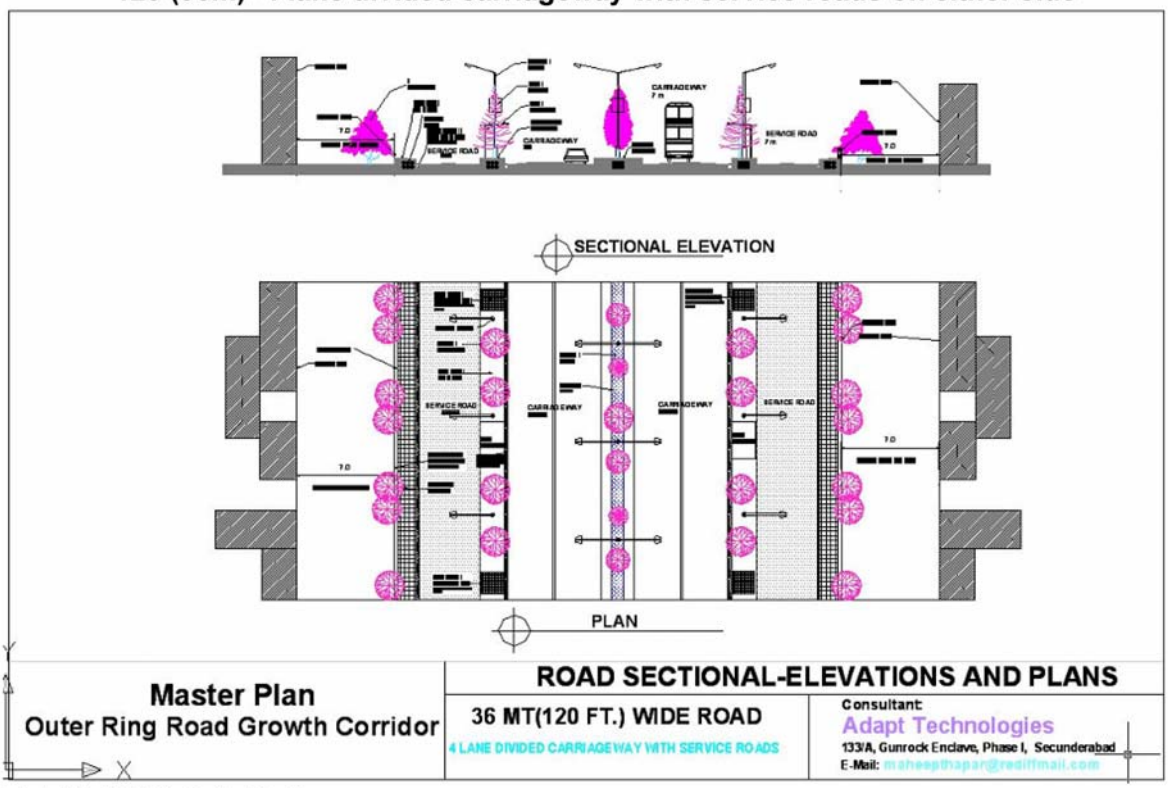
Proposal for ORR Buffer/Common Building Line



- **15 mts wide**
- **No structures, projections, hoardings allowed within this**
- **Easy to regulate/enforce.**
- **Aesthetic Urban Form**
- **Can be part of mandatory Open Space**

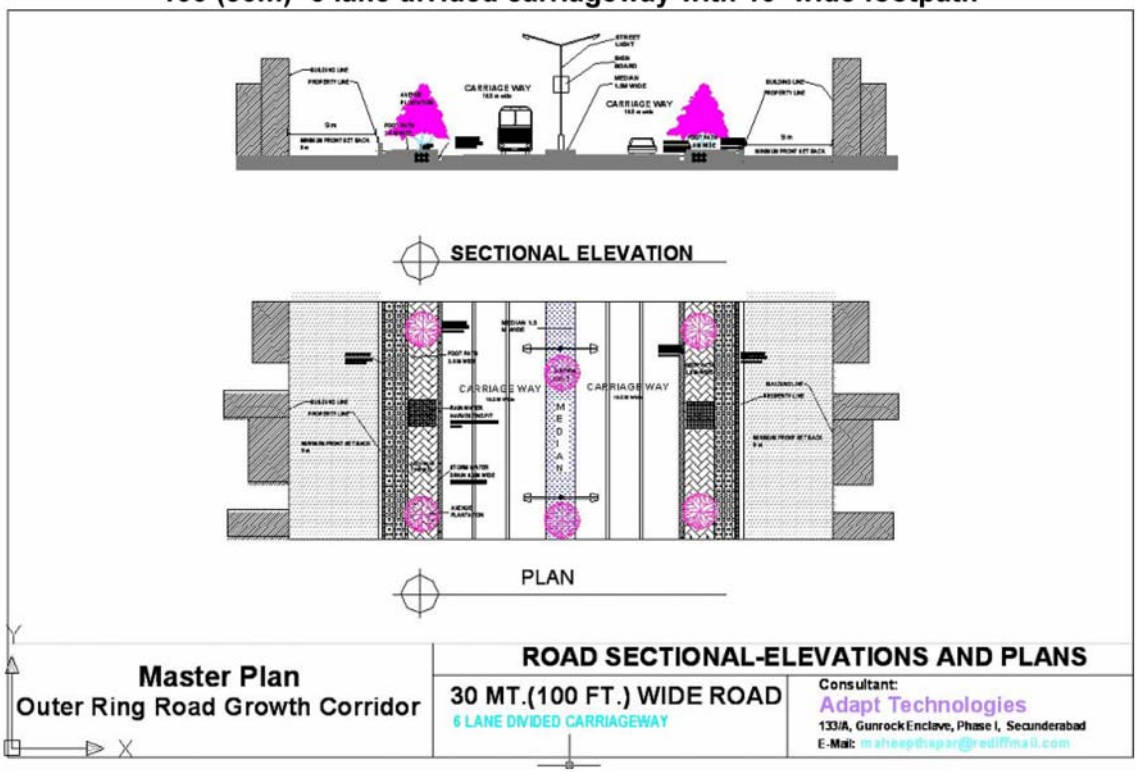
Special Regulations for the Hyderabad Outer Ring Road Growth Corridor

120'(36m)- 4 lane divided carriageway with service roads on either side

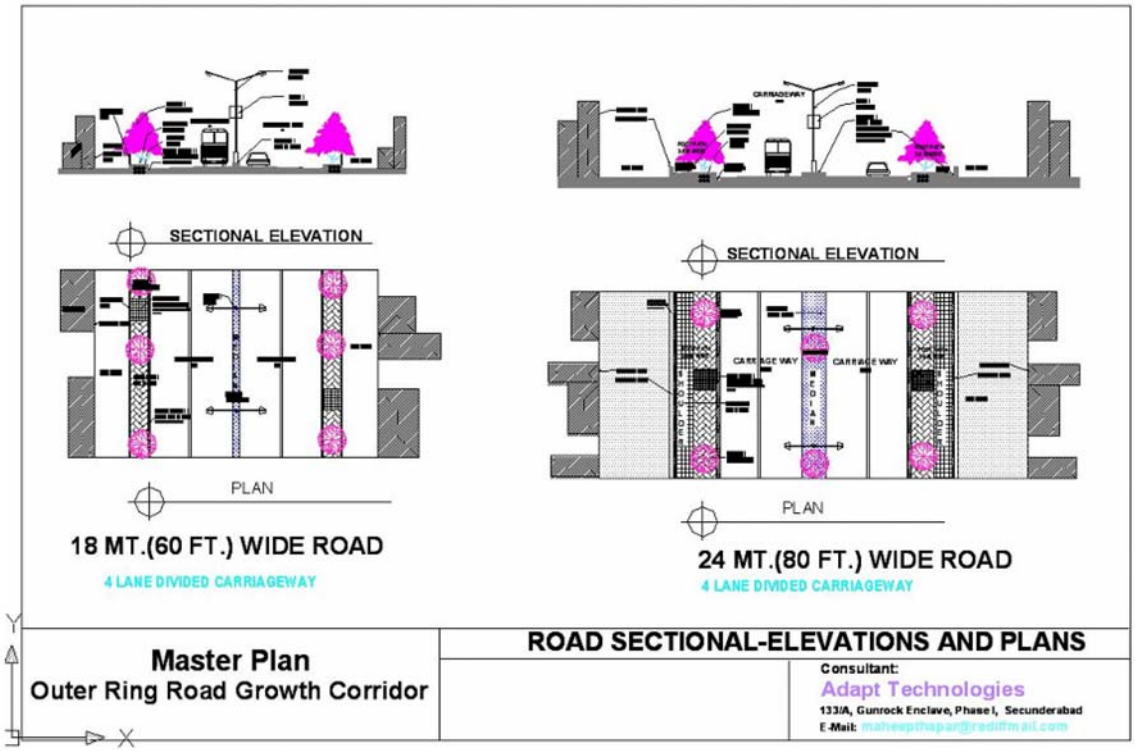


gulations for the Hyderabad Outer Ring Road Growth Corridor

100’(30m)- 6 lane divided carriageway with 10’ wide footpath



80’(24m)- 4 lane divided carriageway with 10’ wide footpath



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Session - I

OUTER RING ROAD TO HYDERABAD CITY

Thiru G.Jaganatha Rao,
Chief General Manager (ORR),
Hyderabad Metropolitan Development Authority, Hyderabad

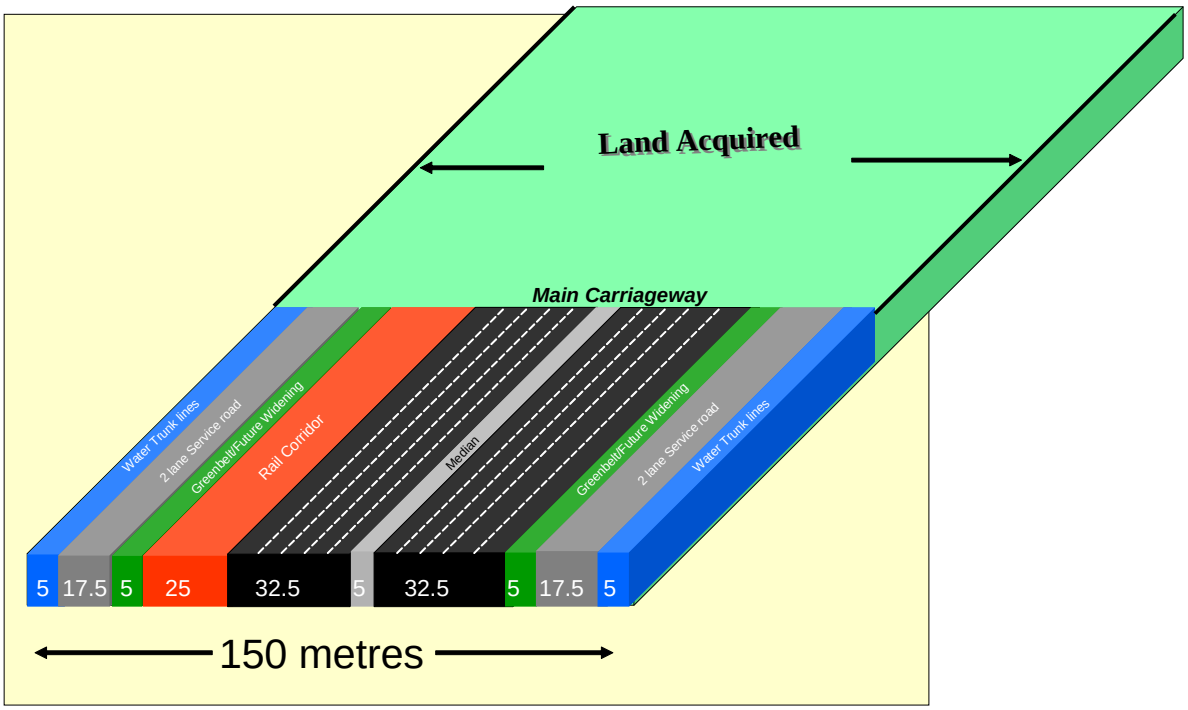
ORR to Hyderabad City was conceived in 2004 with the following objectives

- To reduce congestion in the metropolitan area and inner ring road and to meet the future traffic demand
- To reduce overall pollution in the city and to promote environmental up-gradation and rejuvenation
- To facilitate a total transport solution by connecting the NH and SH network and other important city roads
- To provide quick access to important nodes in the city.
- To connect various urban nodes outside the city
- To take advantage of the city's geological location to develop in all the directions unlike Mumbai, Chennai, Visakhapatnam etc, and to create options for development of further satellite townships and peripheral growth
- To afford uninterrupted movement of traffic at a constant speed, to reduce the travel time
- To bring the far flung areas within the accessible reach of the city to pave way for development of new growth centers.
- To act as a bypass for the through traffic on the national highways and state highways and in turn reduce the accidents by avoiding movement of commercial traffic in the city.
- To provide quick access to the upcoming international air port from various parts of the city.
- To promote Foreign Direct Investments and local investments in view of the international focus on Hyderabad city as a potential Hi-tech base.

SALIENT FEATURES OF ORR

- 8-Lane fully access controlled expressway
- Design Speed – 120 Kmph
- Width of Fast lanes – 3.5m
- Width of outer lanes – 3.75m
- Hard shoulder – 3.0m
- Earthen Shoulder – 3.0m
- Width of Median – 5.0m
- Access to ORR to be provided at all major arterial roads besides NH & SH crossings through Interchanges.
- 2-lane service roads on either side.
- 25 m wide for future MRTS / BRTS.
- Utility Corridor and Green belt on either side.

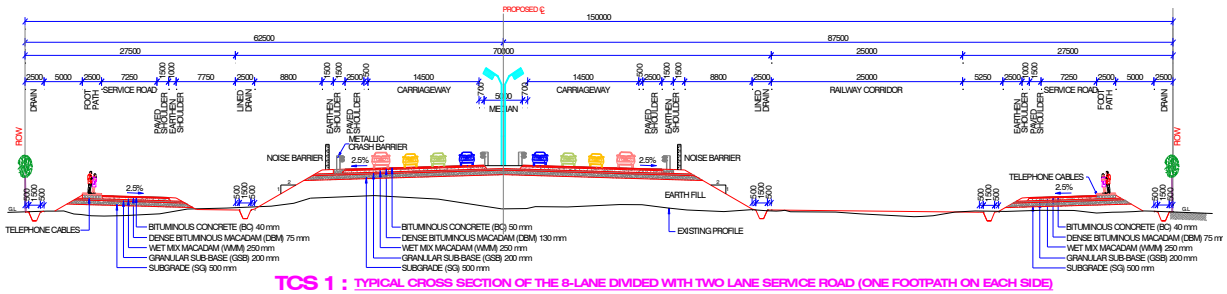
CROSS SECTION OF ORR



BENEFITS OF ACCESS CONTROL

- No at grade junctions
- Vehicular underpasses/ overpasses at all the minor road junctions
- Interchanges at major road junctions with signal-free traffic movement in all directions at 5-8 km intervals
- Low level underpasses for cross movement of light vehicular traffic and pedestrians at close intervals
- No criss-crossing of vehicles
- No movement of stray animals / cattle on the road
- No movement of vehicles in the opposite direction in the same carriage way causing fatal accidents
- To facilitate uninterrupted movement of vehicles at a steady speed

TYPICAL CROSS SECTION OF ORR CORRIDOR

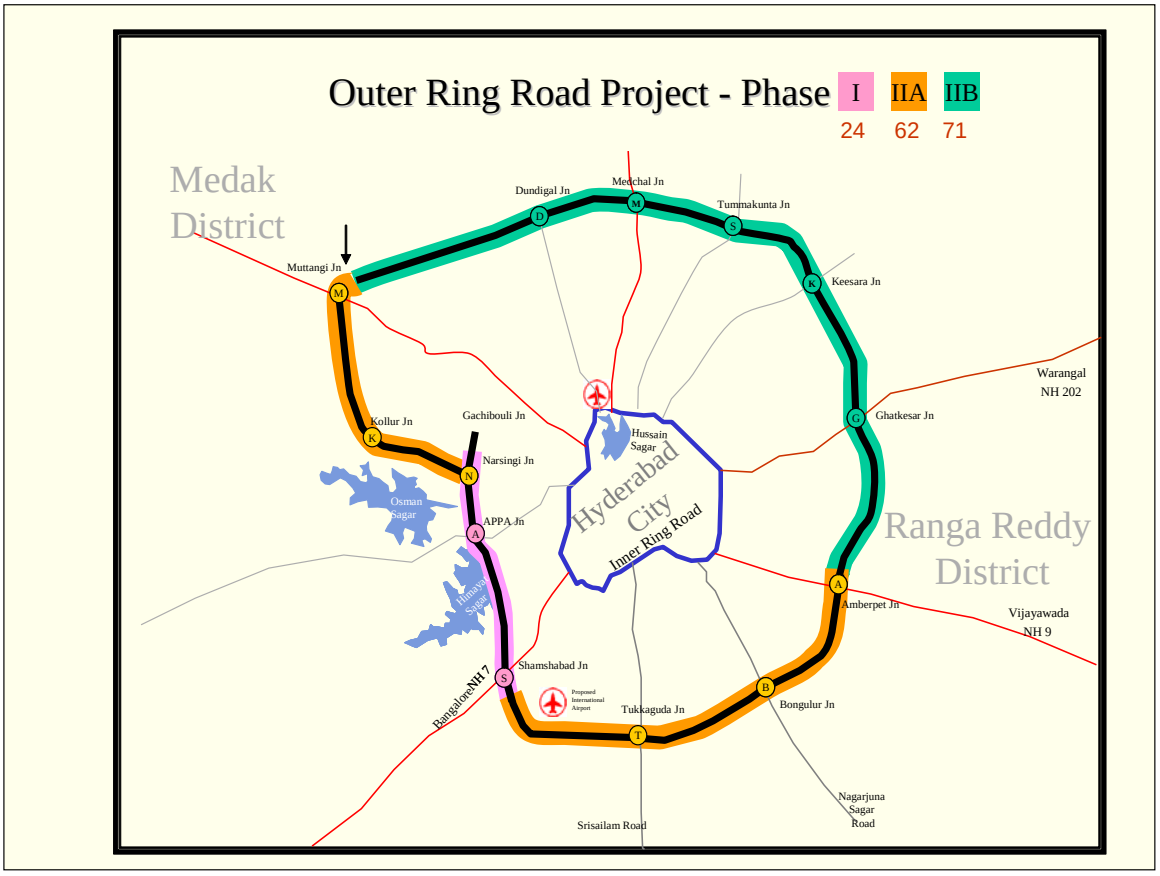


TCS 1 : TYPICAL CROSS SECTION OF THE 8-LANE DIVIDED WITH TWO LANE SERVICE ROAD (ONE FOOTPATH ON EACH SIDE)

IMPLEMENTATION OF OUTER RING ROAD

- The 158 km long Outer Ring Road is being developed at an estimated cost of Rs 6500 Crores. The work is being undertaken in three phases.

- When completed the ORR will improve connectivity, promote development and de-congest the city's inner areas.



Fully Access Controlled 8-lane Expressway as Outer Ring Road to Hyderabad City

Phasing of the Project

- Total length158 km.
  - Phase I – 24.380 km
    - Item rate contracts
    - Under construction

- Phase II – 133.600 km
  - Phase II A – 62.300 km - under BOT Annuity
    - 5 Packages – Works commenced during December, 2007.
  - Phase II B – 71.300 km
    - 6 packages
    - Being taken up with JBIC assistance

The works are expected to be completed by August, 2009.

- **Phase-I : From Gachibowli to Shamshabad - 24.380 Km.**
  - Total Estimated Cost: Rs. 699 Crores.
  - Funding through loan from Consortium of Banks to the tune of Rs. 500 Crores.
  - Loan to be repaid in 8 years with a moratorium period of 2 years.
  - Divided in to two Contract Packages.
  - Civil works and Supervision Consultancy contracts were awarded on International Competitive Bidding during June, 2006.

Status of Phase-IIA

- **Phase-II A: From Narsingi to Patancheru & Shamshabad to PeddaAmberpet**
  - Total Length: 62.3 Km
  - Approximate Cost: Rs. 2439 Crores.
  - Divided into Five Contract Packages.
  - Taken up under BOT- Annuity Model
  - Concession agreements concluded in August, 2007.
  - Work commenced in all five packages in December, 2007.
  - Concession period 15 years including construction period of 2 ½ years.
  - Expected date of Completion – May, 2010.

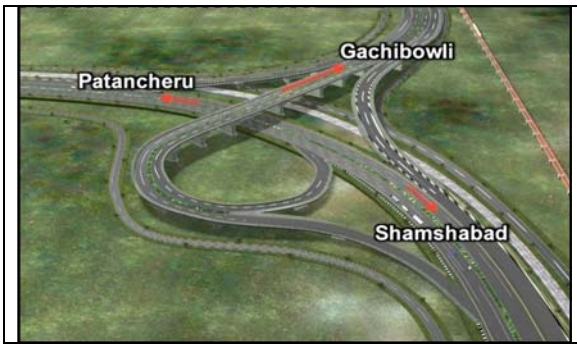
Status of Phase-IIB

- Phase-II B: From Patancheru to Pedda Amberpet via, Kandlakoya, Shamirpet & Ghatkesar
  - Total Length : 71.3 Km
  - Divided into Six Contract Packages.
  - Approximate Cost : Rs.3362 Crores
  - Proposed for Loan assistance from Japan International Cooperation Agency (JICA)
  - First Loan Agreement has been concluded on 10th March, 2008 for the first 3 Packages covering the stretch from Patancheru to Shamirpet.
  - Second Loan Agreement for the balance 3 Packages of Phase-II B covering the stretch from Shamirpet to Pedda Amberpet is expected to be concluded in November, 2008.
  - Procurement is currently in progress.

- It is expected that the works under the first 3 Contract Packages will be grounded in December, 2008
- The works under the balance 3 Contract Packages are expected to be grounded by March, 2009

Gachibouli Jn.

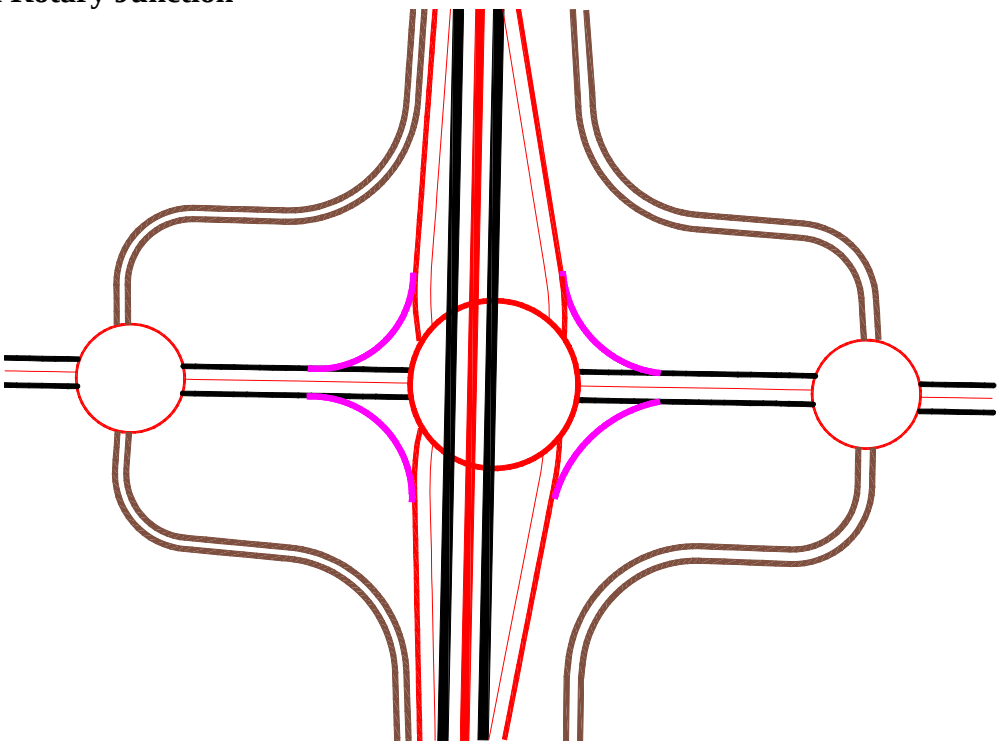
Nanakramguda Jn.



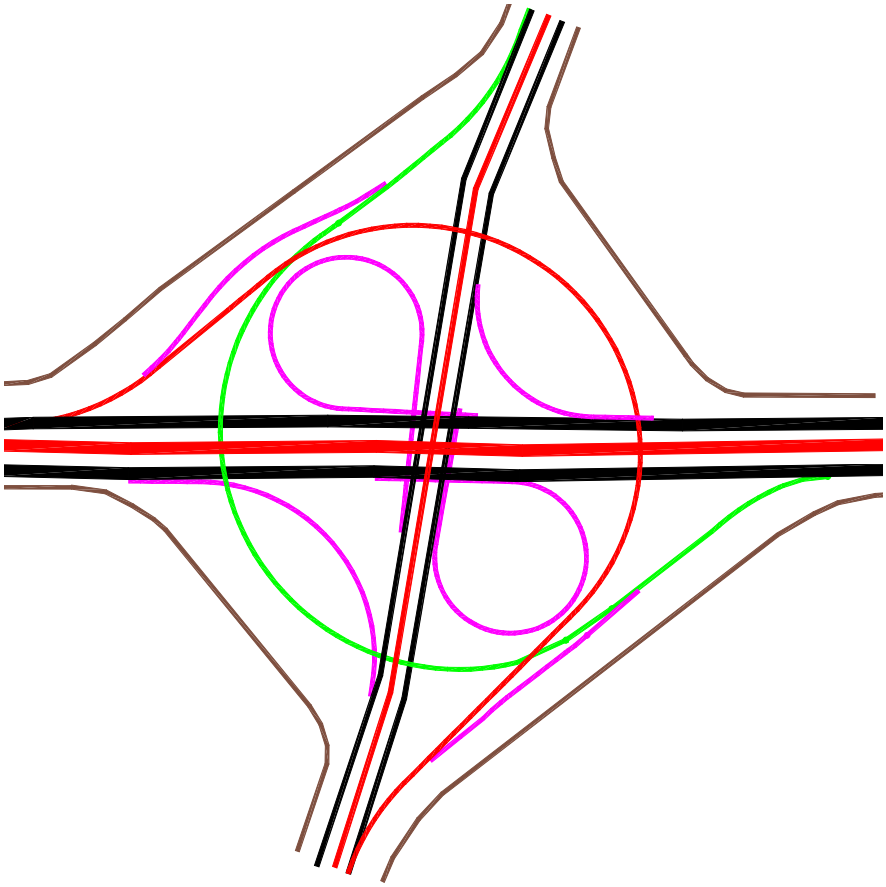
Narsingi Jn.

APPA Jn.

Typical Rotary Junction



TYPICAL PARTIAL CLOVERLEAF INTERCHANGE



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