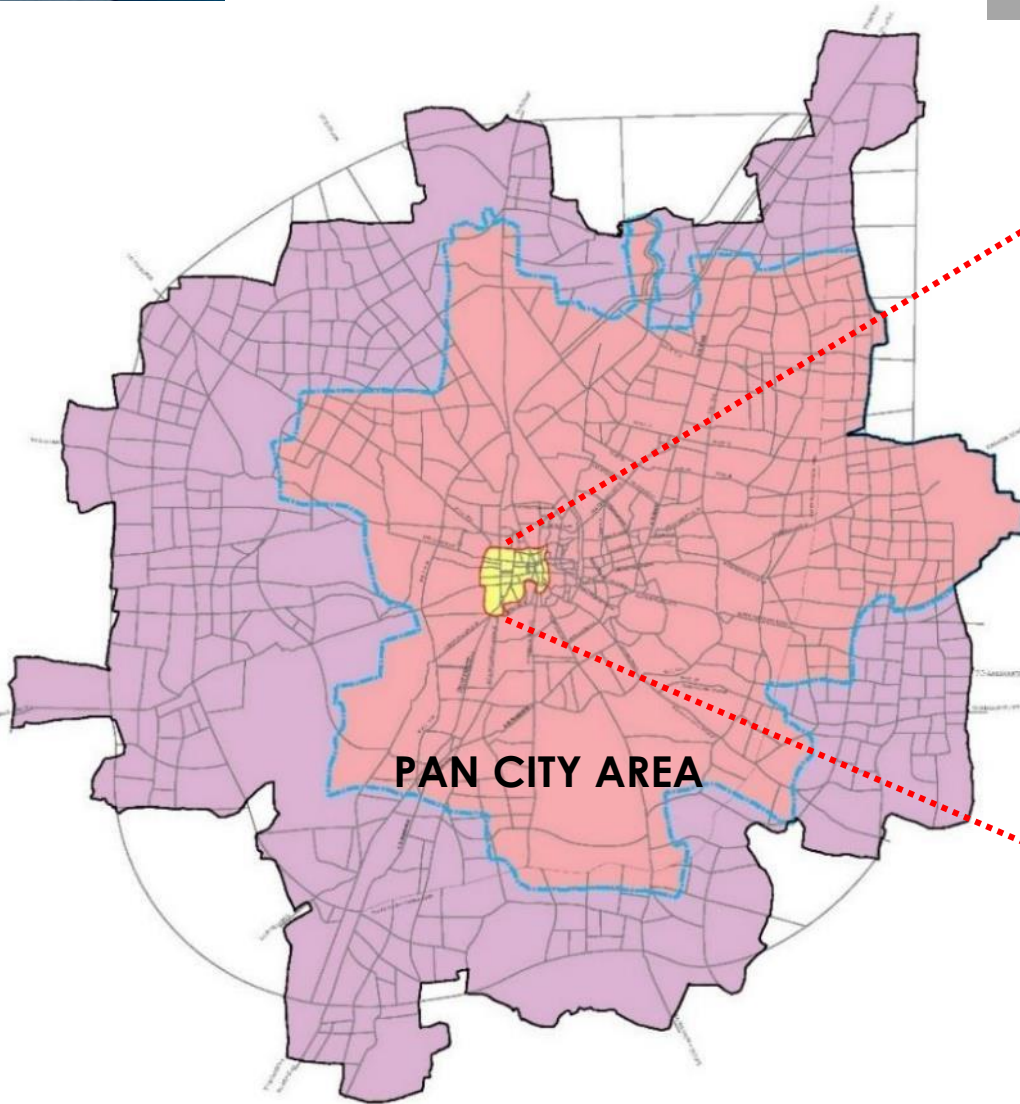


# **ESSENTIAL FEATURES OF SMART CITY**

**Indore Smart City Development Limited**

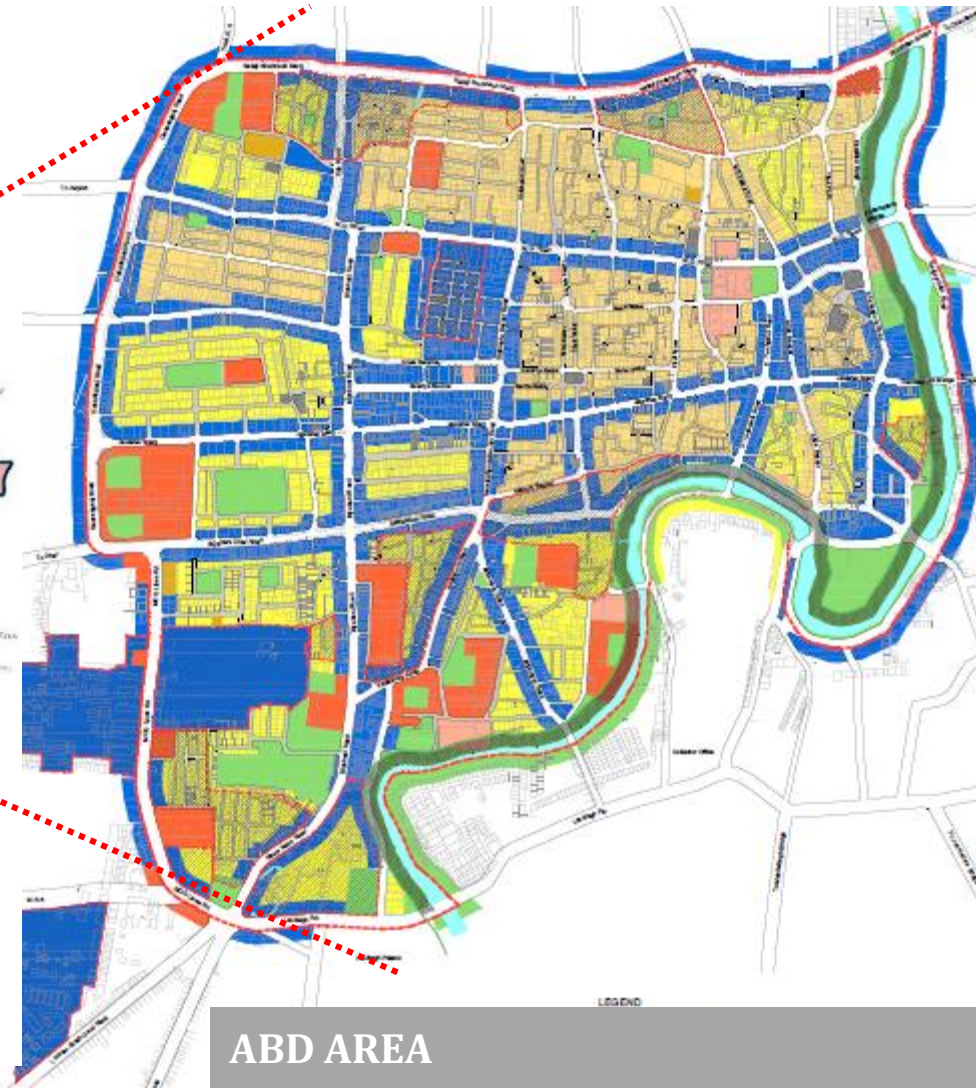
# ABD AREA

TOTAL PROJECT COST (As per SCP) - Rs 4300 CR.  
GoI+GoMP FUNDS RECEIVED - Rs 396 CR.



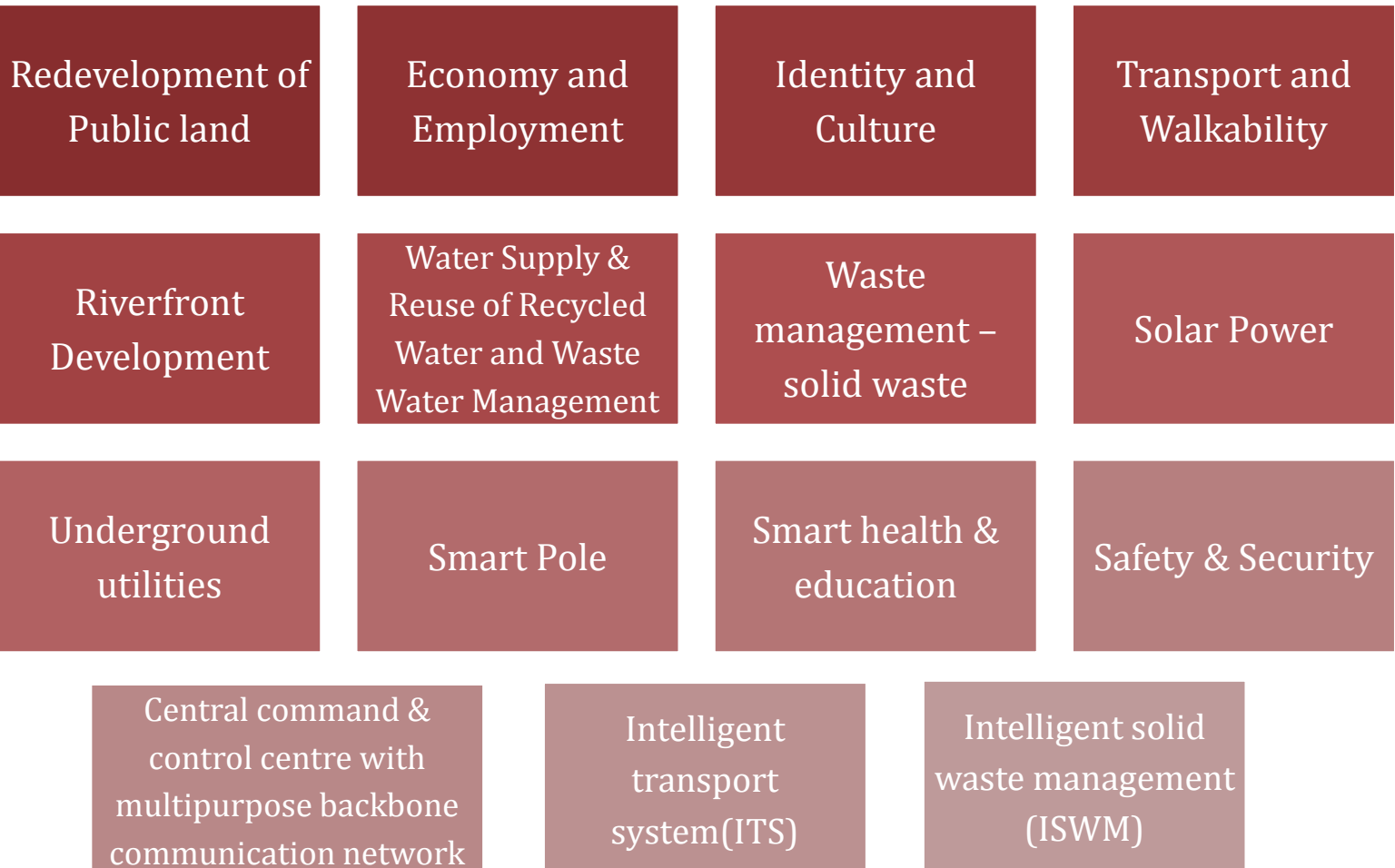
PAN CITY AREA

PAN CITY AREA - 276 SQ.KM.  
POPULATION - 25 LAKH (2017)



ABD AREA  
TOTAL AREA - 3 SQ.KM (1.1%)  
POPULATION - 1.25 LAKH (5%)

# SMART CITY MODULES



# Essential Features Of Smart Cities

1 MASTER PLAN

2 PARKING

3 WATER SUPPLY

4 CREATION OF URBAN SPACES

5 SOLAR POWER

6 IT INITIATIVES





# ABD **M**ASTER **P**LAN



# MASTER PLAN



Urban Design

Façade Design

Heritage

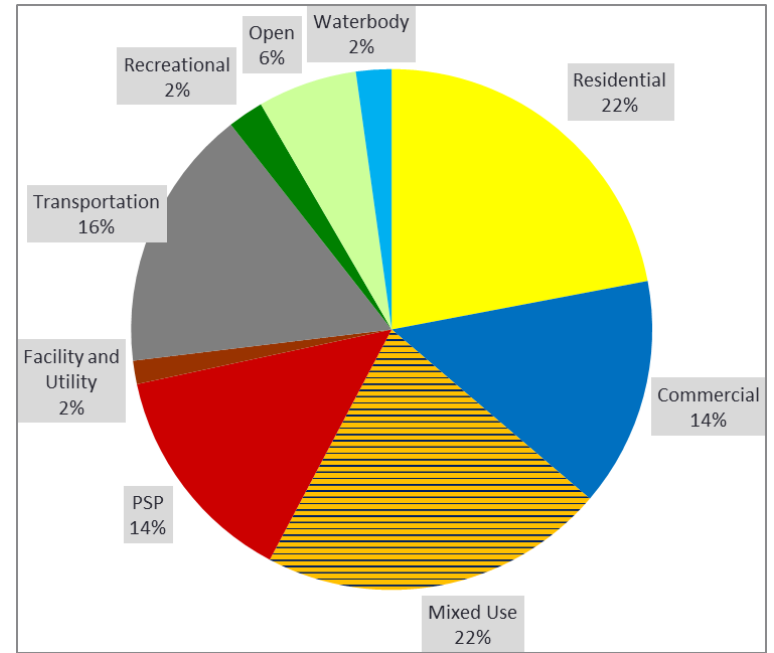
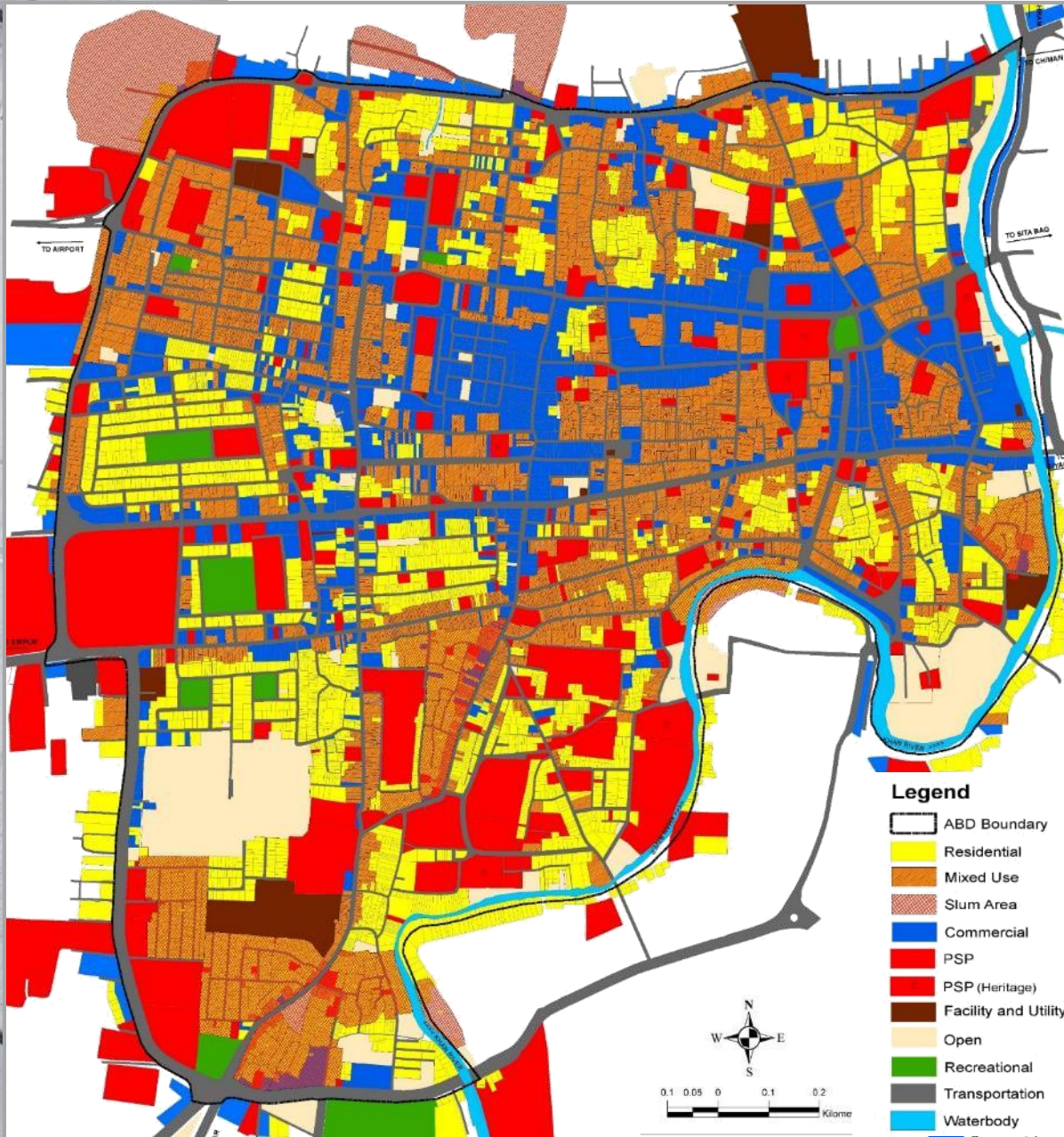
Parking Norms

Traffic Networking &  
Pedestrian Movement

Value Capture Funds



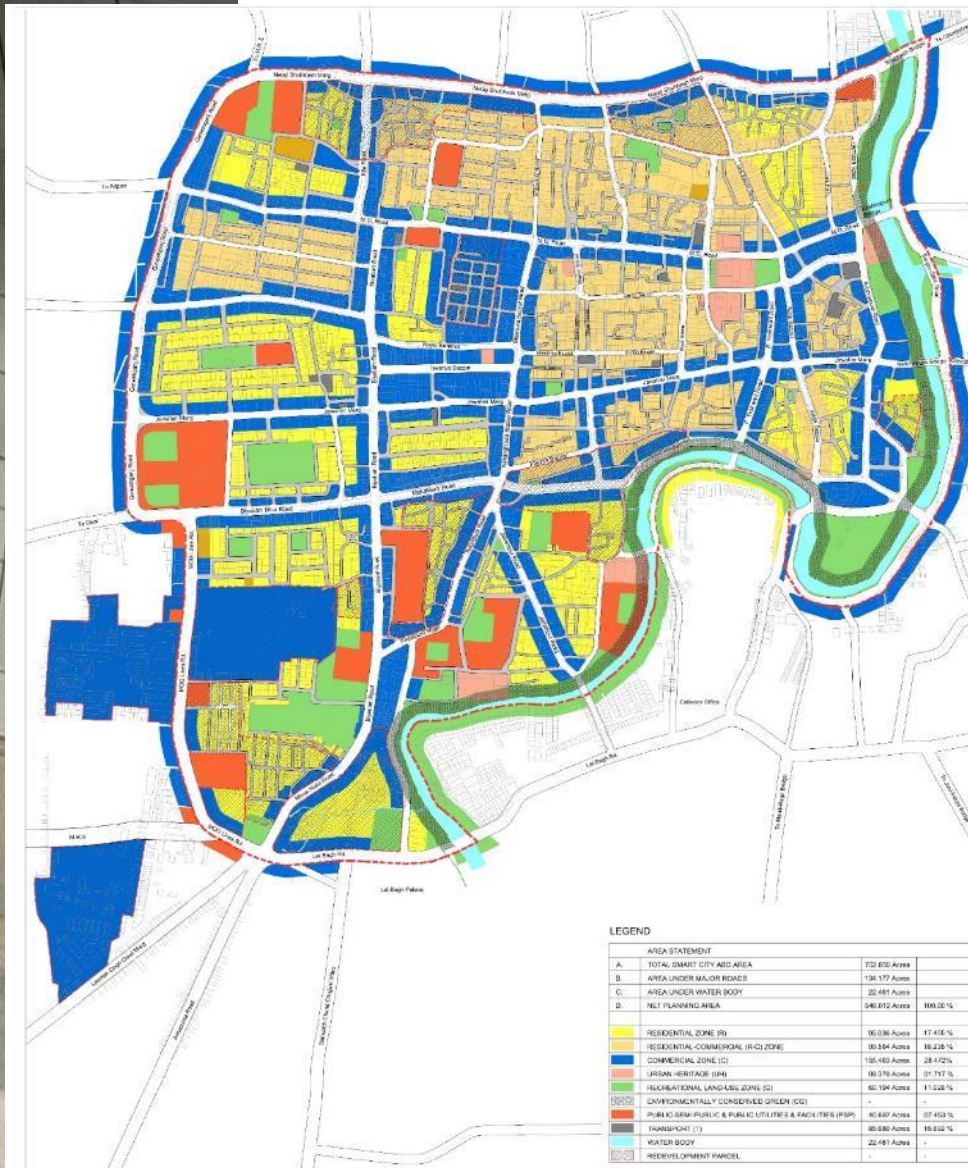
# Land Use Map



Land Use	Area (in Ha)	Percentage
Residential	59.9	22%
Commercial	38.7	14%
Mixed Use	58.5	22%
PSP	37.8	14%
Facility and Utility	4.0	1%
Transportation	44.4	16%
Recreational	6.0	2%
Open	16.8	6%
Water body	6.0	2%
<b>Total</b>	<b>272.2</b>	<b>100%</b>

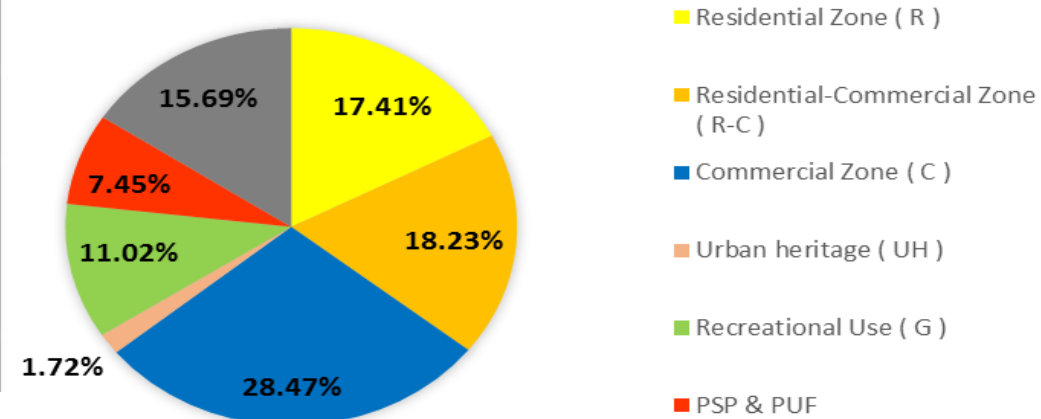


# Proposed Land Use



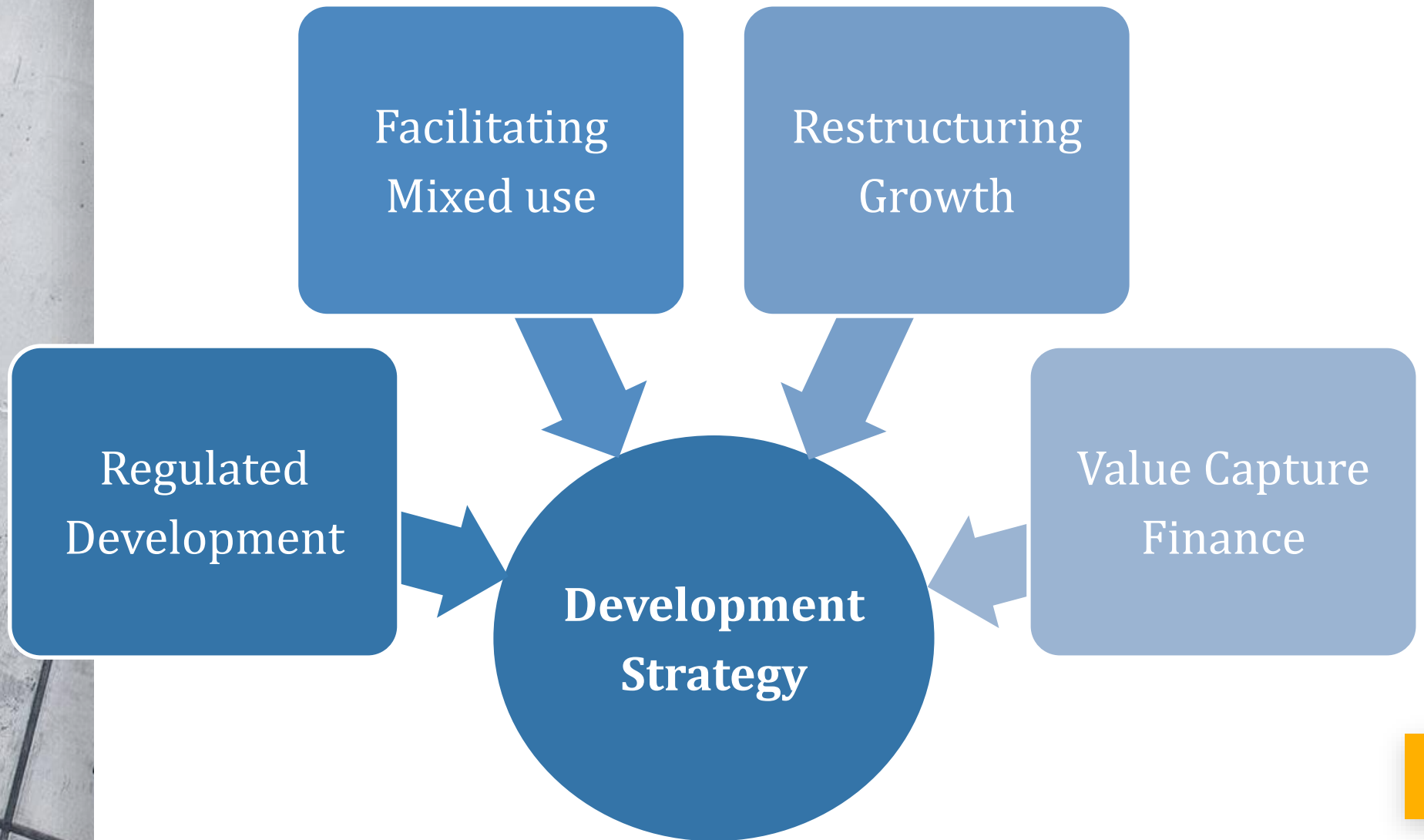
Area Statement		
	Area in Acres	Percentage %
Total Smart city ABD Area	702.65	
Area Under Major Roads	134.177	
Area under Water body	22.461	
Net Planning Area	546.012	100%
Residential Zone ( R )	95.036	17.41%
Residential-Commercial Zone ( R-C )	99.564	18.23%
Commercial Zone ( C )	155.463	28.47%
Urban heritage ( UH )	9.378	1.72%
Recreational Use ( G )	60.194	11.02%
PSP & PUF	40.687	7.45%
Transport ( T )	85.688	15.69%

## PROPOSED LAND USE





# DEVELOPMENT STRATEGIES



# VALUE CAPTURE FINANCE

Commercial Use Charges

Premium on additional FAR

Premium on Mixed use

Premium on Parking

Premium on Plot amalgamation

Total revenue generation from VCF  
is Rs. 1600 Cr

# SUSTAINABILITY

**TOTAL SCP COST**  
**RS. 4300 Cr.**

**OUTFLOW**

**INFLOW**

**SCM**

**Rs. 2750 Cr.**

**PPP**

**Rs. 1500 Cr.**

**CONVERGENCE**

**Rs. 50 Cr.**

**GRATT**

**Rs. 1000 Cr.**

**VCF**

**Rs. 1600 Cr.**

**REDEVELOPMENT**

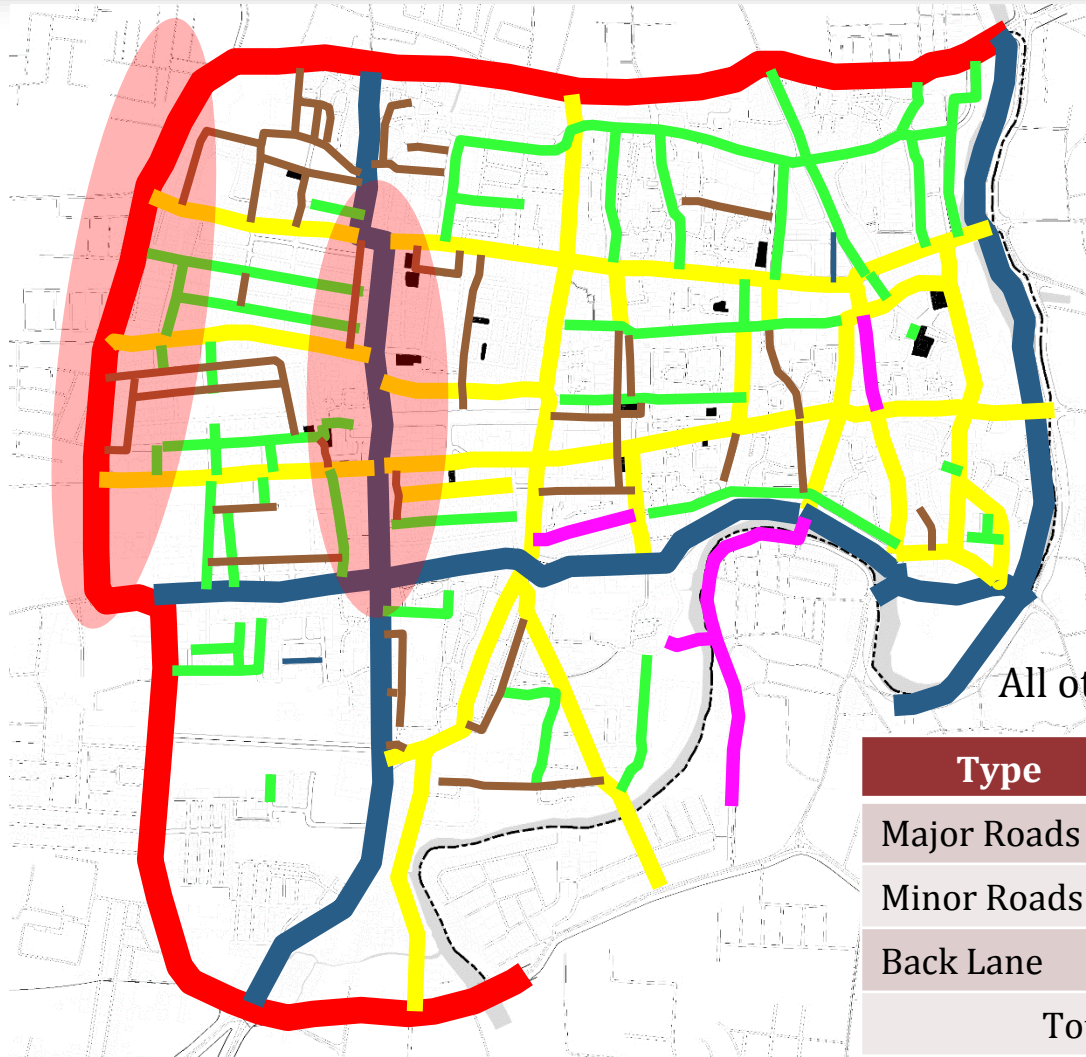
**Rs. 800 Cr.**

**Total Rs. 4300 Cr.**

**Total Rs. 3400 Cr.**



# Proposed Circulation Plan



30 M ROW

24 M ROW

18 M ROW

15 M ROW

12 M ROW

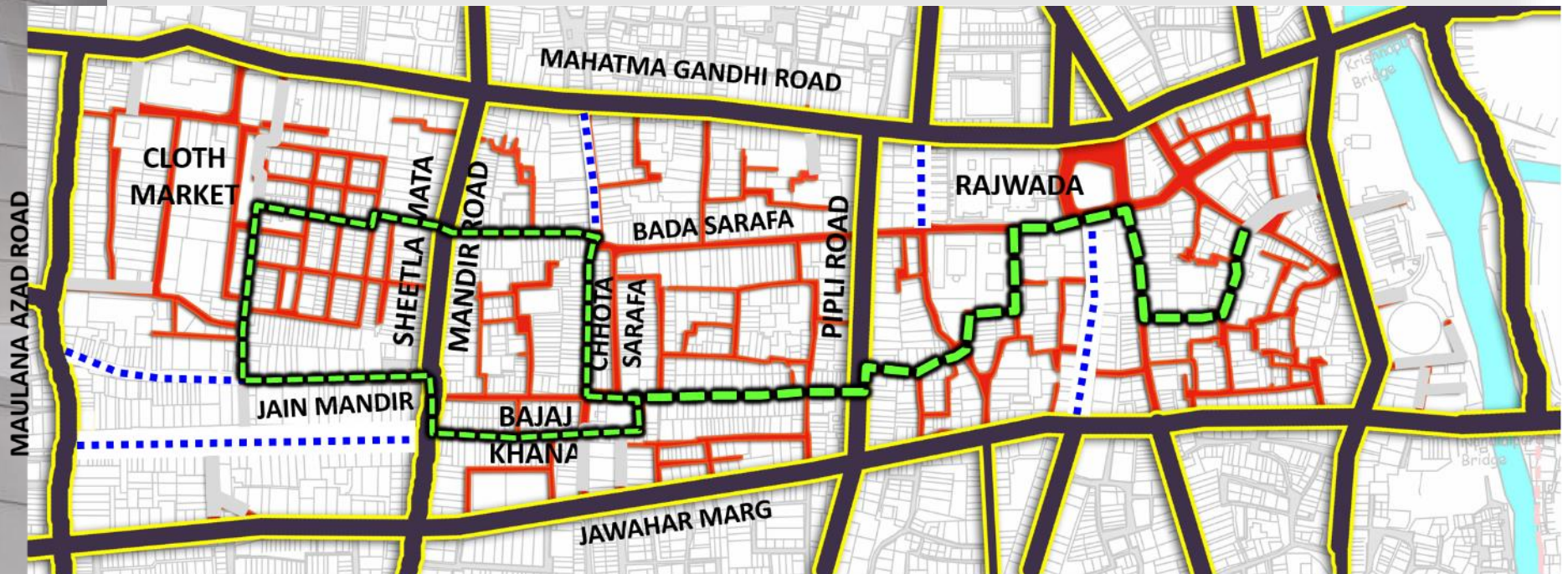
9 M ROW






 Road Completed

All other marked Roads are in Progress

Type	ROW	Length (Km)	Nos.
Major Roads	12-30	22.44	54
Minor Roads	4.5-9.0	42.93	387
Back Lane		7.87	166
<b>Total</b>		<b>73.24</b>	<b>607</b>

# NVZ Circulation Plan



-  Vehicular Road
-  Pedestrian- only street
-  E-rickshaw route (Two- way)
-  E-rickshaw route (One- way)
-  On-street two wheeler parking



# PEDESTRIANIZED STREET



SARAFI STREET



After









# PARKING IN ABD AREA



## Parking Proposed In ABD Area

-  NON MOTORIZED ROUTE
-  4 Wheeler & 2- Wheeler
-  2- Wheeler
-  Street Parking

# PARKING REQUIREMENTS

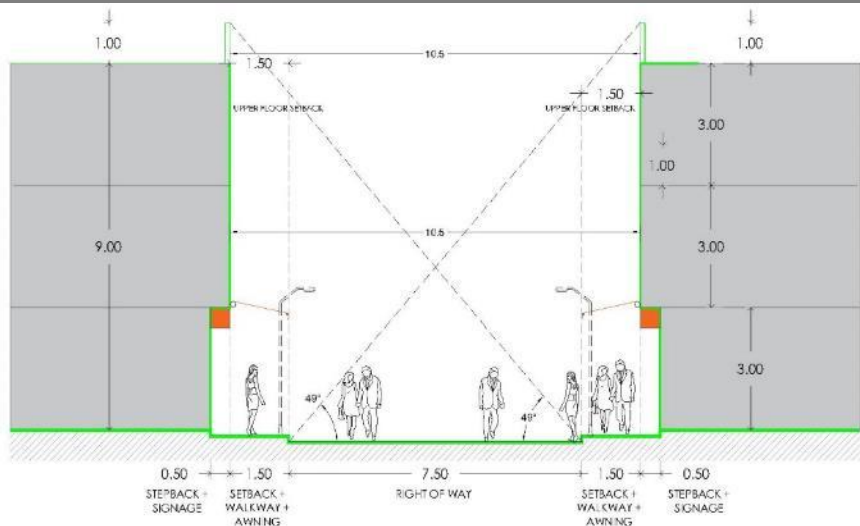
## Demand in ABD area

- Demand (Cars) in No. – 750 nos.
- Demand (2-wheelers) in No. – 21600 nos.

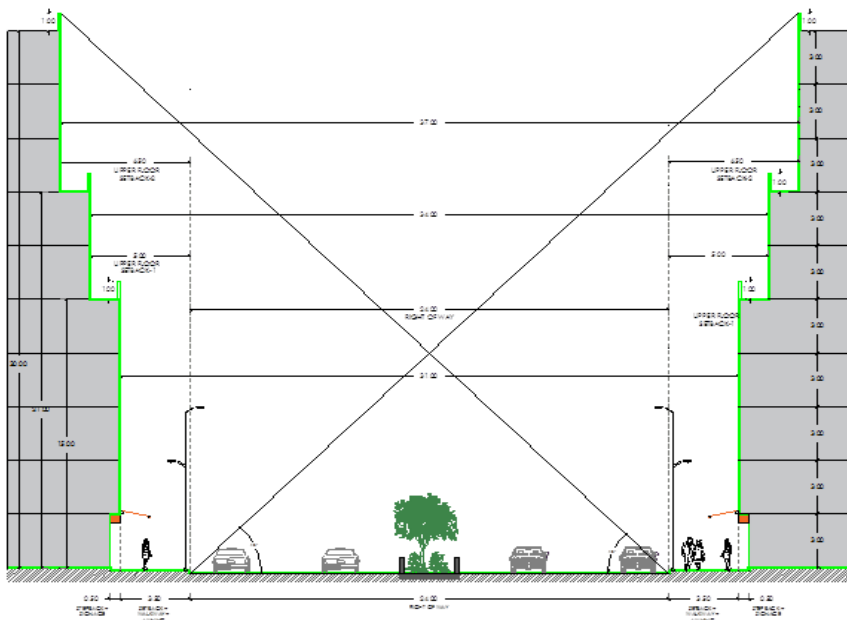
## Parking proposed in ABD area

- Four wheeler parking – 728 nos.
- Two wheeler parking – 4108 nos.
- On Street parking is proposed on 30mts. Wide road

# URBAN DESIGN REGULATIONS



PEDESTRIAN STREET OF ROW 10.5M



STREET WITH ROW 24M

Street Width



Street Edge / Street Wall Guideline



Setback



Building / Street Wall



Ground Floor Setback

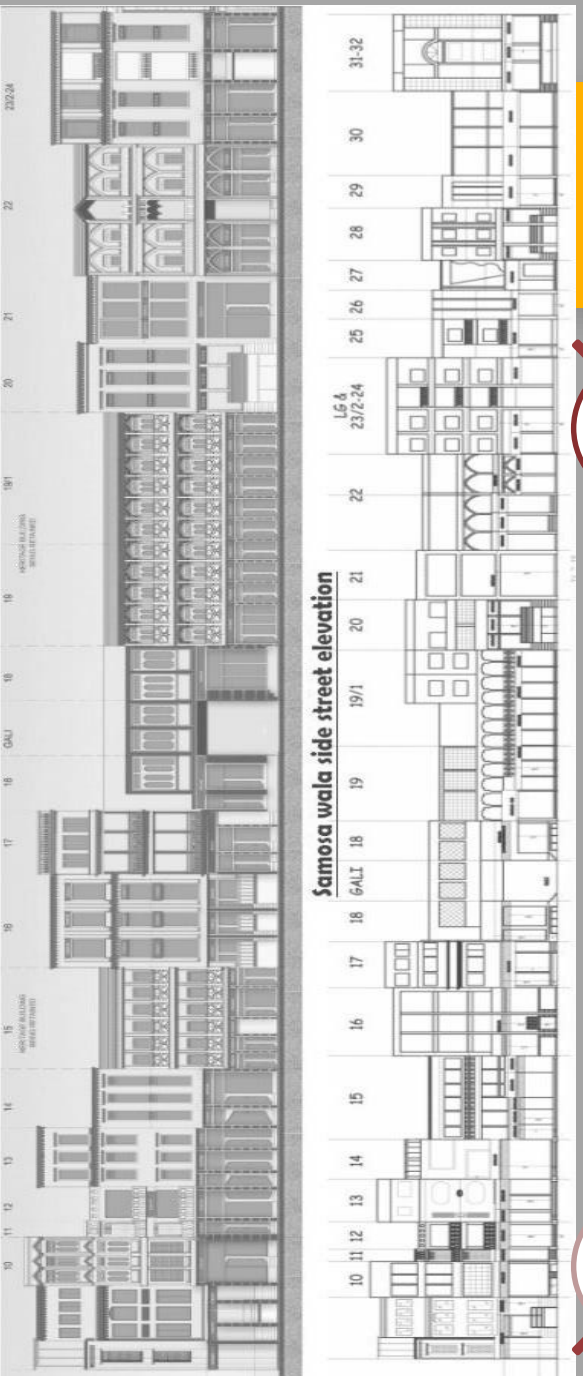


Max. Building Height



Other Height Control Regulations





“

# FAÇADE DESIGN

1

Extensions to Existing Buildings

2

Advertisements / Signage

3

New Shopfronts / Renovated Building

4

Buildings in Heritage Zone

5

Advertisements in Heritage Zone

6

Street Specific Guidelines

# BUILT HERITAGE

➤ Preservation of cultural & historical values with tourism promotion



➤ Comprehensive Approach



➤ Adaptive Re-use



Conservation & Restoration of Rajwada



Conservation & Restoration of Chhatra



Conservation & adaptive reuse of Gopal mandir



# BUILT HERITAGE – WORK IN PROGRESS



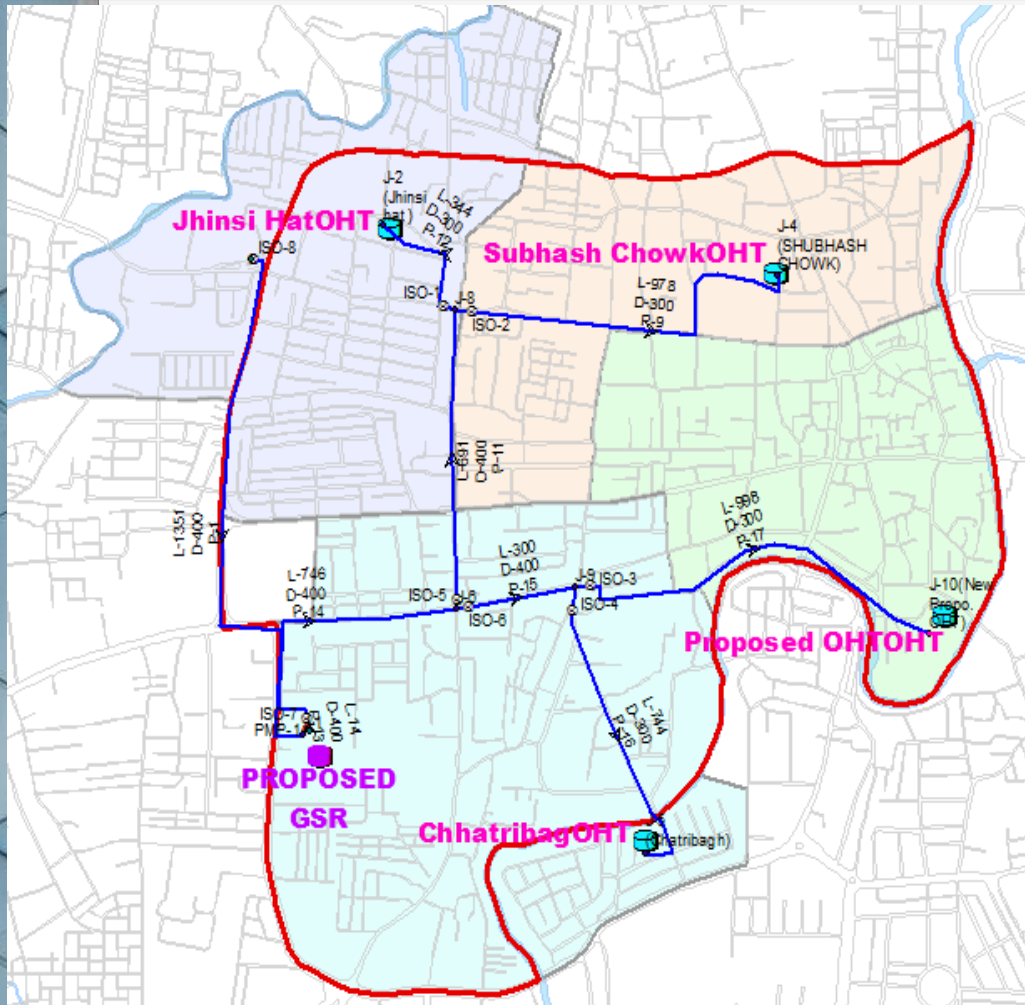
RAJWADA

HARIRAO HOLKAR CHHATRI

GOPAL MANDIR



# WATER SUPPLY & SEWERAGE



This Project will help to meet the following major Objectives

- ✓ 24x7 pressurized water supply in the project area
- ✓ Revamping and rehabilitation of water & sewerage infrastructure
- ✓ Reduction in water losses
- ✓ Reduced consumption of potable water
- ✓ Reduction in future demand for fresh water
- ✓ Improved management and services
- ✓ Providing DEWATS



# WATER SUPPLY & SEWERAGE

## Population projection as per Water Supply & Sewerage DPR

### ABD Area Population

Existing	Projected		
2015	2020	2035	2050
120012	166349	205550	249687

### Water Supply

- ✓ ABD Project area is receiving **13.72 ML water** every alternate day for distribution to water consumers.
- ✓ Total length of the existing distribution network in the ABD Project Area is around 76.53 km.
- ✓ The distribution network of ABD project area is very old and dilapidated condition and most of the pipes required complete rehabilitation and revamping.

Service Connections: There may be approximate 11,854 connections in ABD area. (based on the % ward area covered under ABD).


Future Demand	Year	Population	Water Demand (in ML)	Fire Demand (100(P)^0.5)	Total Demand (in ML @150 mld)	Total Demand (10% dist. Loss)
	2020	166349	25	0.35	25	28.10
	2035	205550	31	0.39	31	34.69
	2050	249687	37	0.43	38	42.09

# WATER SUPPLY & SEWERAGE

## Sewerage

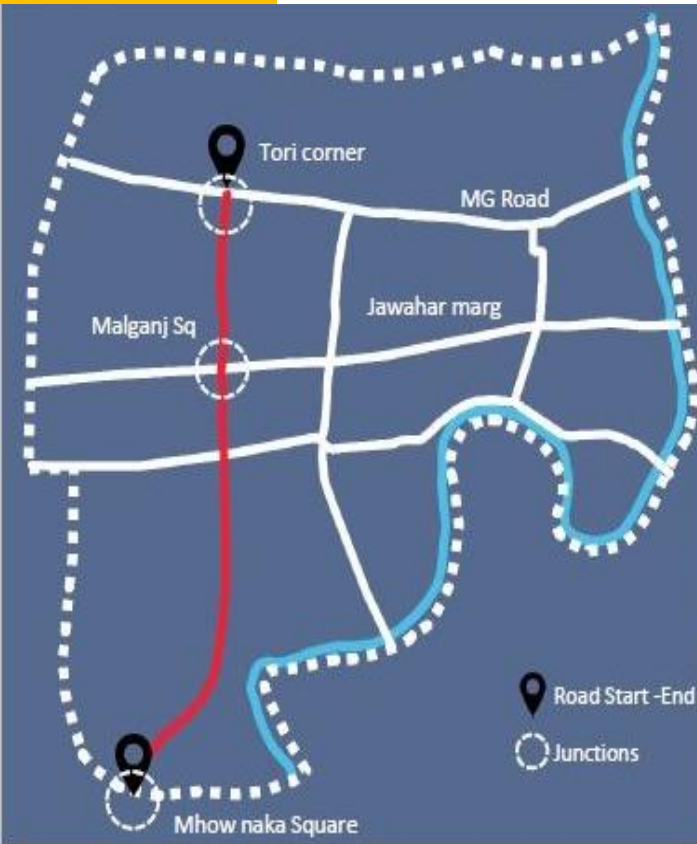
- ✓ The existing sewerage network is very old. It was laid in 1936 during Holkar's State and outlived their life.
- ✓ The existing sewerage network consists of 36.11 Km in length.

	Year	2020	2035	2050
Future Demand	Population	166349	205550	249687
	Total Area in ha.	300.27	300.27	300.27
	Total Water Demand	28.1	34.69	42.09
	losses 15%	23.89	29.49	35.78
	water supply rate(Say)	144	144	144
	Sewerage generation (80%)	115.2	115.2	115.2
	sewerage generated in MLD	19.16	23.68	28.76
	infiltration in MLD (6000 liters/Ha./day) As per CPHEEO para 3.2.7	1.8	1.8	1.8
	Total	20.96	25.48	30.56
	<b>Total sewerage in MLD (Say)</b>	<b>21.00</b>	<b>26.00</b>	<b>31.00</b>
	<b>LPCD Rate for Sewer generation (Say)</b>	<b>126</b>	<b>126</b>	<b>126</b>



# Creation Of Urban Spaces

# ROAD WIDENING



**Biyabani Road** also known as **Mhow Naka Road**, connects to the important and busy streets of Indore i.e. **MG Road, Annapurna road, Lal Bagh Road.**

## Length of street

Length of the street is 1.8 km from Mhow naka circle to Tori corner including junctions Mhow naka circle, Malganj square & Tori corner.

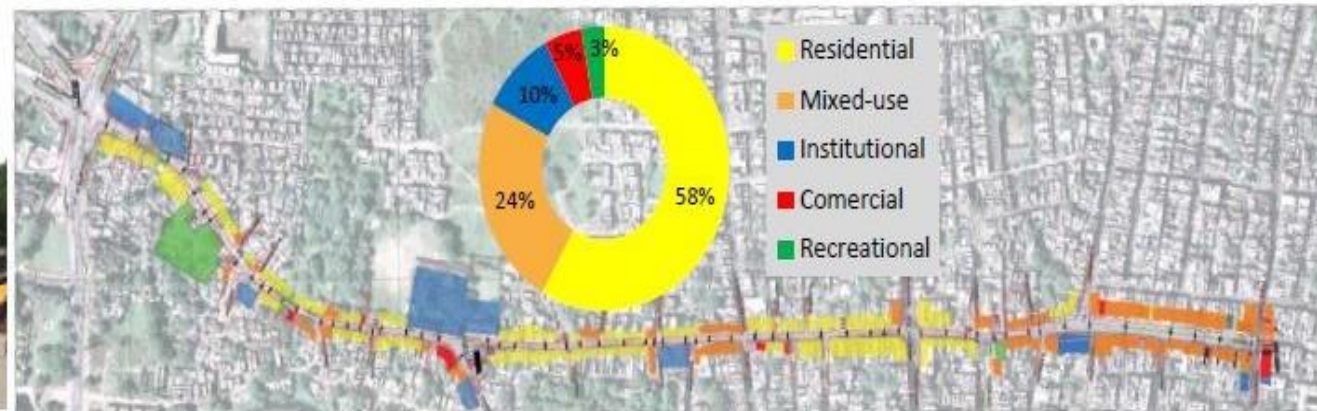
## Street Character

One of the commercial road identified for retrofitting in proposed ABD. Buildings on both sides of the road are of mostly G+2 to G+3 height.

## ROW of street

Existing ROW varies from 6 mt to 18 mt, it is proposed 24 mt wide ROW in Master plan. Street is two way vehicular.

## Building use Map





# ROAD WIDENING

Earlier Scenario



Site Preparation

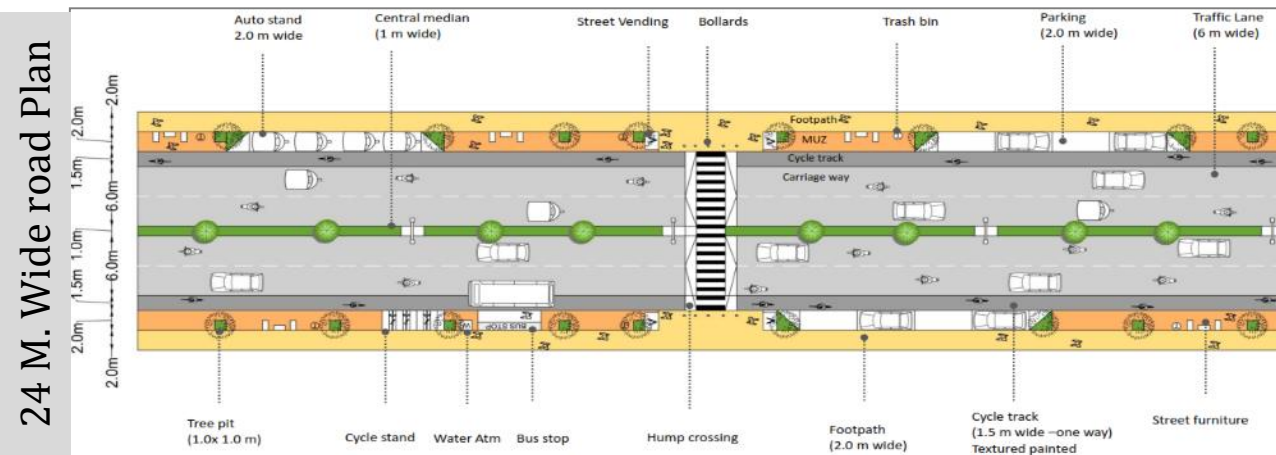


Present Scenario



RCC duct for electrical cables and  
RCC pipes for OFC on both sides of  
the road

RCC median with central LED smart  
lighting



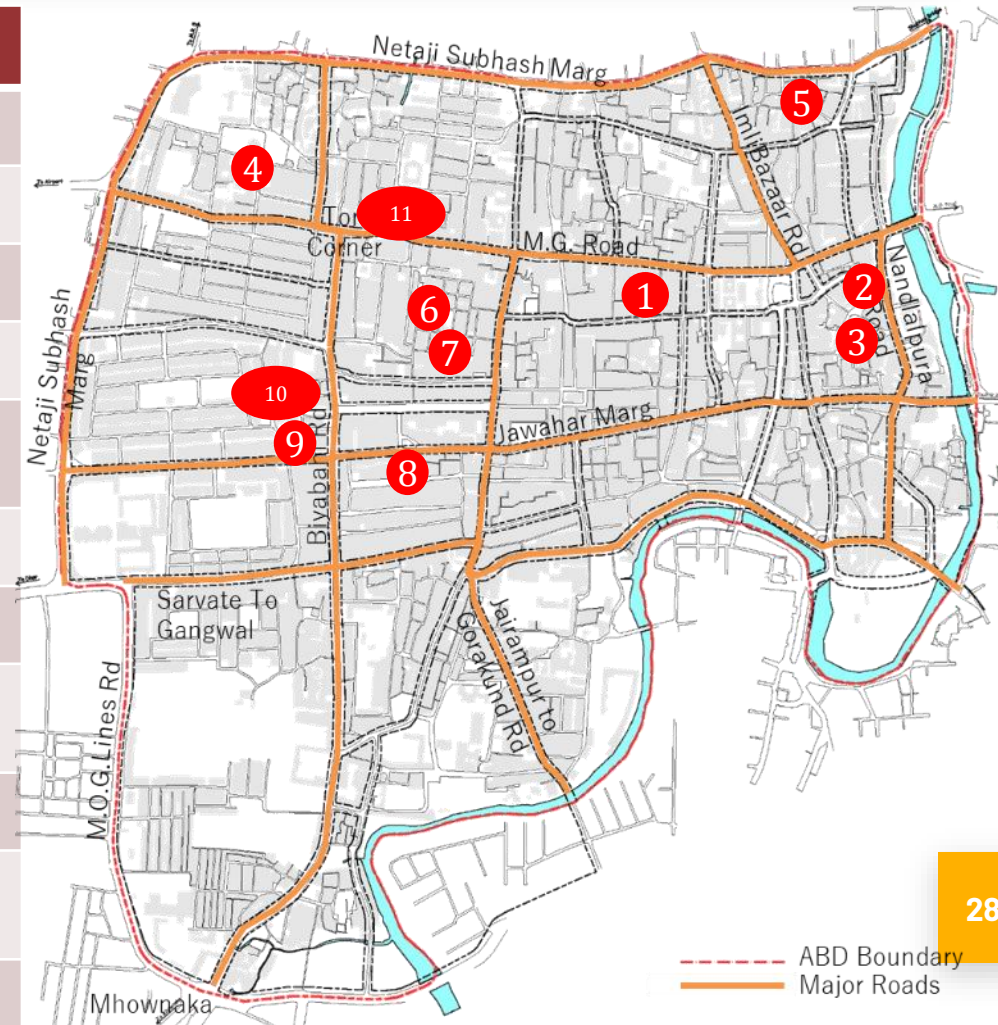


# ROAD WIDENING



# MULTILEVEL PARKING

S.N	MLP PARKING
1	Two-wheeler parking behind Rajwada
2	Parking at Veer Savarkar Market
3	Parking at Primary School No.-6, Bakshi Gali
4	Parking at Jinsi Haat
5	Two wheeler parking at Govt. School, Bhoi Mohalla, Imli Bazaar
6	Parking at Mt Cloth Market, Plot-1
7	Parking at Mt Cloth Market, Plot-2
8	Parking at Govt. Unnat Middle School, Mukheripura
9	Parking at Rajmohalla, Jawahar Marg (Plot-1)
10	Parking at Hindi Girl's School, Rajmohalla (Plot-2)
11	Parking at Malharganj (Plot-1 & 2)





# MULTILEVEL PARKING

EXISTING CONDITION



## Parking at Veer Savarkar Market

- Dedicated fruit & vegetable market but lost its identity and left abandoned.
- 20-25 cars are parked presently.

PROPOSED



EXISTING CONDITION



## Parking at Govt. School, Bhoi Mohalla

- Govt. school but presently there are some dilapidated structures existing on the site.
- Due to a fire accident, the school was shut down and left abandoned and unused.

PROPOSED



# MULTILEVEL PARKING

**EXISTING CONDITION**



## Parking at Jinsi Haat

- In the present scenario, there are few dilapidated structures left which are left abandoned and is not in use further anymore.

**PROPOSED**



**EXISTING CONDITION**



## Parking at Primary School No.-6, Bakshi Gali

- This school is under utilized in terms of student it serve, its student can be transferred to any other school near by and place and it can be redeveloped in Parking.

**PROPOSED**





# REDEVELOPMENT PROJECTS

Transformation of MOG Lines



## ✓ Redevelopment of Land Parcels:

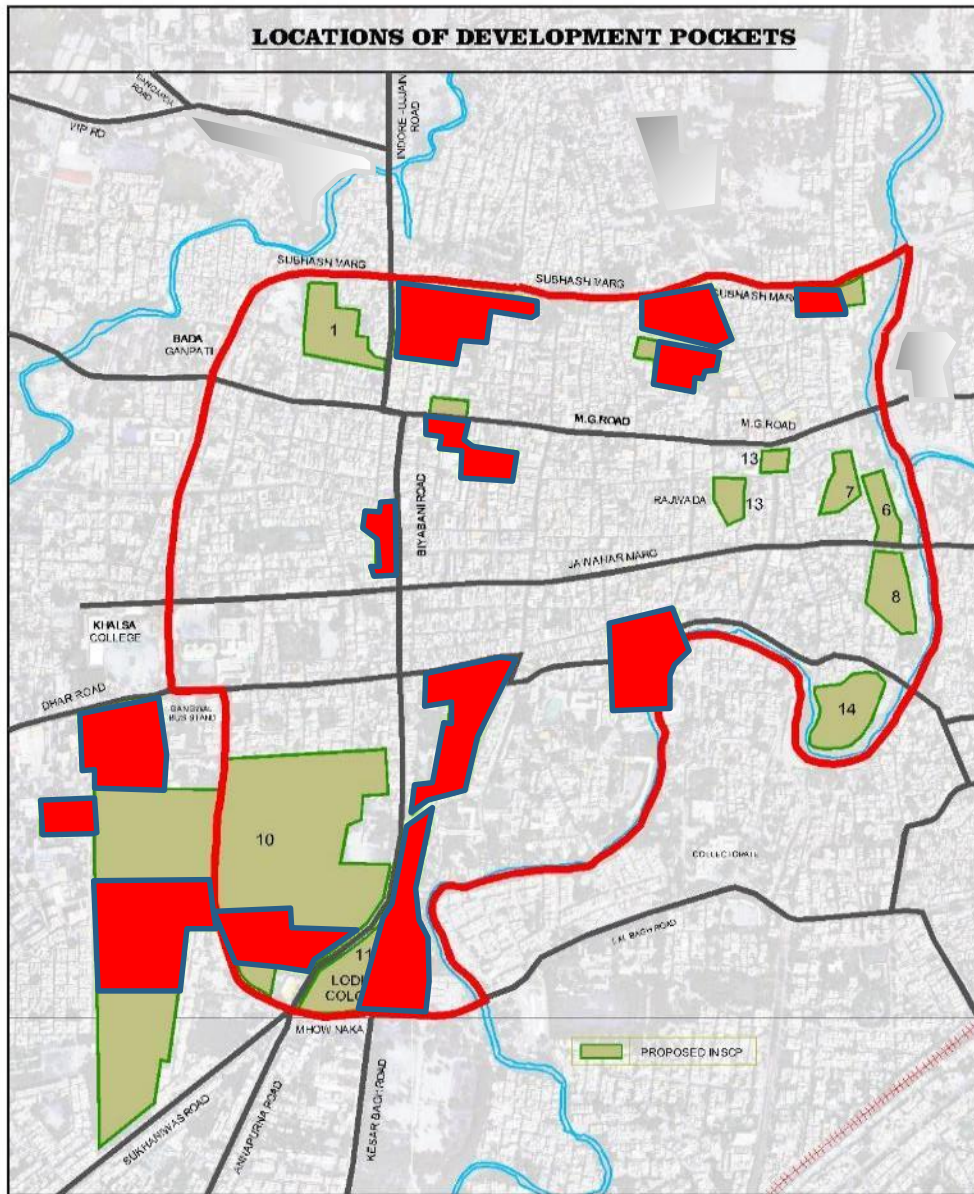
- MOG Barracks,
- MOG-E (Khayali Ram Ved),
- Kukkut Palan Kendra,
- Deaf & Dumb School Site,
- Samajwad Nagar, Balda Colony,
- Lodha Colony

✓ Mix Land use, High density, Smart features

✓ Compensatory Housing + Commercial + PSP

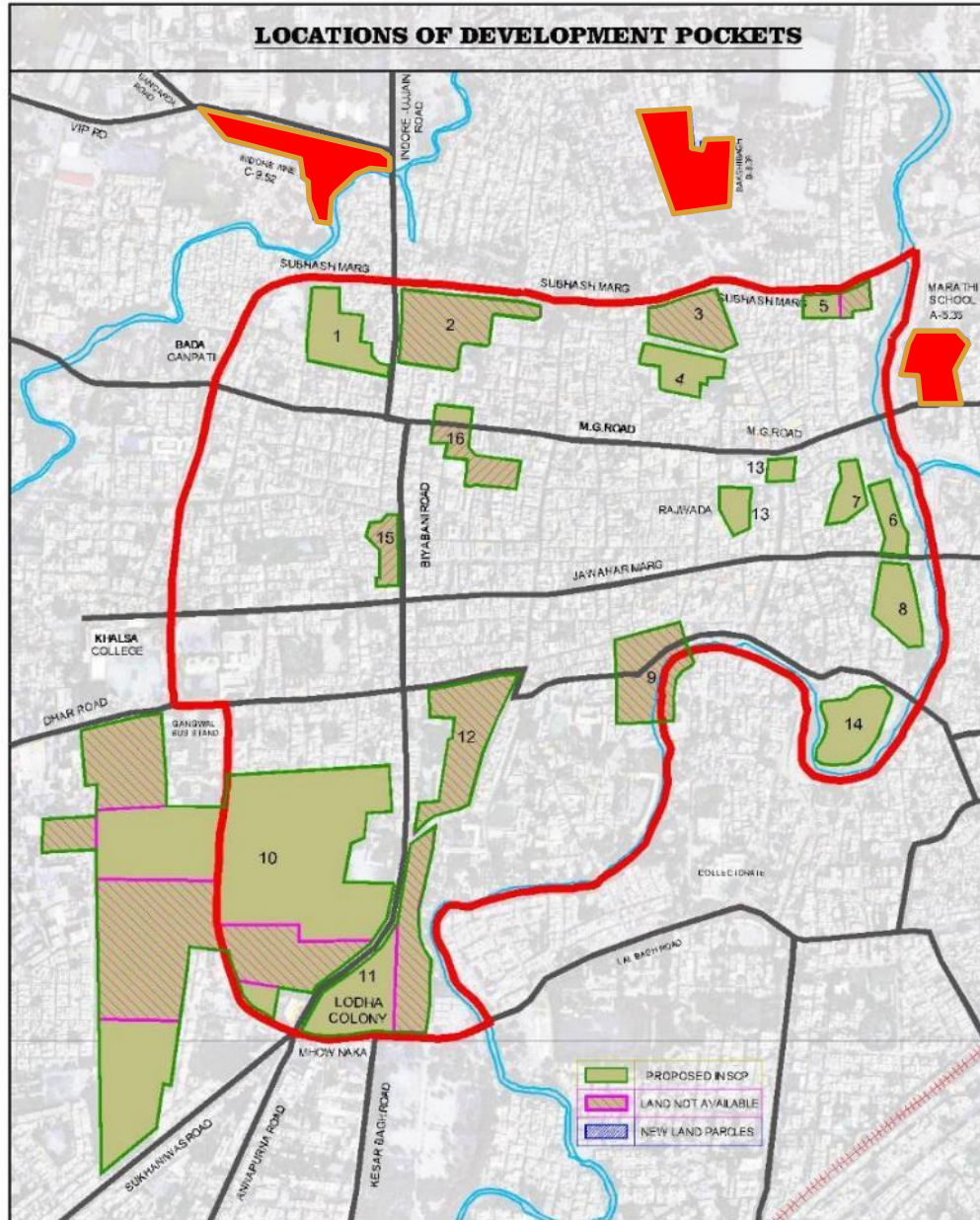


# REDEVELOPMENT PROJECTS



No.	Area	Land use	Area in acres
01	Jinsi Area	Jinsi Haat, Redevelopment of Bus Stand, & old Press	3.00
02	Near Jinsi, ramganj	Residential	5.95
03	Gaffor khan ki Bajaria	Residential	5.75
04	Old SP Office & Urdu School	Comm./ Residential	4.26
05	Sanskrit College, Subhash Marg	Comm. / Education	0.95
06	Nandlalpura Subji Mandi	Commercial	2.10
07	Vir Sawarkar Market & Baxi Gali School	Parking / Commercial	0.90
08	Kabutar Khana	Residential / Comm.	2.10
09	Machhi Bazar & Kadav Ghat	Residential / Comm.	9.50
10	MOG Lines, Balda Colony, Samajwad Nagar	Comm./ Residential / Mall / PSP	97.38
11	Lodha Colony	Residential / Comm.	8.20
12	Tata patti bakhal (Kagdi Pura)	Residential / Comm.	8.63
13	Gopal Mandir	Heritage / Cultural / Comm.	1.43
14	Malharganj, Near Police Station & Hospital	Comm./ Parking / Health	6.45
15	Near Itwaria Bazar	Commercial	2.56
16	Malharganj Hospital	Comm., Health & Parking	5.28
Total land area			164.45
<b>LAND NOT AVAILABLE</b>			<b>64.27</b>
<b>BALANCE LAND AREA</b>			<b>100.18</b>

# REDEVELOPMENT PROJECTS



Parcel No.	Location	Area (Acres)	Type of Project
A	Marathi School Campus	5.35	Cultural Centre, Dance/Drama/Music Training centre
B	Baxi Bag, Sadar bazar road	8.36	Residential, Commercial
C	Near Indore Wire, VIP Road	9.52	Residential, Commercial
TOTAL LAND AREA		23.23	

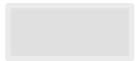
NEW LAND PARCELS



FIRST PHASE ( LODHA COLONY)



SECOND PHASE ( MOG LINE)





# RIVERFRONT DEVELOPMENT (C.P SEKHAR NAGAR-HARSIDHI PARK)



EARLIER SCENARIO WITH **REDEVELOPMENT OF 1400 SLUMS**

PROPOSED GARDEN

S.N	Design Components:
1	Harsiddhi Garden - 5.16 Acres
2	STP-10 MLD (3600 sqm)
3	Promenade - ( 500 m)
4	DP road -24 m wide (220 m)
5	Parking
6	Children's play area



Work in Progress



# STRETCH-4: C.P SEKHAR NAGAR-HARSIDHI PARK



WORK IN PROGRESS



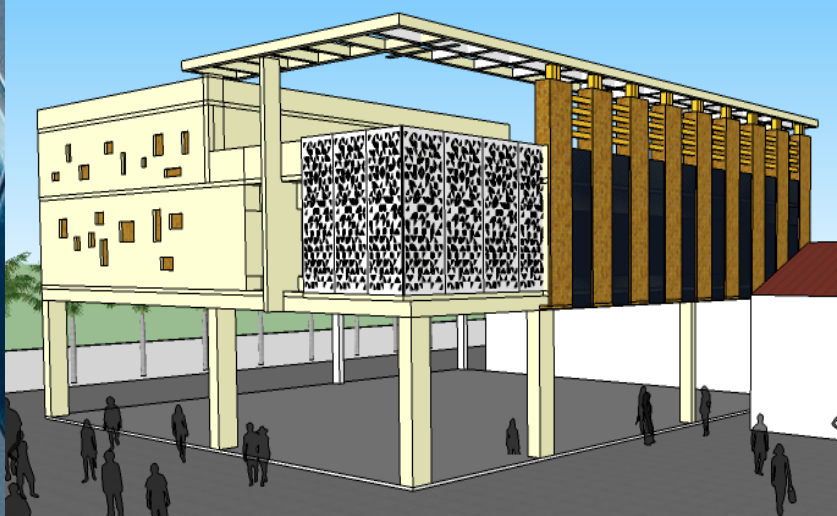


## OTHER INITIATIVES

- Command & Control Centre
- Solar Power
- Smart Education
- Smart Health
- Integrated Solid Waste Management
- Intelligent Transport Management system



# INTEGRATED COMMAND & CONTROL CENTRE



- ✓ Setting up of In-Premise Local Data Centre
- ✓ Providing Cloud Services
- ✓ Web-Portal & Mobile Application development
- ✓ Citizen Kiosk
- ✓ Enterprise Email
- ✓ Integration of 18 Applications
- ✓ O&M for 5 Years

Proposed View of Command control  
centre building



# SOLAR POWER

As per Smart City Mission Guideline, 10% (35 MW) of Indore's power demand to be met by Solar Power.



ISCDL signed MoU with SECI in August 2016.  
SECI official visited Indore in March 2017.



ISCDL has identified land areas and roof-tops over government schools, offices and parking buildings for solar panel installations.



Following sites installation is completed.

Devdharam Filtration Plant - 60 KW

Regional Park - 50 KW

13 Govt Schools – Total 30 KW

Vendor: Ujaas Energy Ltd.

Amount Paid: Rs. 51.57 Lakh



Devdharam  
Filtration Plant



School

# SMART EDUCATION



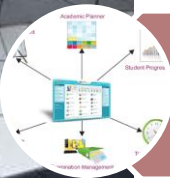
Supply, Installation & Commissioning of Computer, Projection System, power backup and Smart Board



Supply, Installation, Commissioning of Hardware, Networking, Internet connection and other Equipment



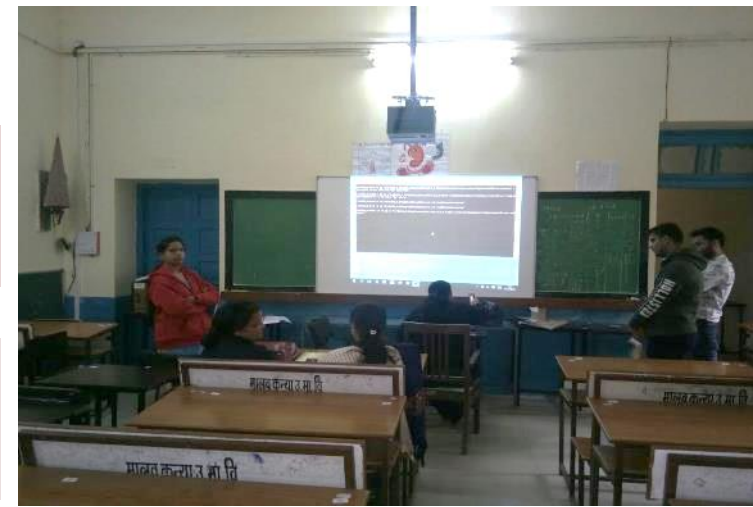
Procurement Customization and Deployment of Software, Academic Content and Mobile App.



Training, Hand holding & Go-Live



Operation & Maintenance & Help Desk Services



# SMART HEALTH

The Building Healthy Cities project awarded to JSI will provide technical assistance to refocus city policies, planning, services and decision making for Smart City Indore.



**Smart Health ATM**

S.N	Health Related Projects
1	Smart Ambulance & Trauma Services
2	Developing Health Promoting Schools
3	Periodic Screening for Lifestyle Diseases
4	Healthy and Safe Food Establishments
5	Maintaining Air & Water Quality
6	Universal Health Care for Urban Poor

S.N.	Technical Assistance by JSI
1	Training of Human Resources
2	Guidelines & Training of Teachers
3	Health Promotion; training teams
4	Guidelines on Food Safety (FSSAI)
5	Risk Analysis for related diseases
6	Capacity Needs Assessment & Training



# 1

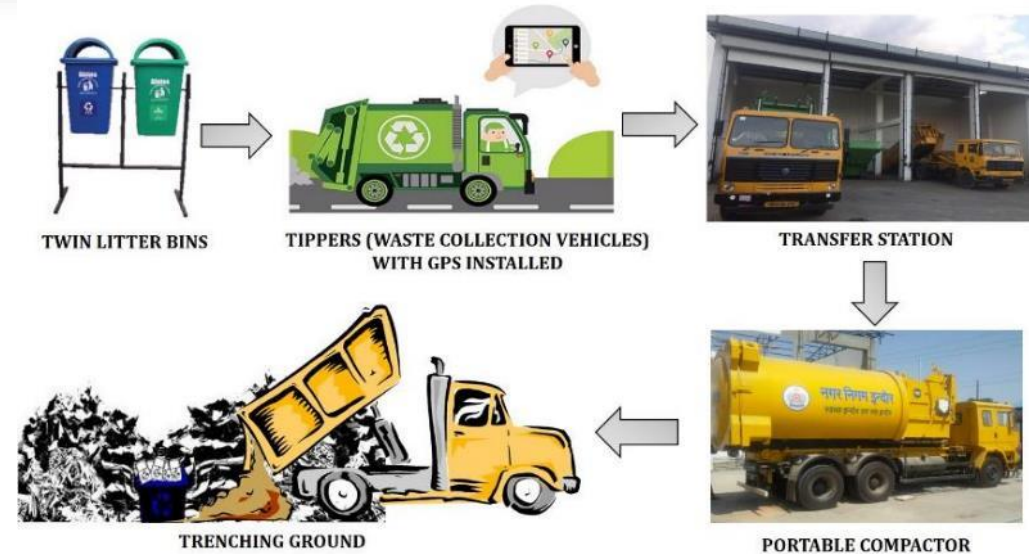
India's Cleanest City

INDORE

## IN SWACHH BHARAT RANKING 2017 & 2018

# INTEGRATED SOLID WASTE MANAGEMENT

- To comply with Solid Waste Management Rules, 2016.
- To improve the existing standards of public health and environmental quality by establishing efficient mechanism for collection and transportation of Municipal Solid Waste.
- Ensure clean and hygienic collection and transportation system of Municipal Solid Waste
- Improve productivity of man, materials and equipment.
- Less requirement of space as compared to conventional static transfer stations



PROCEDURE FOR WASTE COLLECTION FROM COMMERCIAL



PROCEDURE FOR WASTE COLLECTION FROM RESIDENTIAL



# INTEGRATED SOLID WASTE MANAGEMENT



Main Trenching ground/ Landfill site



10 Transfer stations with Weighbridge



Bio-methanation Plant



Waste Processing Plant



Bioremediation/ Biomining

# INTEGRATED TRANSPORT MANAGEMENT SYSTEM

Traffic Management Centre (TMC) Software, Communication System, AFCS Equipment & Installation, Transit Management System (AVL) , Utilities (Power Backup systems)

## PROPOSED ITMS SYSTEM COMPONENTS

Fare Integration using Automatic Fare Collection System



OFC based Communication Network



Command Control Centre



Mobile App and User Website for Commuters



WiTRAC  
Traffic  
Signals



Automatic  
Sliding  
Door



AVL -  
Progress of  
On Board  
Unit



AVL - Progress of  
Passenger  
Information  
System (PIS)



Automatic Fare  
Collection  
System (AFCS)



TMC - Control  
room views &  
sections



# INTEGRATED TRANSPORT MANAGEMENT SYSTEM

Automatic Sliding Door



WiTRAC Traffic Signals



AVL - Progress of On Board Unit



AVL - Progress of Passenger Information System (PIS)



Automatic Fare Collection System (AFCS)



Command Control Centre



## CONVERGENCE WITH OTHER SCHEMES OF GOVT.

- AMRUT
- HOUSING FOR ALL
- SWACHH BHARAT MISSION
- PRADHAN MANTRI KAUSHAL VIKAS YOJNA
- AICTCL
- INDORE MUNICIPAL CORPORATION





**THANK YOU**