



WRI INDIA
— ROSS CENTER

WEBINAR SERIES ON TRANSIT ORIENTED DEVELOPMENT IN INDIAN CITIES

Regulatory framework

PRERNA V MEHTA, LEAD – URBAN DEVELOPMENT

A product of WRI Ross Center for Sustainable Cities

COMPONENTS

- Institutional Setup
- Regulatory Framework
- Mapping
- Design Interventions (*Planning & Design and implementation*)
- Financing
- Monitoring and Evaluation

GOAL

To impart understanding of the various amendments that needs to be undertaken to adopt and facilitate Transit Oriented Development (TOD) planning and implementation.

REVIEW, REVISE OR FORMULATE

- **National level: Guidance document**
 - National TOD policy – guidance document
- **State Level: Enabling through legislation**
 - Town and Country Planning Acts
 - Budgetary allocations
- **City Level: Enabling through Development Plans**
 - Master Plans/Development Plans
 - Zonal Plans
 - Local Area Plans
 - Development Control regulations
 - Budgetary allocations

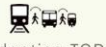
STATE OF TRANSIT ORIENTED DEVELOPMENT IN INDIAN STATES AND CITIES

04
Cities
TOD POLICY



Pedestrian Network
Public Bi-Cycle Sharing
NMT
Cycle Track

15
Cities
Adopting TOD Principles



Multi Modal Integration
Public Transport
Feeder System
Improve Connectivity
Integrated Public Transport

01
State
TOD POLICY



Density
Mixed Use
Universal Access
Open Space
Property Development
Increased FSI



Cities and states with TOD Policy

Cities with mass transit adopting TOD principles but no policy.

Cities with mass transit adopting TOD principles

NATIONAL TOD POLICY

CONTINUED....

May 2017, the Ministry of Urban Development launched the landmark National TOD policy.

VISION

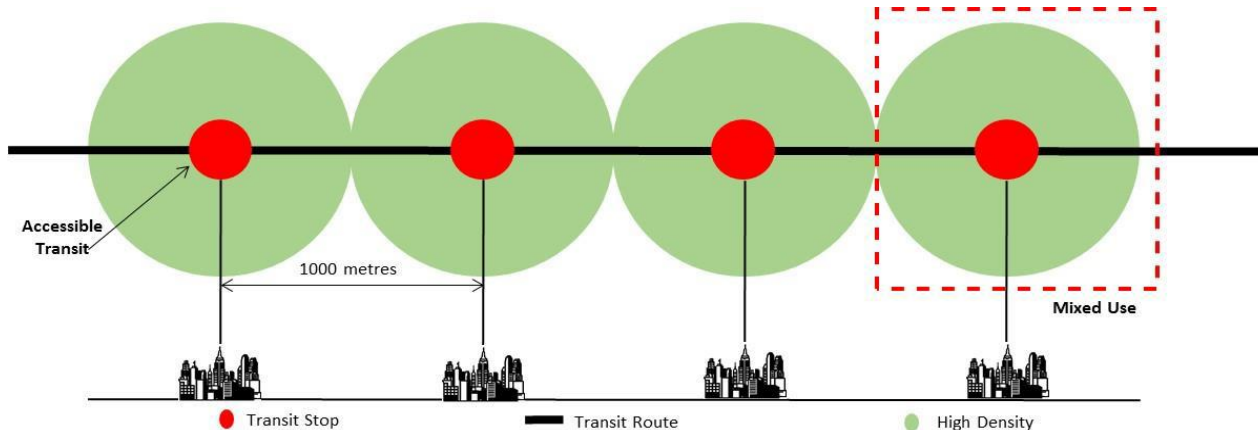
- Enable Transformation
- Accessible Public Transport
- Compact Walkable Communities

OBJECTIVE

- To **promote the use of public transport** by developing high density zones
- **Mixed land-use** development which would reduce the need for travel.
- **Safe and easy movement and connectivity of NMT** and pedestrians between various uses as well as to transit stations.
- To achieve **reduction in the private vehicle ownership, traffic and associated parking demand.**
- To develop **inclusive habitat** , **integrate the Economically Weaker Sections (EWS) and affordable housing** in the influence zone.
- To **provide all kinds of recreational/entertainment/ open spaces** and ensure **development of safe society, prevent urban sprawl and reduce carbon footprints.**

DEFINITION

- TOD integrates land use and transport planning and aims to develop planned sustainable urban growth centres, having with high density mixed land-use. Citizens have access **walkable and liveable communities** to open green and public spaces and at the same time transit facilities are efficiently utilized.
- TOD focuses on **creation of high density mixed land use development in the influence zone of transit stations**, i.e. within the walking distance of (500-800 m) transit station or along the corridor

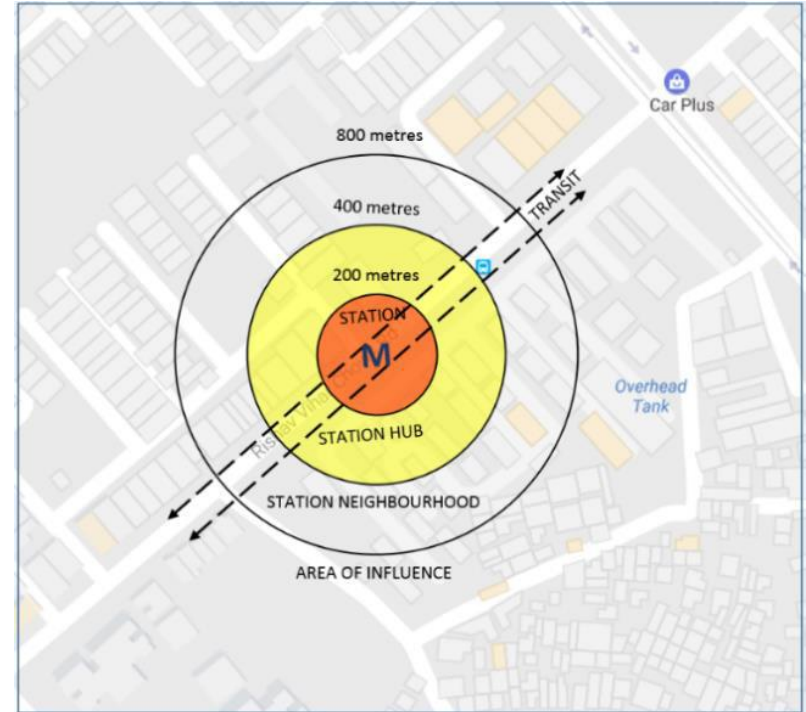


PRINCIPLES



APPROACH FOR TOD IMPLEMENTATION

- **Influence Zone:** Demarcate influence zone nearly 500-800m radius of the transit station
- **High Density Compact Development:** Density and FAR norms can vary across the city
- **Mixed Use Development:** optimization of infrastructure & resources
- **Mandatory and Inclusive Housing:** minimum %age for affordable housing and provision of EWS & LIG.
- **Multimodal Integration:** High quality integrated multimodal transport system.
- **Focus on pedestrians, cyclists and NMT users:** The streets should be designed for users of all age groups and for all types of commuters
- **Street Oriented Buildings and Vibrant Public Spaces**
- **Street Vendors, Preserve Open Spaces, Safety and Security and Managing Parking**



VALUE CAPTURE FINANCING

- In TOD influence zones, land value capture can be done through **enhanced or additional land value tax** or **one time betterment levy, development charges or impact fee, transfer of development rights (TDRs)**, or other such mechanisms which have been adopted in various states across the country and abroad.
- The resources generated through various mechanism should be credited into a **TOD fund** created for funding the infrastructure upgradation/ maintenance and development of transit corridor and public transport

STATUTORY FRAMEWORK

- **TOD policy** should be notified as **part of the Master Plan/Development plan** of the city.
- The **building bye-laws and development control regulations** would need to be **amended** to incorporate the changes required for implementing TOD.
- The **influence zone of the TOD should be clearly notified** by the concerned authority.
- The **ULBs** and the concerned authorities/agencies should **prepare a comprehensive plan integrating** all the utilities, physical infrastructure and essential facilities such as roads, sewers, drainage, electric lines, green spaces, police post, fire post, sub-stations, etc.
- The **plan would be useful to assess the carrying capacity of the existing infrastructure** and the **upgradation needed** to meet the increased demand once **TOD is implemented**.

OTHER ASPECTS

- Coordination and Implementation
- Communications and Outreach

HOW TO ADOPT AND IMPLEMENT TOD?

EXAMPLES

AHMEDABAD PROCESS FOR TOD

Capacity building

- Developed detailed knowledge of the TOD concept and its benefits

Amendment in state legislation

- Modified Gujarat Town Planning and Urban Development act to incorporate Local area planning process.

Development Plan revision

- The Ahmedabad Development Authority revised the Development plan to incorporate TOD and added development control regulations for the same.

TOD Projects

- Area based development project was launched based on the TOD provisions incorporated in the Development Plan

DELHI PROCESS FOR TOD

Capacity building

- Developed detailed knowledge of the TOD concept and its benefits

Developed draft TOD policy

- TOD policy was developed for incorporating in the Master Plan of Delhi – 2021.

Notification of the TOD policy

- The Ministry of Housing and Urban affairs the then MoUD notified the TOD policy on 14th July 2015

Publishing as part of MPD-2021

- Delhi Development Authority incorporated the TOD policy in the revised Master Plan of Delhi – 2021 and Launched a TOD pilot project.

Issuing detailed regulations

- First set of draft TOD regulations were released on 23rd Feb. 2016 followed by few amendments. The same are yet to be finalized.

DELHI TRANSIT ORIENTED DEVELOPMENT

POLICY & REGULATION INTERPRETATION

PURPOSE OF UNDERTAKING THIS WORK

- A **graphical interpretation** of the **Delhi TOD Policy** based on the policy and regulation documents that were available in the public domain as of October 2016.
- The manual presents a concise means to develop clear understanding of the **processes, rules and regulations** as defined in MPD - 2021 for facilitating TOD in Delhi.
- The manual intends to bring in a **common interpretation language** for **various stakeholders** involved in TOD implementation.

DOCUMENTS REQUIRED*

- Master Plan of Delhi 2021.
- Gazette of India – Modifications in MPD 2021 as part of review exercise Dt. 14-7-2015.
- Public Notice - Draft TOD Regulations Dt. 23-2-2016.
- Public Notice - Draft TOD Regulations. Dt. 24-4-2016.
- Public Notice - Proposed MPD 2021 Modifications Dt. 24-4-2016.

* For the purpose of following slides in this presentation.

TOD AS DEFINED BY MPD-2021



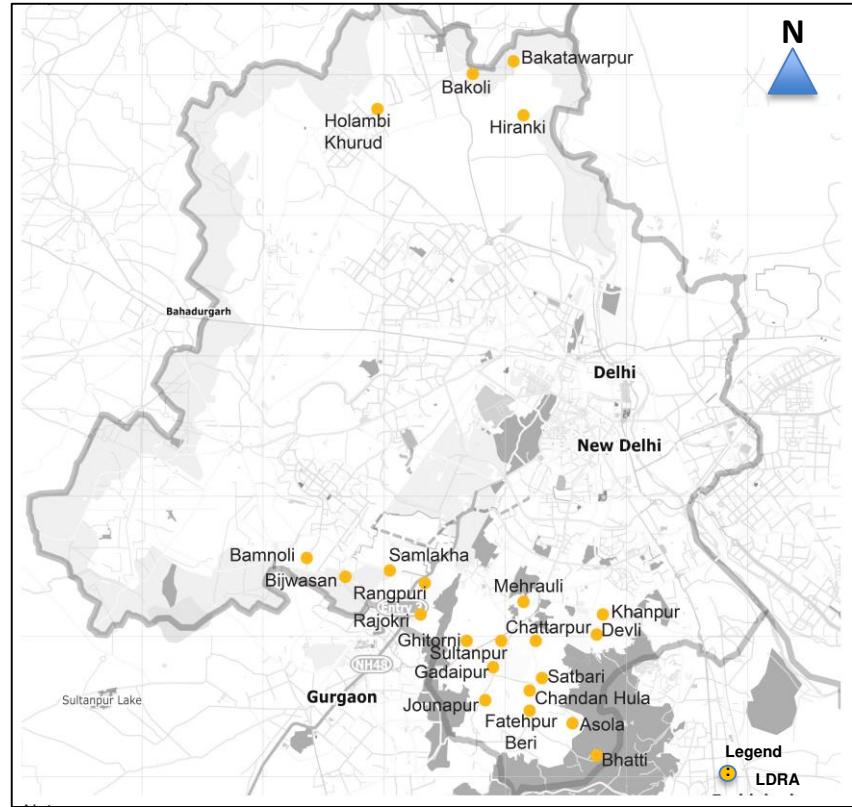
- TOD is essentially **any development, macro or micro** that is focused **around a transit node**, and **facilitates** complete **ease of access** to the **transit facility**, thereby inducing people to prefer to walk and use public transportation over personal modes of transport. (MPD-2021).

APPLICABILITY OF TOD POLICY

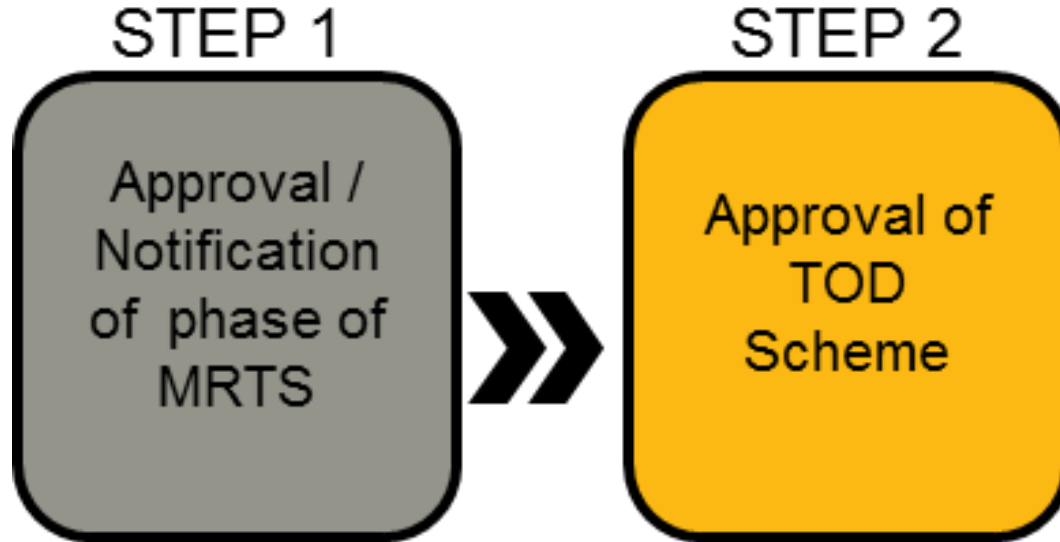
- The policy is applicable within the jurisdiction of MPD-2021 until unless specified.

Areas exempted from applying TOD

- Lutyens' Bungalow Zone, Chanakya Puri (as per layout plan of New Delhi Municipal Council, L&DO).
- Civil Lines Bungalow Area (as per layout plan of North Delhi Municipal Corporation, DDA).
- Monument Regulated Zone (As per ASI guidelines)
- Zone-O (as notified by DDA)
- Low Density Residential Area (as notified by DDA).



The approval of schemes will be granted after the approval / notification of the respective phase of MRTS



IMPLEMENTATION THROUGH TOD PRINCIPLES

PRINCIPLE 1: PEDESTRIAN AND NMT FRIENDLY ENVIRONMENT



Street furniture



Safe bicycle parking



Pedestrian ramps



Segregated and
connected NMT
routes

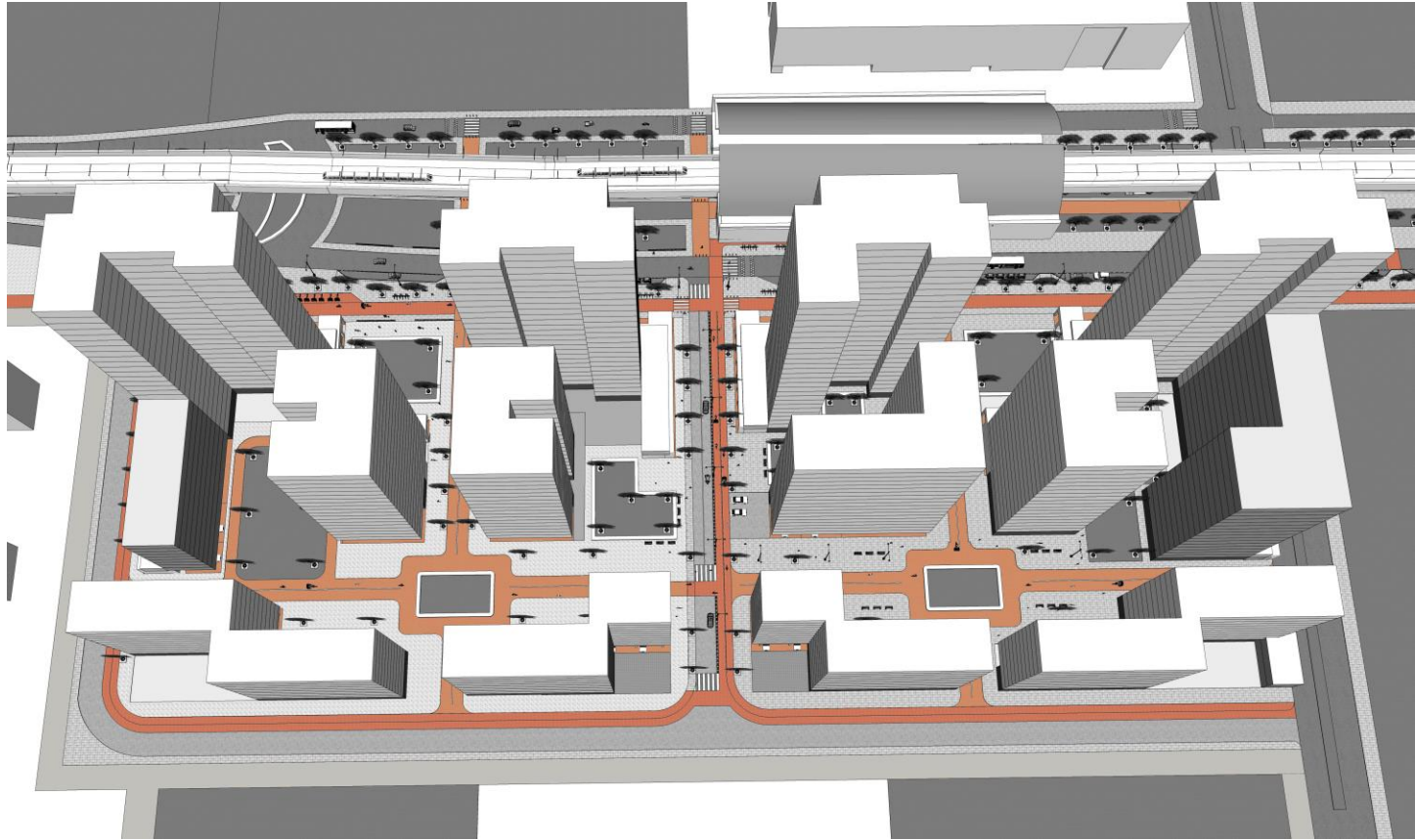


Traffic Signals

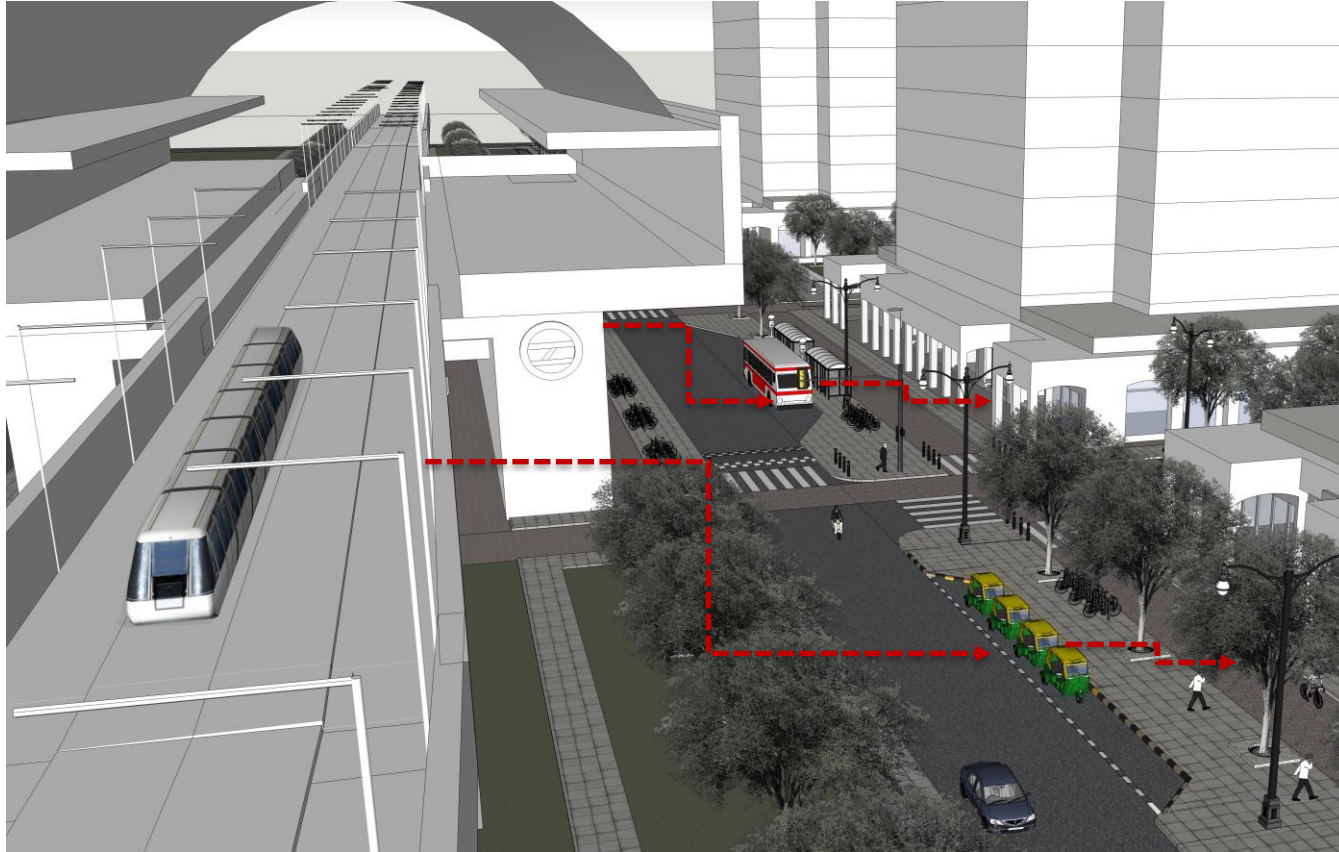


Refuge Area

PRINCIPLE 2: CONNECTIVITY AND NETWORK DENSITY



PRINCIPLE 3: MULTI-MODAL INTERCHANGE



PRINCIPLE 4: INDUCING MODAL SHIFT



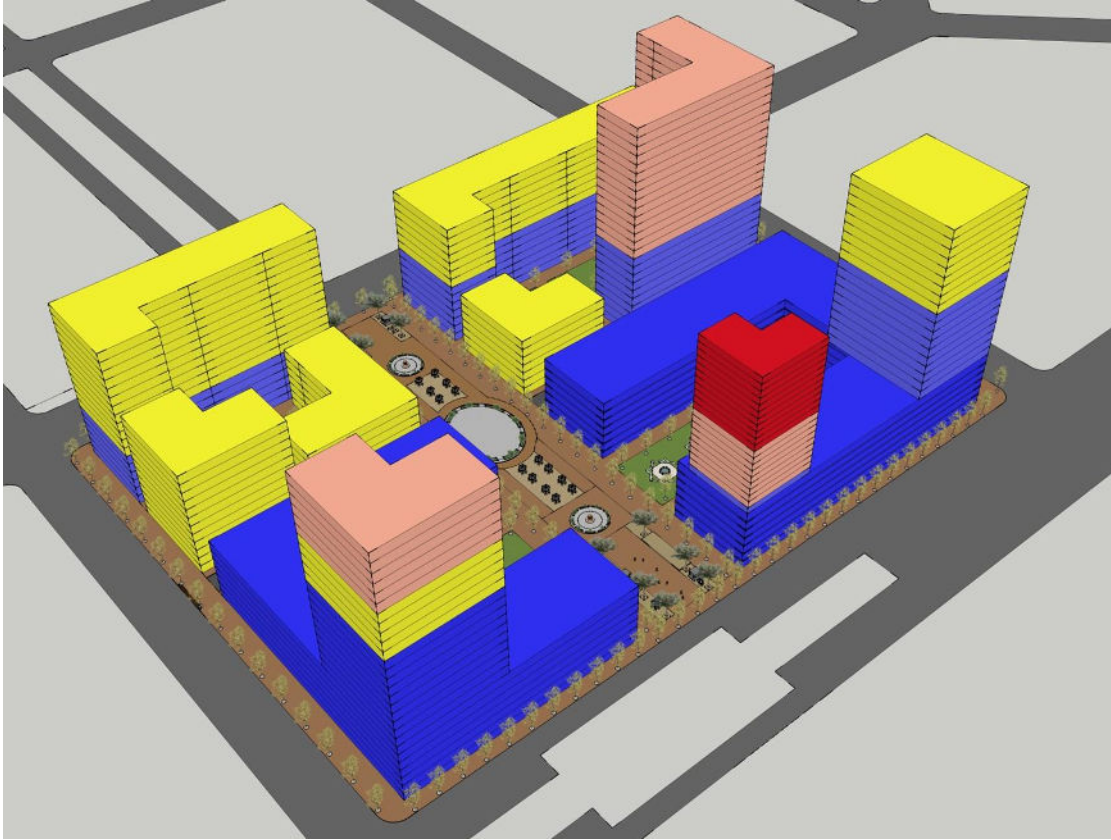
Locate public transport stations, homes, jobs and civic facilities within easy access of each other, to incentivize walking

Priced private parking spaces

PRINCIPLE 5: PLACE-MAKING AND ENSURING SAFETY

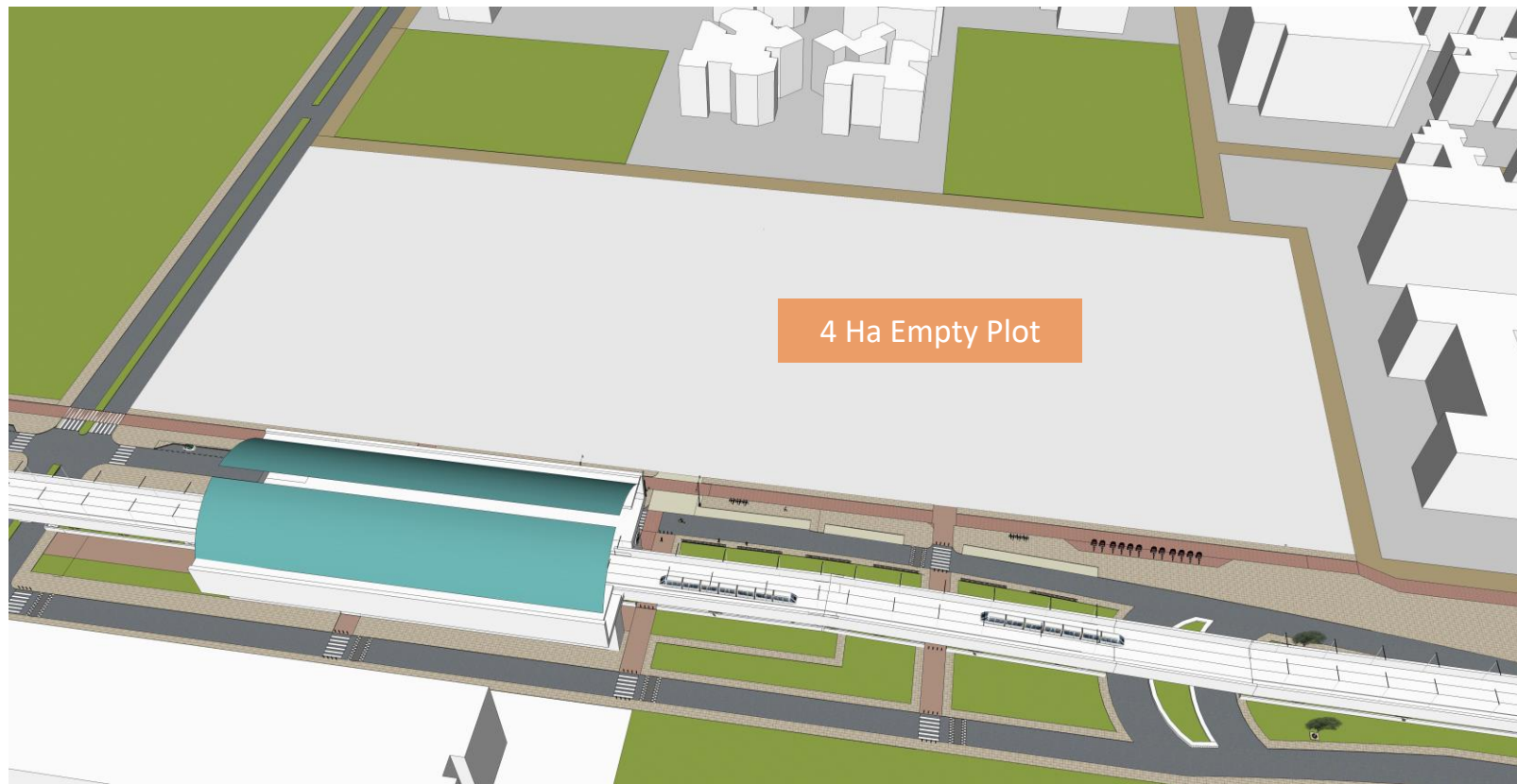


PRINCIPLE 6: HIGH DENSITY, MIXED USE, MIXED INCOME

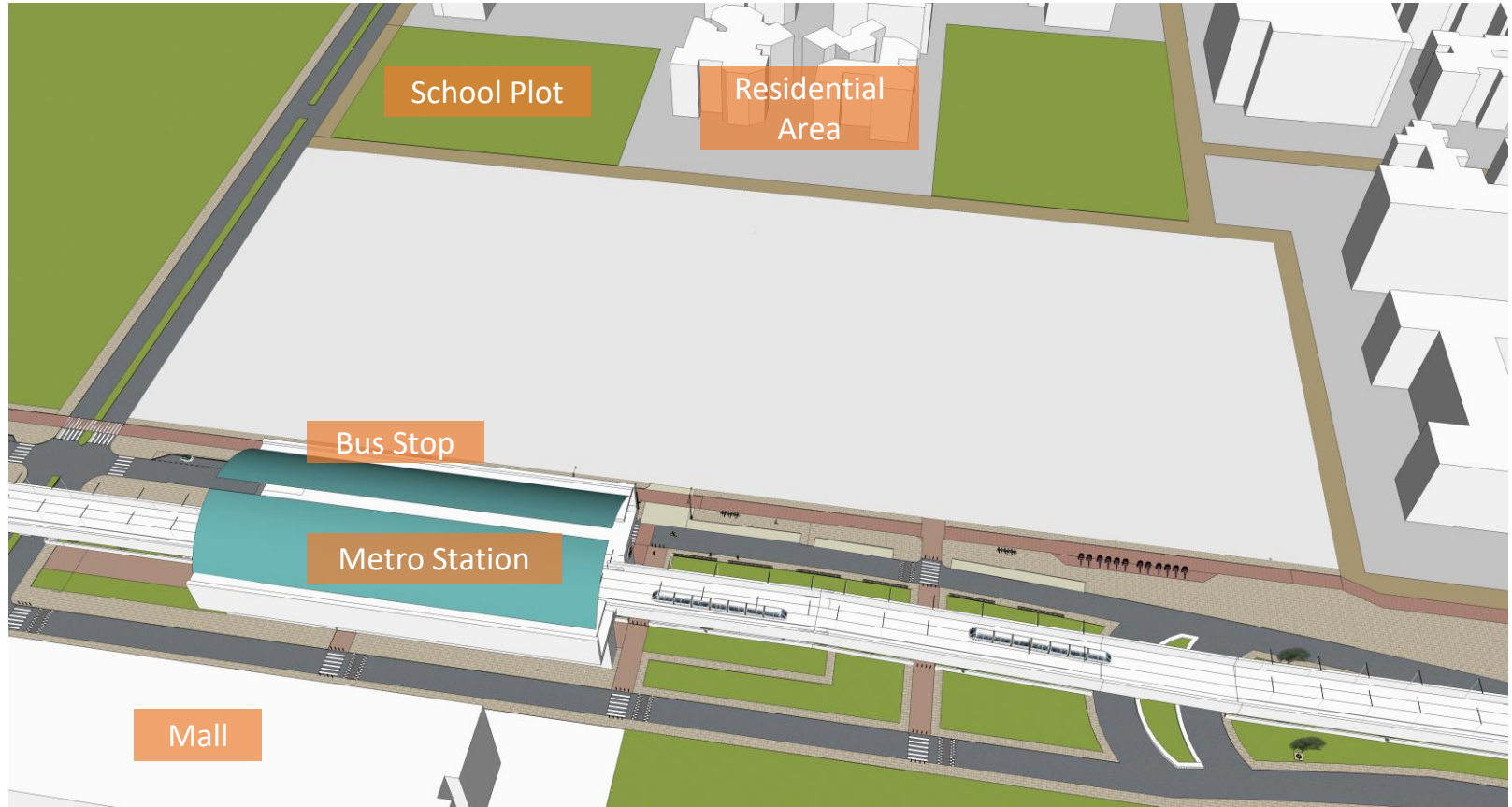


GENERIC SIMULATION

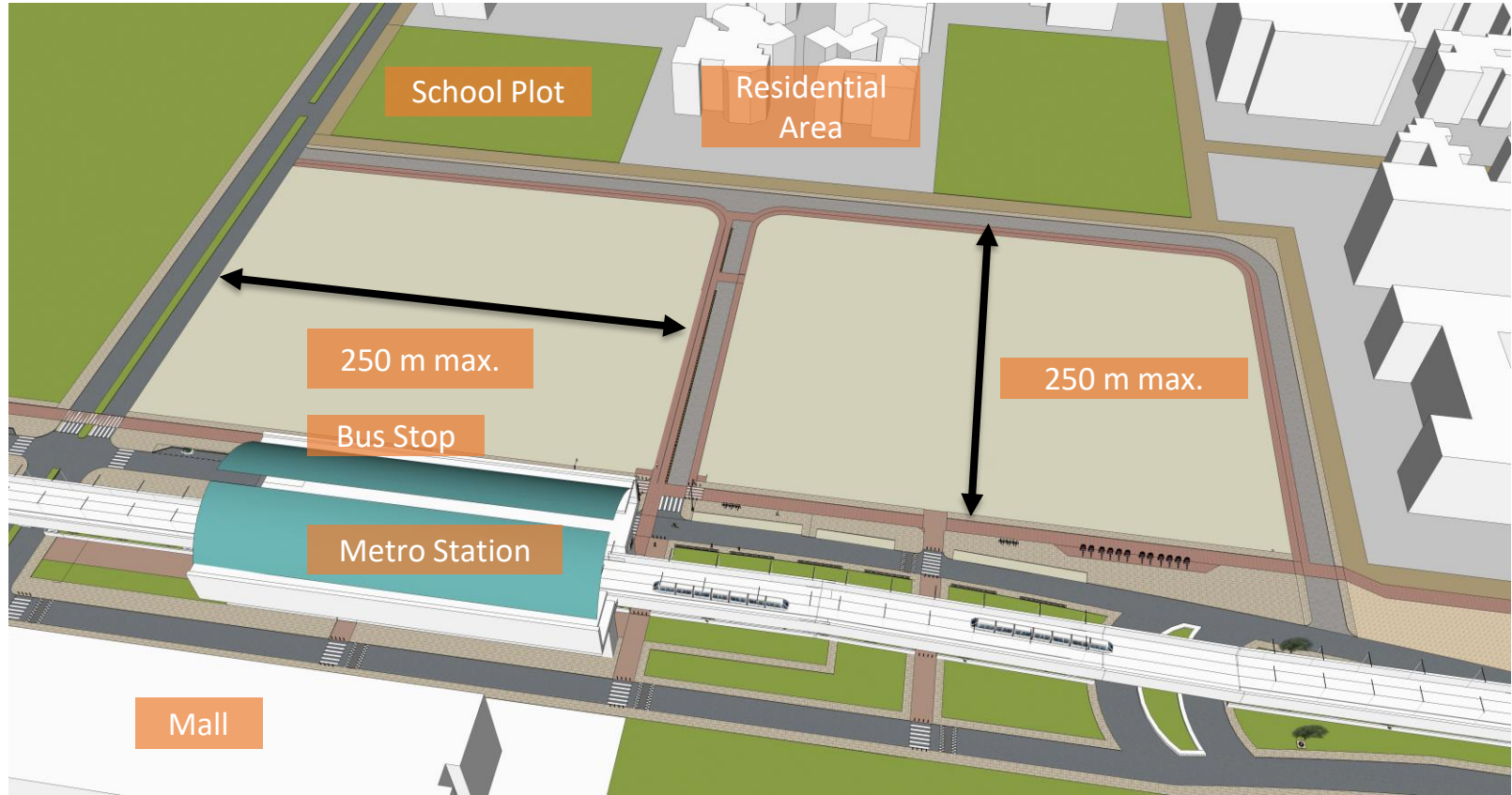
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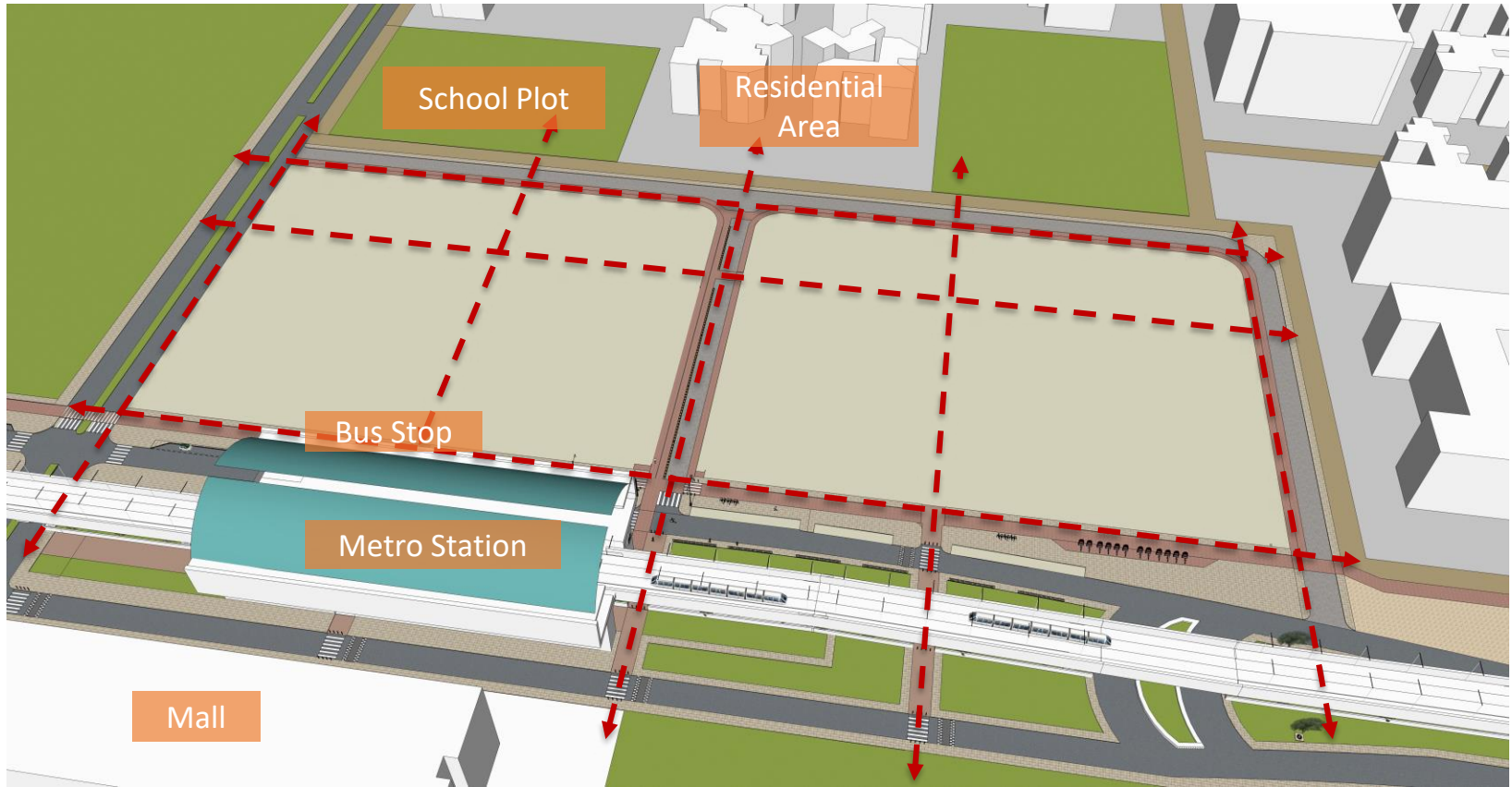
2 - SURROUNDINGS



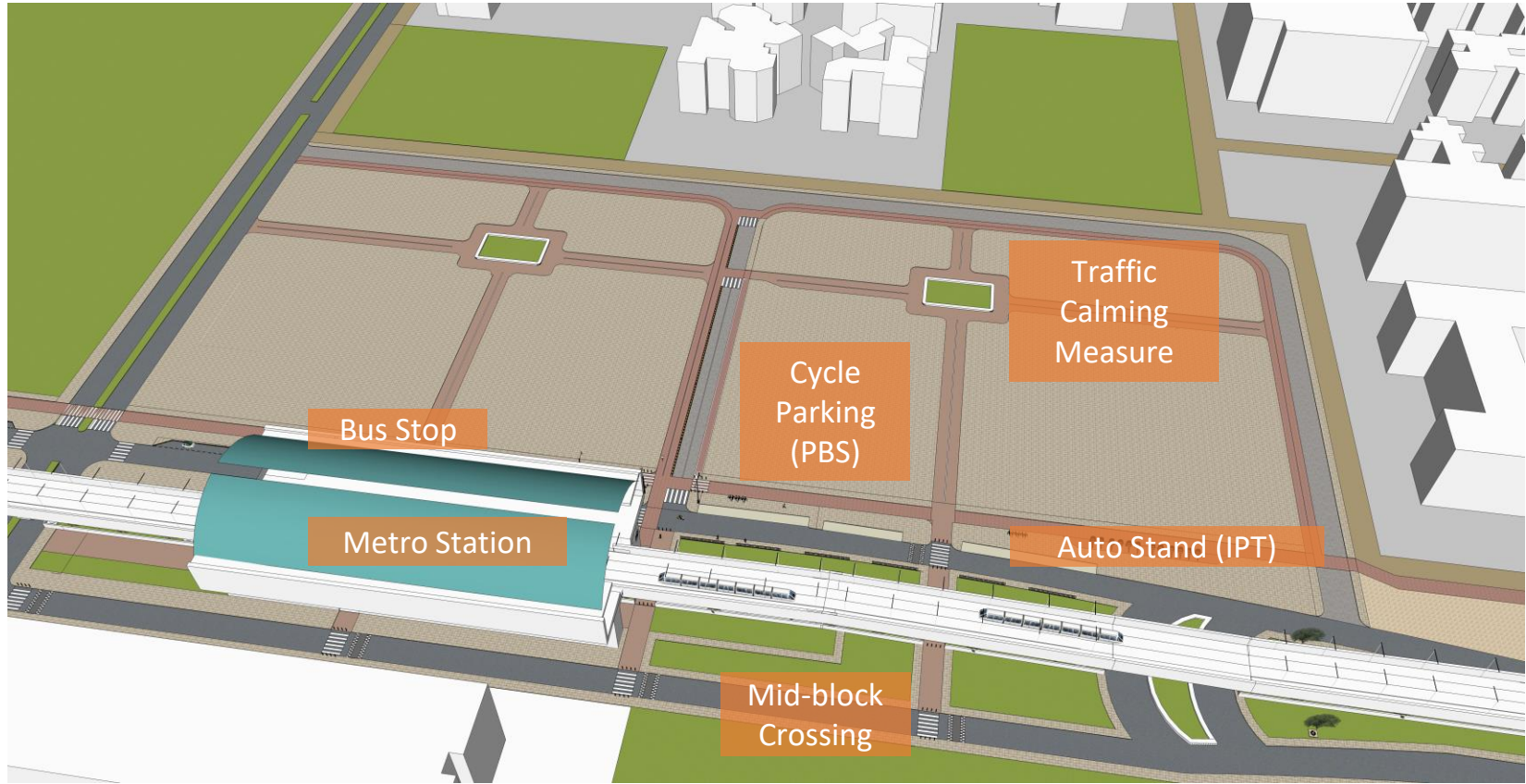
3 - VEHICULAR GRID (250 M C/C)



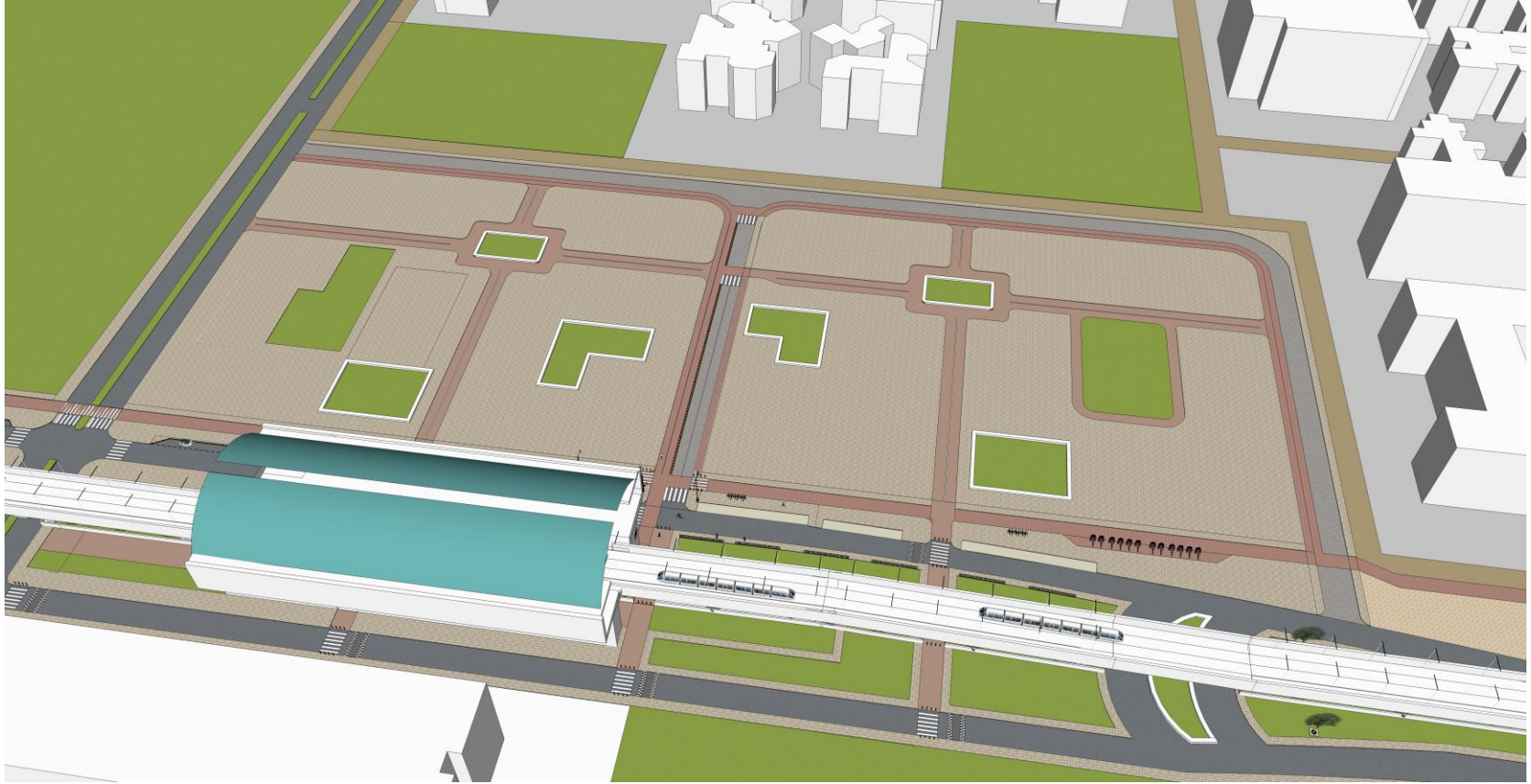
4 - DESIRE PATHS



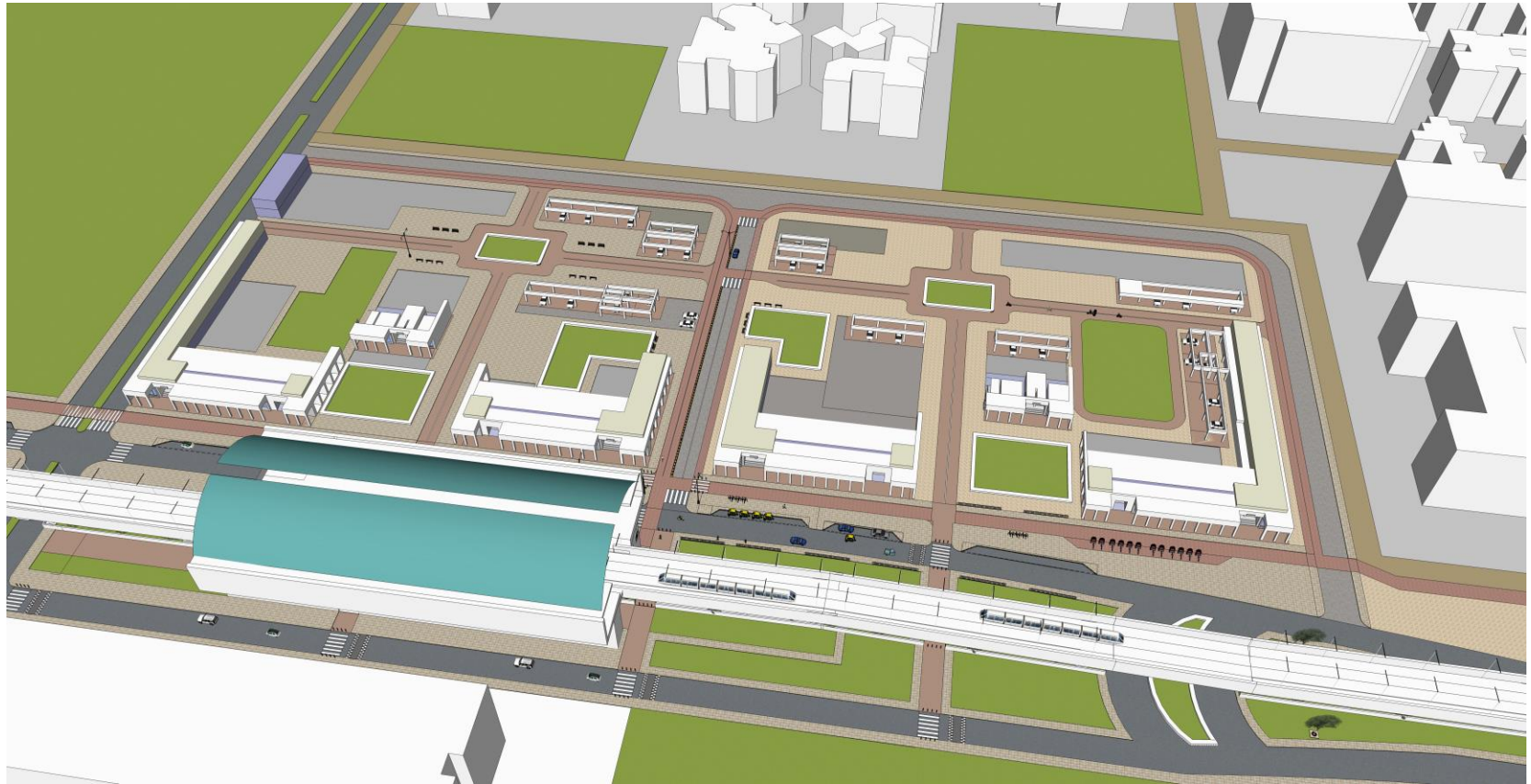
5 - PEDESTRIAN ROUTE – 100 M C/C



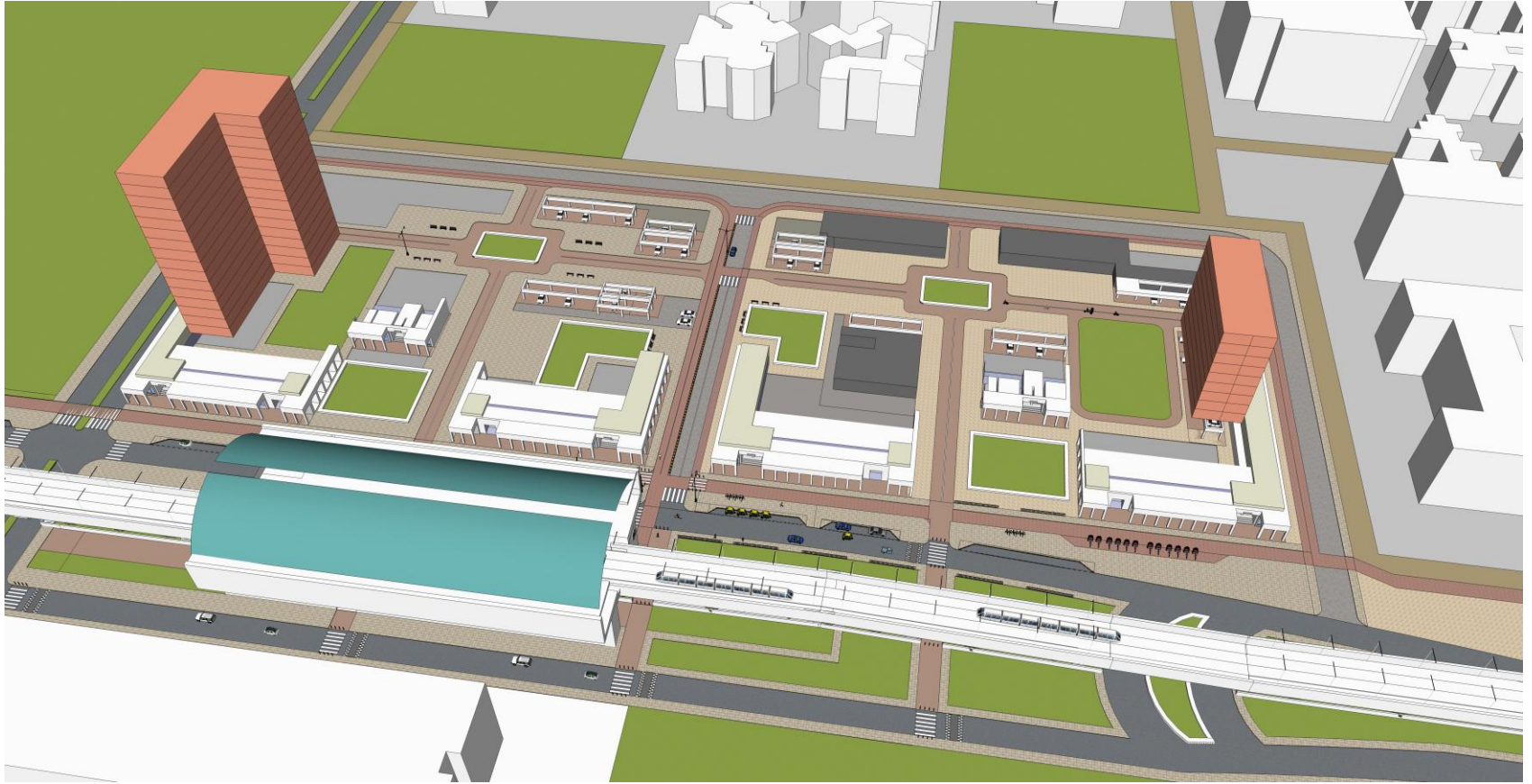
6 - LAYING OPEN SPACES AROUND PEDESTRIAN ROUTES



7 - ARCADE COMMERCIAL FRONTAGE



8 - INSTITUTIONS PLACED AROUND NMT & VEHICULAR ROUTE



9 - REST OF THE DEVELOPMENT

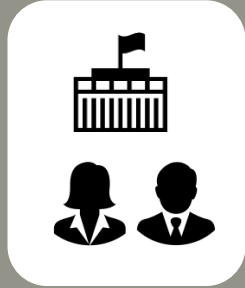


HOW TO ATTAIN TOD?

3 ACTORS

4 STAGES

21 STEPS



Delhi
Development
Authority (DDA)



Competent
Authority
(CA)



Developer Entity
(DE)

STAGE 1
Pre-approval
Stage

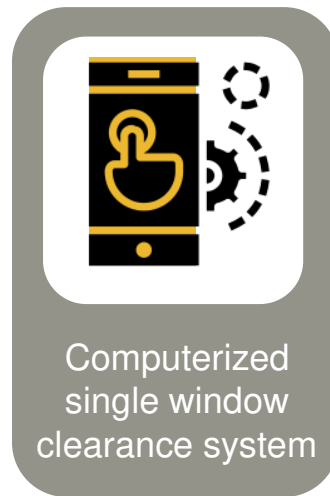
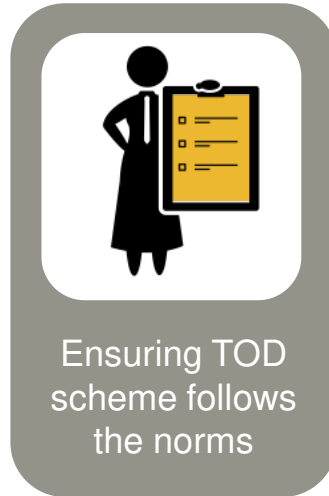
STAGE 2
Approval for
layout plan for
integrated
scheme

STAGE 3
Sanction for
individual
projects within
scheme

STAGE 4
Certification

ROLES AND RESPONSIBILITIES OF STAKEHOLDERS

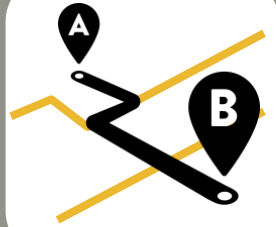
STAGE 1 Pre-approval Stage



STAGE 2 Approval for layout plan for integrated scheme



Delhi
Development
Authority
(DDA)



Ensuring that existing
movement patterns
through the site are
kept functional



Renew
approvals



Issue completion
certificate. Ensuring
transaction of
saleable component



Project to quality
assurance checks

STAGE 3

Sanction for individual
projects within scheme

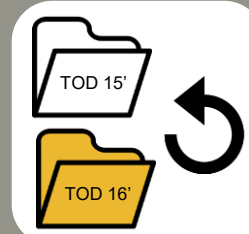
STAGE 4 Certification



Competent
Authority



Acquire land required for
effectuating effective TOD



Amend any terms and
conditions of the scheme
and TOD Policy



Examine the submitted
TOD scheme, and approve
once all the aspects have
been met.



Specify the details of the
land to be handed over to
the local body (DDA)

STAGE 1 Pre-approval Stage

STAGE 2 Approval for layout plan for integrated scheme



Competent
Authority



Recover penalty from
the developer entity
in case of delay



Review renewal of
approvals if extension
is required



Recover additional FAR
charges.



Ensure that existing
service lanes/ public
roads/ public drains/
public parks, etc., to be
retained and improved

STAGE 3

Sanction for individual
projects within scheme

STAGE 4 Certification

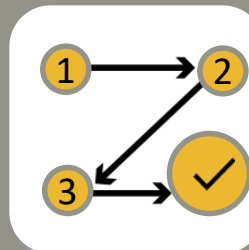


Developer
Entity (DE)

STAGE 1 Pre-approval Stage



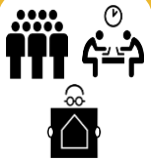
Self-evaluate land
owned to determine
whether it is applicable
for TOD



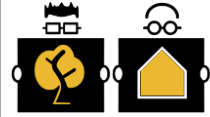
Apply for approval of
TOD schemes to the
competent authority



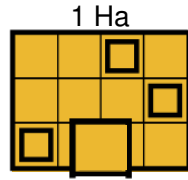
Pay EDC



Developer
Entity (DE)



Prepare plans for
approval



1 Ha
Prepare a single
contiguous scheme
of minimum 1 Ha
based

5 years!



Complete construction
within 5 years for projects
 ≤ 10 Ha, or within 7 years for
all larger projects



Make appropriate site
arrangements to ensure
that existing movement
patterns through the site
are addressed and kept
functional even during the
course of construction/
completion of the project.

STAGE 2

Approval for layout plan
for integrated scheme

STAGE 3

Sanction for individual
projects within scheme

STAGE 4 Certification



Developer
Entity (DE)



Submit additional FAR charges and balance EDC in 4-6 instalments in order to obtain completion certificate



Retain 50% of DUs meant for EWS housing purpose and sell remaining 50% to DDA at base cost

21 STEPS

1

DDA delineates TOD Zone and notifies the same.
DDA constitutes & notify CA.

2

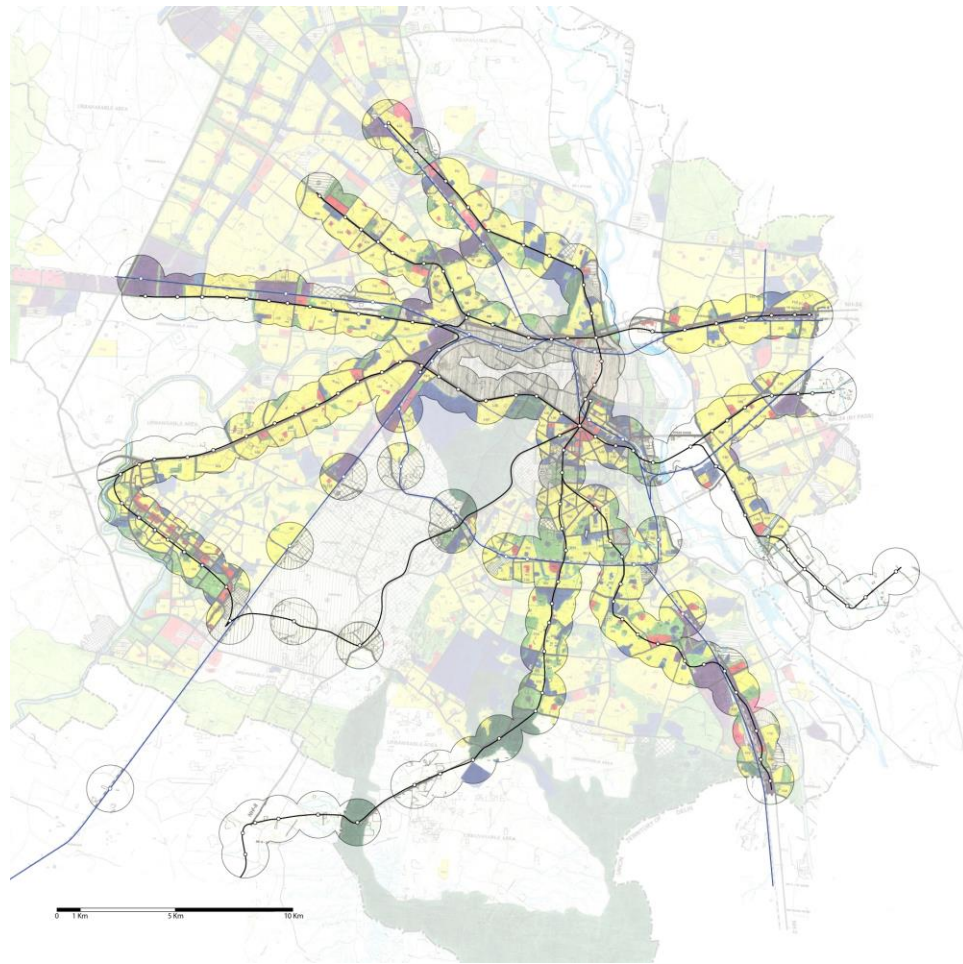
CA is appointed by the concerned local bodies under their respective acts for implementation of TOD regulations.

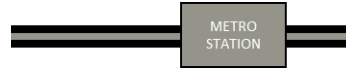
3

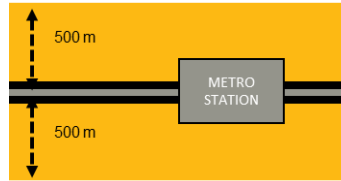
CA along with assistance from DDA to prepare/ approve conceptual Influence Zone Plans (IZP)

STAGE 1
Pre-approval
Stage

TOD INFLUENCE ZONE

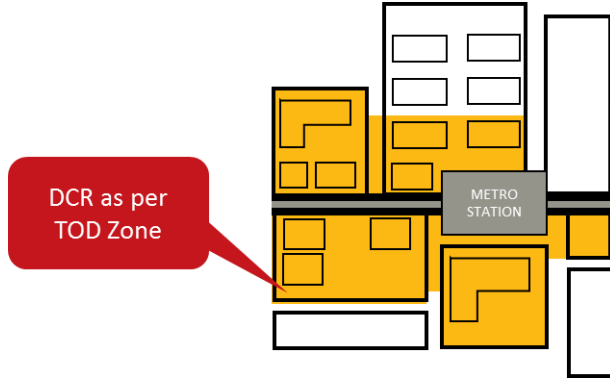












DCR as per
TOD Zone

*TOD Zone as TDR Absorption Zone



21 STEPS

4

DDA sets up TOD Fund to be used exclusively for maintaining and upgrading the services within the TOD scheme area

5

Applicant self-evaluates the site on a geo-spatial interface to ascertain eligibility

6

Developer entity (DE) prepares TOD scheme based on the criteria and Obtain EIA clearance as well.

STAGE 1
Pre-approval Stage

7

DE submits scheme and other required documents

8

CA reviews and processes submitted application under computerized single window clearance system

9

Competent authority issues the approval of scheme to the DE

10

DE to pay CA, first instalment equivalent to 25% of the EDC as may be prescribed

11

Status of TOD schemes updated daily on centralized database

12

DE to complete construction within 5 years for projects ≤ 10 Ha, or within 7 years for all larger projects counted from the date of its issuance, failing which all approvals would need to be renewed

STAGE 2

Approval for layout plan for integrated scheme



13

Penalty is imposed on the developer entity in case of delay in completion of development; DE has to re-apply for approval.

14

In the event of non-completion of the project beyond the deadline, the validity of the given sanctions shall be deemed cancelled and re-approvals have to be taken by DE

15

The CA shall recover the additional FAR charges and balance EDC from the DE in a staggered manner in 4-6 instalments, before the issue of completion certificate to the DE.

16

A - CA issues completion and occupancy certificate.
B - Completion certificate can be issued for premise/building level plan within any approved phase of development, subject to obtaining the part / full completion certificate for infrastructure development works of that phase.

STAGE 3

Sanction for individual projects within scheme

17

DE can sell or transfer saleable component under its share/ownership to the prospective buyers only after the prescribed public land (roads, parking, etc) and EWS housing is handed over to the to the DDA.

18

The EWS housing component created by the DE shall be subject to quality assurance checks, as prescribed.

19

Monitoring mechanism for public land post handover and take appropriate penal action in case of violation of norms.

20

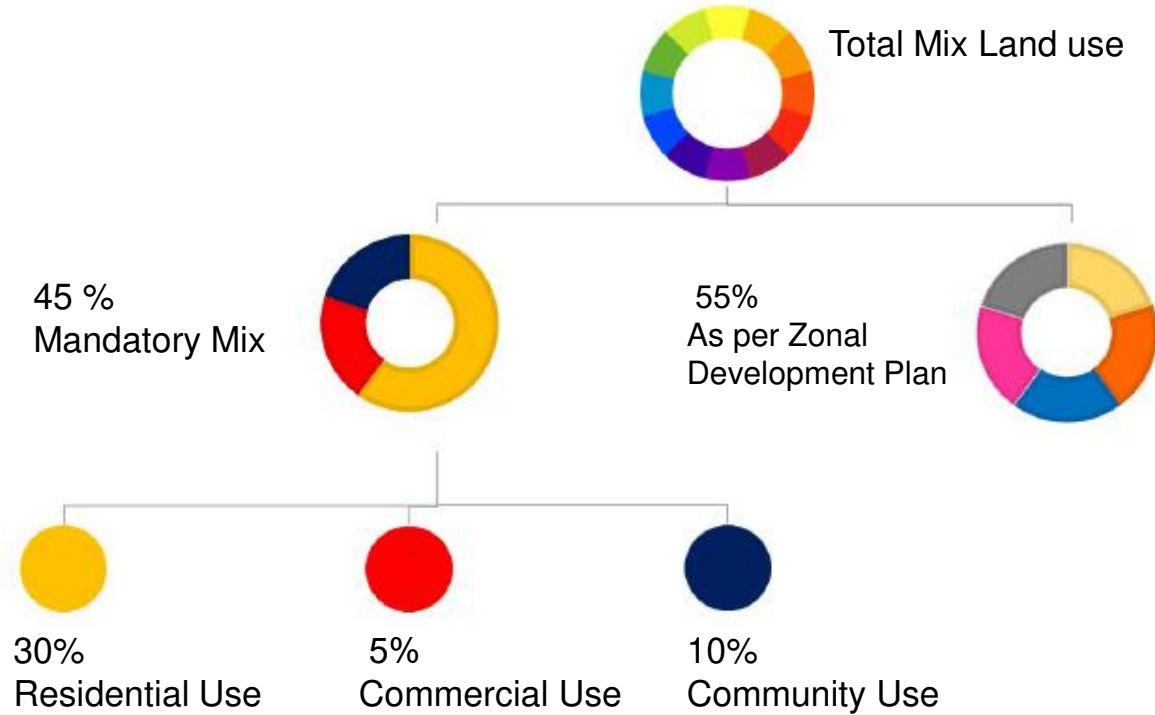
Surplus funds received by local body by way of EDC charges, FAR charges, auction of advertisement rights etc. received shall be invested in high interest yielding government securities

21

Accrued interest, Public parking charges shall be used by Local body to utilize for creation, upgradation and maintenance all public amenities within TOD zone.

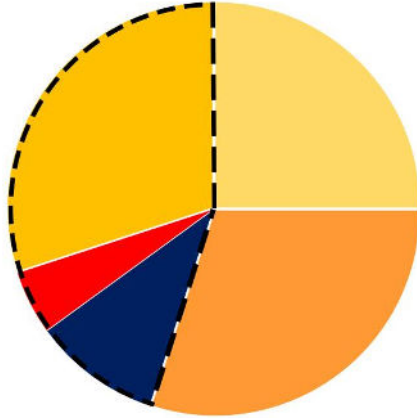
DEVELOPMENT CONTROL REGULATIONS (DCR) FOR TOD






LAND USE MIX



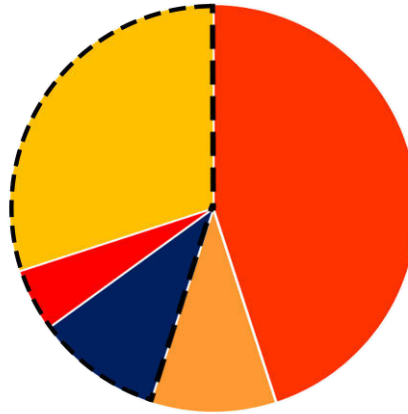
MIX OF USES WITHIN TOD ZONE






i. Residential land use



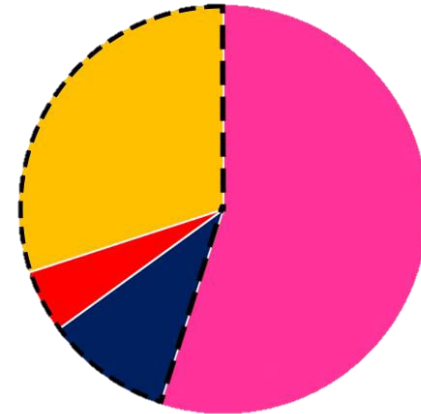
45 % Mandatory Mix		
Residential Use	30%	
Commercial Use	5%	
Community Use	10%	
55 % As per ZDP		
Residential Use	25%	
Others	30%	





ii. Commercial land use



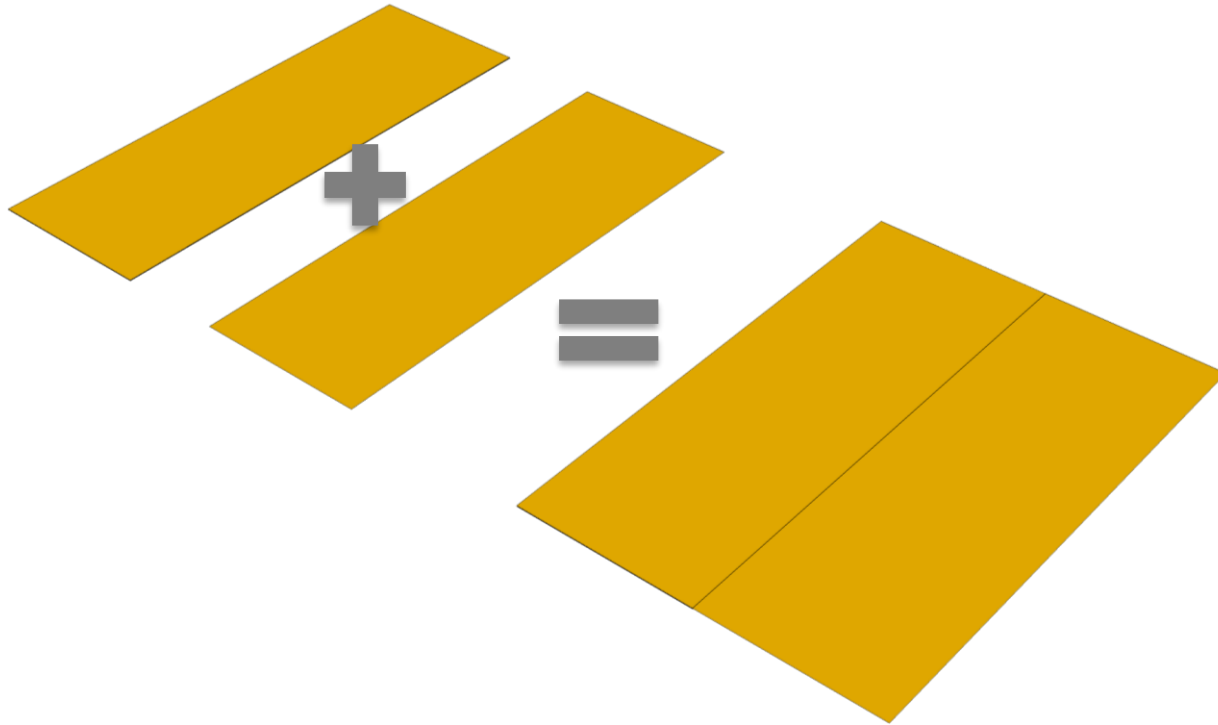
45 % Mandatory Mix		
Residential Use	30%	
Commercial Use	5%	
Community Use	10%	
55 % As per ZDP		
Commercial Use	45%	
Others	10%	

iii. Industrial land use



45 % Mandatory Mix		
Residential Use	30%	
Commercial Use	5%	
Community Use	10%	
55 % As per ZDP		
Industrial Use	55%	

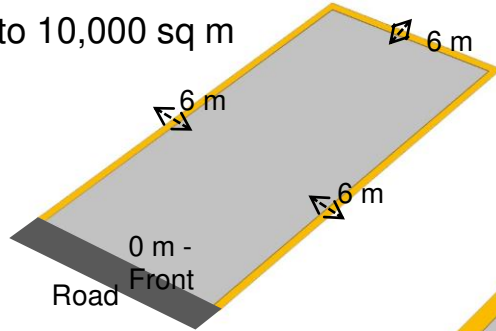
AMALGAMATION



Amalgamation and reconstitution of the plots for planning purpose will be permitted in TOD zones

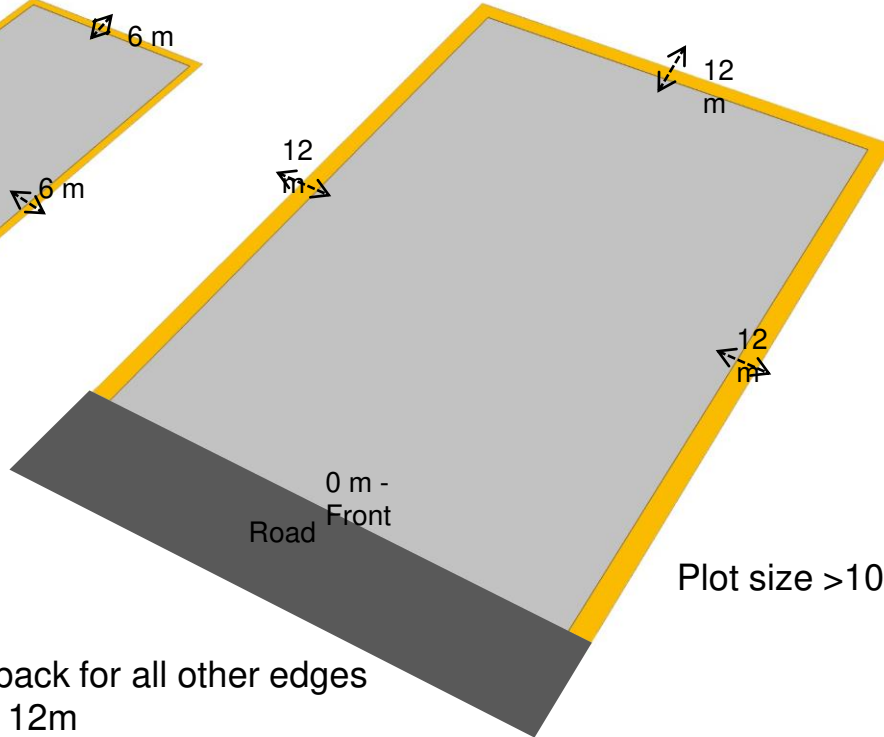
SETBACK

Plot size >3,000 up to 10,000 sq m



Minimum setback for all other edges (Rear, side) - 6m

Plot size >10,000 sq m



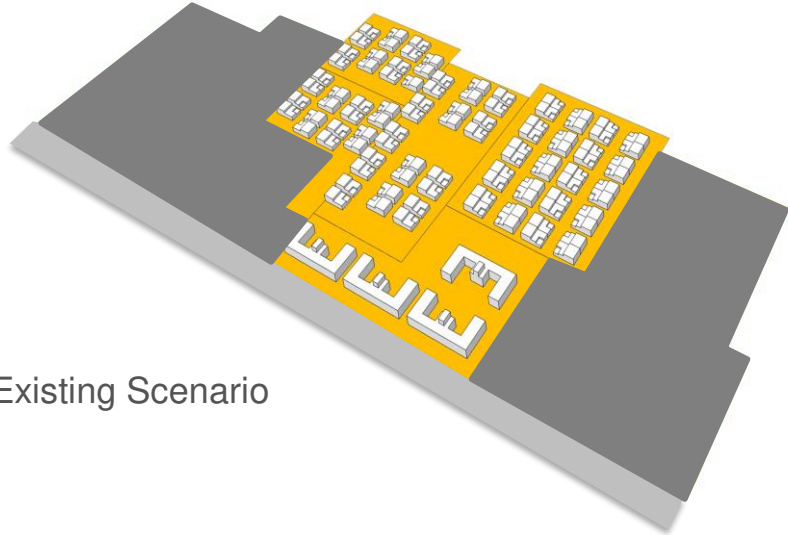
Minimum setback for all other edges (Rear, side) - 12m

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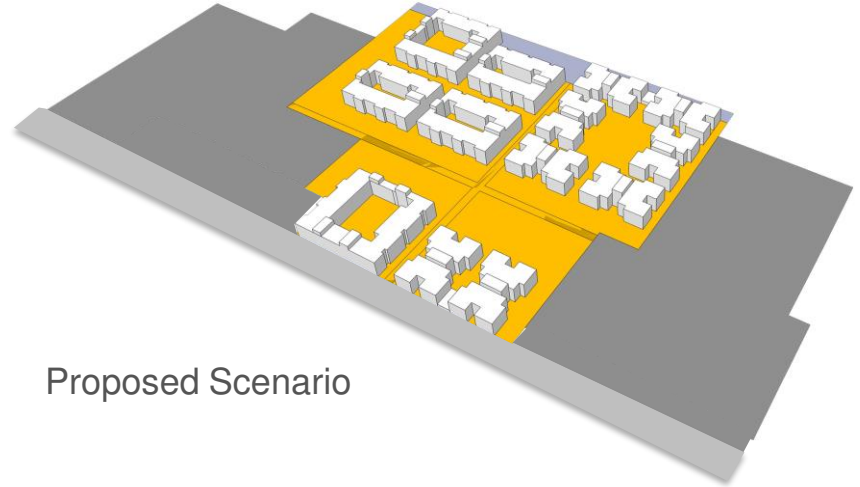


FAR

FAR: 400
Density: 2000 pph
Du/Ha: 450 DU/Ha

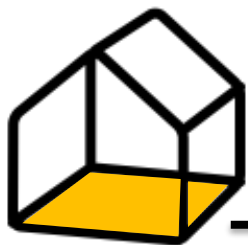


Existing Scenario

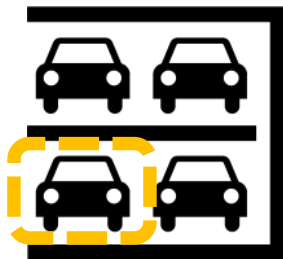


Proposed Scenario

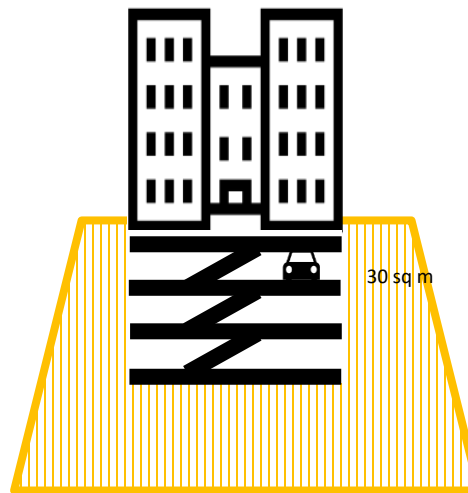
PARKING



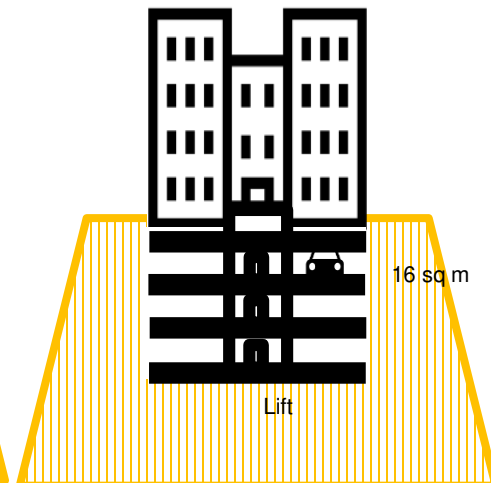
100 sqm. floor area



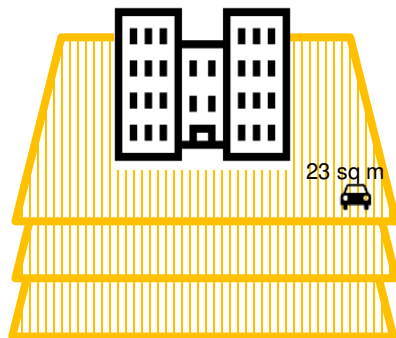
100 sqm floor area = 1.33 ECS



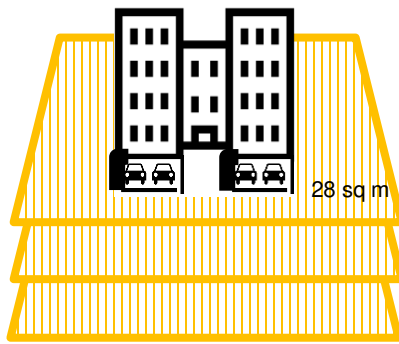
Multi-level with ramps



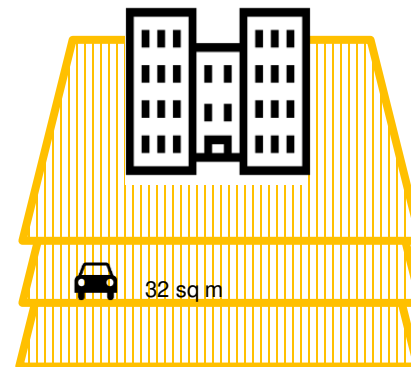
Automated multi-level with lifts



Open Parking

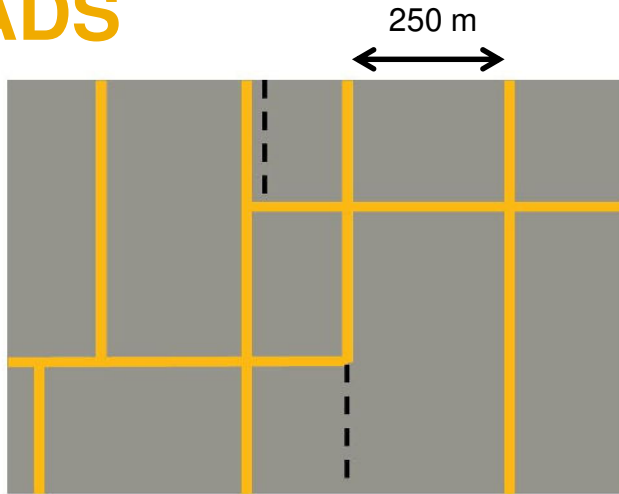


Ground floor covered parking

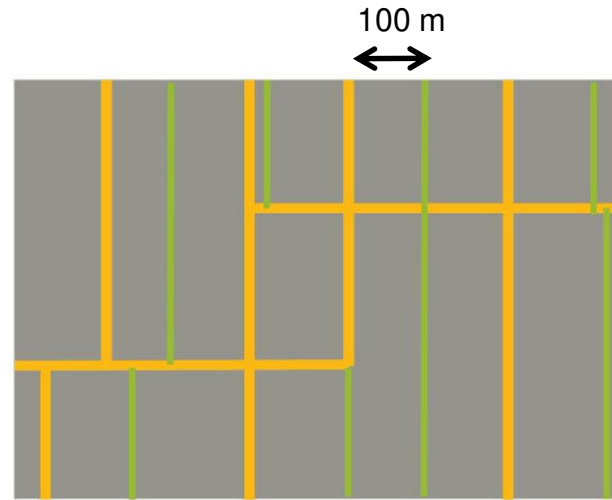


Basement Parking

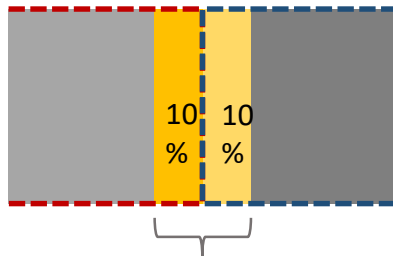
ROADS



Vehicular streets at 250 c/c

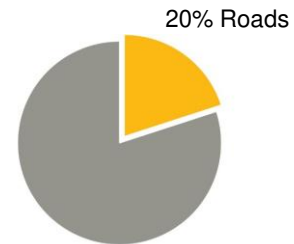


Pedestrian streets at 100 c/c

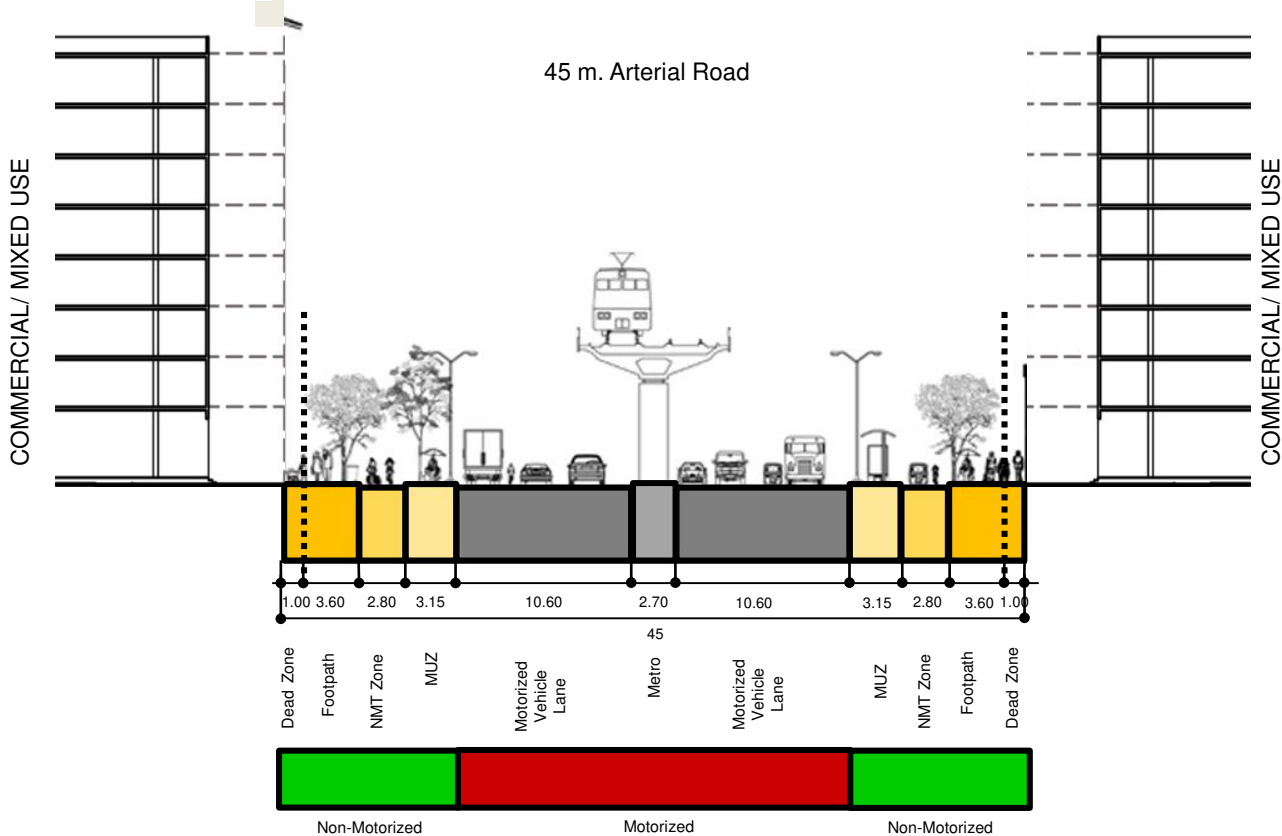


20 %

Land to be surrendered as roads / public spaces

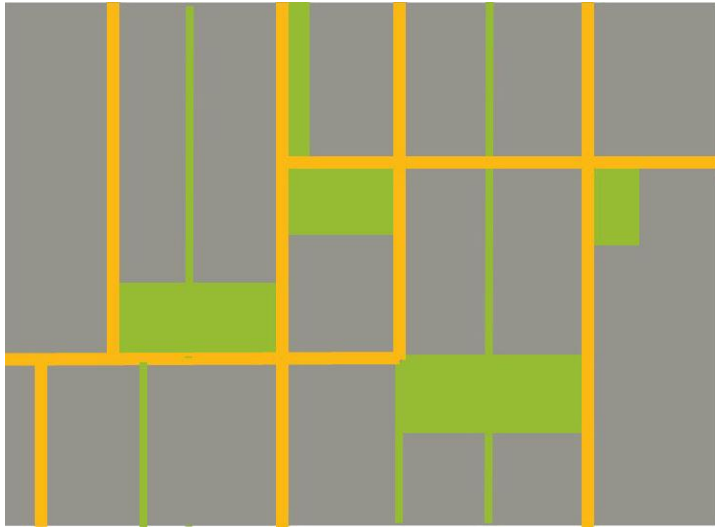


STREET SECTIONS

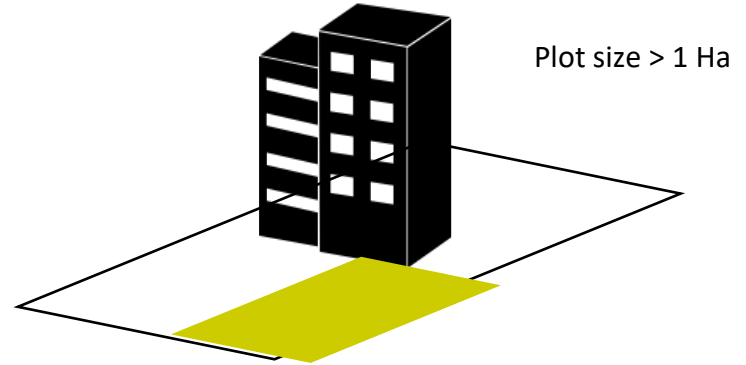


Similar for: 30 m Collector Road, 12 m Local Streets

PUBLIC SPACES/ GREEN SPACES

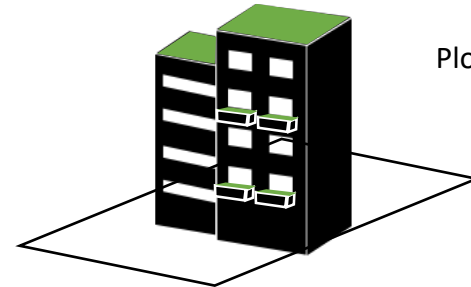


20% of the area of the amalgamated plot in TOD integrated scheme (TODIS) of 4 Ha and above, shall be designated as green Public Open Space



Plot size > 1 Ha

10% Greens + Circulation



Plot size < 1 Ha

10% Greens + Circulation

STREET REGULATIONS



Universal Access and Comfort and Road safety strategies

Climate Comfort



Intermediate Public Transport

Reduce Urban Heat Island Effect and Aid Natural Storm water management



GREEN BUILDINGS

The entire development has to be with minimum 3 star or gold rating as per approved rating agencies and appropriate rebate in the property tax may be applicable.



FACILITIES IN STATION AREAS



GAPS IN THE POLICY

- There are no details regarding the composition of Grievance Redressal Committee.
- Certain Development Control Regulations (DCR's) need clarity.
- No coherence of TOD policy norms and EIA norms.
- No details of processes involved in Traffic Impact Assessment (TIA).
- No details on Transfer of Development Rights (TDR) absorption.
- Single window clearance does not take into account the external approvals like EIA. Besides, there is no mention of the timeline for granting approvals.
- EDC Instalment payment percentages vary in certain sections of the policy.

<http://wricitieshub.org/publications/transit-oriented-development-manual-delhi-tod-policy-regulations-interpretation>

THANK YOU!

