

Zonal Development Plan for Nagar Nigam South Zone, Jodhpur



Draft Report

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1 INTRODUCTION OF THE CITY

1.1 REGIONAL SETTING

Jodhpur is the second largest city in the state of Rajasthan. It is located 335 km west from the state capital Jaipur and 200 km from the city of Ajmer. It was formerly the seat of a princely state of the same name, the capital of the kingdom known as Marwar. Being a place of princely palaces, magnificent forts as well as age old temples, this city of Rajasthan is among the famous tourist destinations in the state as well as India. Positioned in the Thar Desert's stark landscape, Jodhpur experiences a bright and sunny weather all through the year. Jodhpur city is also known as "Sun City".

It is also referred to as the "Blue City" due to the vivid blue-painted houses around the Mehrangarh Fort. The old city circles the fort and is bounded by a wall with several gates. However, the city has expanded greatly outside the wall over the past several decades. Jodhpur lies near the geographic center of Rajasthan state, which makes it a convenient base for travel in a region much frequented by tourists.

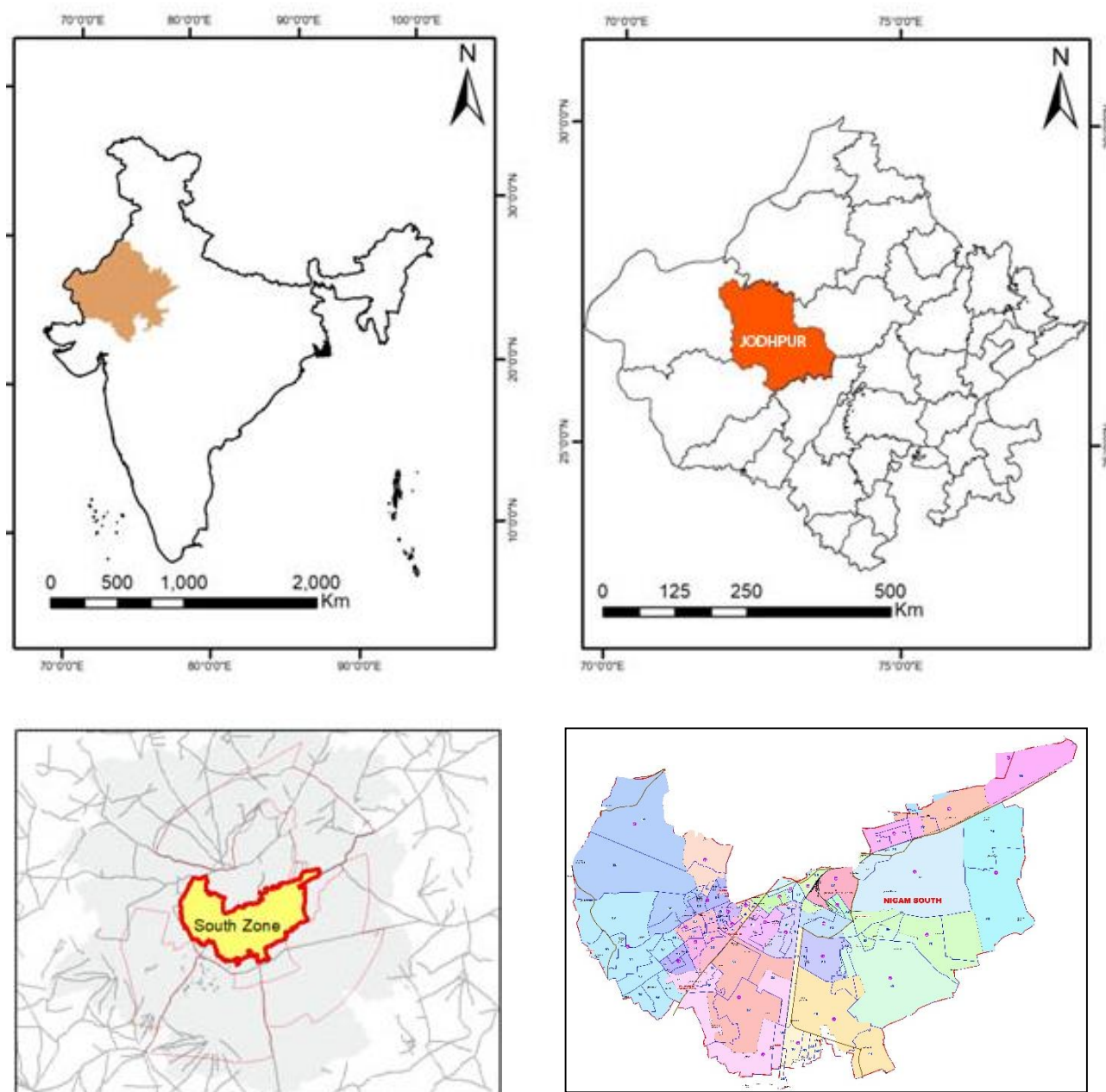
Jodhpur city is one of the major cities of Rajasthan. It is well connected to the rest of Rajasthan by airways, road and rail links. This city basks in the golden history and heritage of the state and is located at the fringe of the great Thar Desert. The city was founded in 1459 A.D by the Rathore rulers.

Physiography

Jodhpur district is located in western part of Rajasthan, located between 26°00' to 27°37' North latitude and 72°55' to 73°55' East .Climate of Jodhpur remain extreme hot in summer season, extreme cold in winter season. Day and night temperatures increase gradually and reach their maximum values in May and June respectively. The temperature varies from 48°C in summer to 4°C in winter.

Regional Context

The city has well-established rail, road and air networks connecting it to other major cities of the country. Jodhpur railway station is the Divisional Headquarters of the North Western Railways (NWR). Jodhpur Airport is one of the prominent airports of Rajasthan. It is primarily a military airbase with a civil enclosure to allow for civilian air traffic. Due to Jodhpur's strategic location, this airport is regarded as one of the most important ones for the Indian Air Force.



Map 1.1: Location Map of Jodhpur

Road Linkages

Jodhpur is connected by road to all major cities in Rajasthan and neighboring states like Uttar Pradesh, Madhya Pradesh, Haryana and Gujarat. Jodhpur is connected to the National Highway network with three National Highways and connected to the Rajasthan State Highway network with four state highways. Details of above are as follows:

National Highways

- NH-62, Ambala-Kaithal-Hissar-Fatehpur-Jodhpur-Pali
- NH-25, Junction with NH-125 near Bar connecting Jaitaran-Bilara-Kaparda-Jodhpur Kalyanpur Pachpadra-Balotra-Tilwara-Kher-Bagundi Dhudhwa-Madhasar-Kawas and terminating at its junction with NH 15 near Barmer.
- NH-125, Junction with NH-62 near Jodhpur connecting Balesar - Dechhu and terminating at its junction with NH-15 near Pokaran.

State Highways

- SH-58 connects Jodhpur with Bheem in Rajsamand district.
- SH-61 connects Phalodi in Jodhpur district of Rajasthan with Mandal in Bhilwara district.
- SH-63 connects Banar to Kuchera via Bhopalgarh
- SH-68 connects Dangiyawas to Balotra via Kakelao, Khejarli, Guda Kakani, Luni, Dhundhara, Rampura, Samdari.

1.2 HISTORICAL BACKGROUND

The Jodhpur city is the administrative headquarters of the district. Jodhpur with strategic location is one of the important cities of western Rajasthan famous as Sun City established on 12th May 1459 by Rao Jodha. Jodhpur is the second largest and most visited city in Rajasthan. The city was the capital of the once great kingdom of Marwar - the most powerful of all the Rajput kingdoms and the Meherangarh fort rated as one of the mightiest castles ever built, anywhere. Jodhpur history revolves around the Rathore Clan. Rao Jodha, the chief of the Rathore clan, is credited with the origin of Jodhpur in India. He founded Jodhpur in 1459. The city is named after him only. It was previously known as Mandore. Even today, the fort is an awesome sight, especially when seen from the old town.

Demography of Town – Growth Trends

Jodhpur is the second largest city of the state. It has registered 10 times increase in population during 1901 to 2001. During 1971-1981 there was phenomenal increase in population with 59.42 percent increase which is the highest rate of growth in past decades.

Table below gives the details of population increase in Jodhpur city during various decades.

S. No.	Year	Population	Difference	Growth Rate
1	1911	79754	645	0.82
2	1921	73480	-6274	-7.87
3	1931	94736	21256	28.93
4	1941	126842	32106	33.89
5	1951	180717	53875	42.47
6	1961	224760	44043	24.37
7	1971	317612	92852	41.31
8	1981	506345	188733	59.42
9	1991	666279	159934	31.52
10	2001	860818	194539	29.19
11	2011	1138300	277482	32.23

Table1.1: Population Growth during 1911-2011

1.3 MASTER DEVELOPMENT PLAN – 2031

Master Development Plan of Jodhpur Area Approved vide Gazette Notification order no F-37/D.I.R (P)/JDA/General/2021/1221 Dated Feb. 18 2021. Zonal Development Plans are being prepared under Jodhpur development authority act in order to detail out proposal of Master Development plan.



Map 1.2: Proposed Land Use Plan Jodhpur- 2031

Land use classification

S. No.	Land Use	Area (in Ha)	Percentage of U-1 Area	Percentage of Urbanisable Area
1	Residential	41795.08	51.58	27.33
2	Commercial	1334.23	1.65	0.87
3	Industrial	14884.91	18.37	9.73
4	Mixed land use	7736.15	9.55	5.06
5	Government and Semi- government	468.84	0.58	0.31
6	Recreational	1265.34	1.56	0.83
7	Tourist Facility	1318.32	1.63	0.86
8	Public and Semi-Public	3842.02	4.74	2.51
9	Circulation	8391.01	10.35	5.49
	Total Area of U-1	81035.90	100.00	
10	Special Schemes	11469.28	-	7.50
11	U-2	44831.02	-	29.31
12	Hilly Area and Hilly Conservation Zone	5328.92	-	3.48
13	Water bodies	2613.12	-	1.71
14	Forest Area and Plantation	3519.73	-	2.30
15	Government Reserved area	4138.18	-	2.71
	Total Urbanisable Area	152936.15		100

Source: Report –Jodhpur Master Plan – 2031

Table1.2: Proposed Land Use Classification as per Master Development Plan – 2031

1.4 ZONAL DEVELOPMENT PLAN

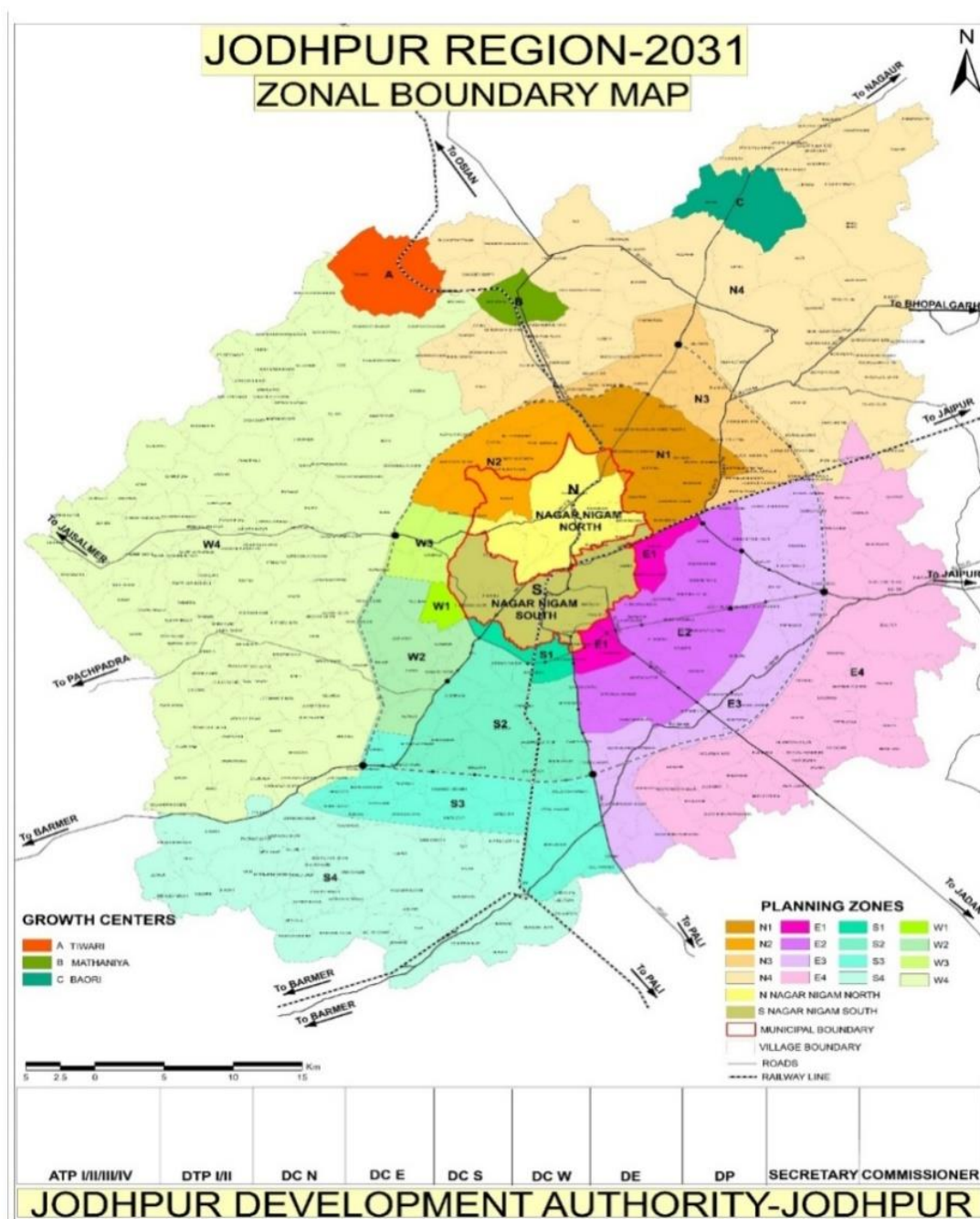
Zonal Development plan of a city is a comprehensive micro level detail plan document to guide the long-term physical development of a particular specified area of the city. It needs to be viewed as an integral part of an overall regional city development strategy, i.e., recognizing the intrinsic and symbiotic relationship of the city and its functional region. Master Development Plan-2031 (Jodhpur Region), main objective is to execute Master Development Plan in time bound in stages; it is proposed to prepare Zonal Development Plan.

Delineation of Administrative Zone

Jodhpur Master Plan 2013-2031 is proposed for an area of 446733.94 hectare with 395 Revenue Villages & Jodhpur city. It consists of:

- **South Planning Zone** (S1, S2, S3, S4, Nagar Nigam - South)
- **North Planning Zone** (N1, N2, N3, N4, Nagar Nigam - North)

- West Planning Zone (W1,W2,W3,W4)
- East Planning Zone (E1,E2,E3,E4)



Source: Jodhpur Development Authority (<http://jda.urban.rajasthan.gov.in/>)

Map 1.3: Map showing Planning Zones for Jodhpur

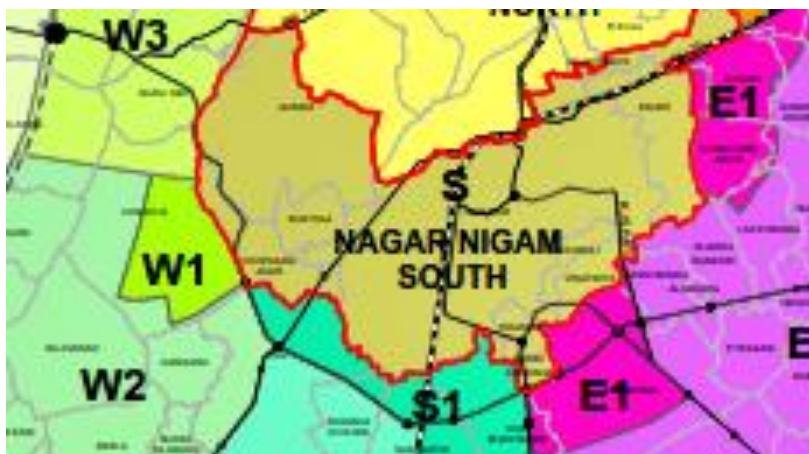
Delineation of Work area

As per Jodhpur Master Development Plan 2031, there are 4 Major zones which are further subdivided into 18 zones. Planning Zone Nagar Nigam - South is awarded to Yashi Consulting Services Pvt. Ltd Jaipur.

2 ANALYSIS OF NAGAR NIGAM - SOUTH ZONE

2.1 PHYSICAL FEATURES

The Zonal Development Plan of Nagar Nigam – South Zone covers 11852.90 hectares area. The location of this zone is in the south side of Municipal corporation area, Jodhpur. In the north, the boundary of zone is co terminus with the southern boundary of north zone. The eastern boundary of the zone is coinciding with the western and northern boundary of zone East 1 and East 2. Southern boundary of the zone is co terminus with the Northern boundary of South zone 1 and western boundary is co terminus with the eastern boundary of West zone 1, West zone 2 and West zone 3. The state highway 16 passes through the zone which is Kuchera-Sankhwas-Jodhpur Road. Also, National highway 62 passes through central part of the zone connecting Pali to Sri Ganganagar. The important landmarks within this zone are Umaid Bhawan palace, Nagar Nigam office, Army Cantonment Area, Jodhpur airport. Hilly and rocky area is on the western and north eastern part of the zone. This zone is situated in the south side of the city. The walled city area, Chaupasni industrial area, Kajri, Jodhpur university etc. are located in this zone. Kayalana Lake which is a major source of drinking water, is also located in this zone.



Map 2.1: Location of Zonal Development Plan of Nagar Nigam South

The area of following villages forms the total area of the zone:

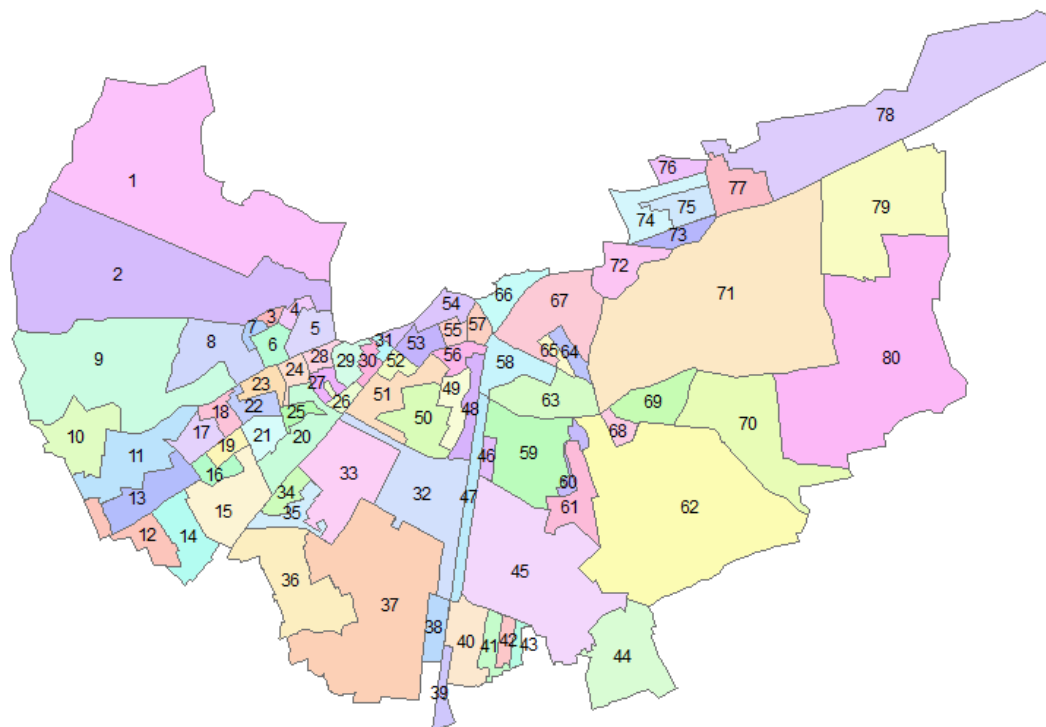
Sr. No.	Village Name	Area (Hect)	Sr. No.	Village Name	Area (Hect)
01	Bargi Aaraji	8.847	13	Jhalamand	21.773
02	Basni Benda	30.836	14	Jodhpur Khas	5554.827
03	Basni Chauhana	96.037	15	Kharda Randheer	54.976
04	Basni Tamboliya	10.988	16	Khokhriya	111.004
05	Bhadwasiya	122.856	17	Kudi Bhagtasani	24.182
06	Bhicharli	203.337	18	Nandari	126.629
07	Chopasni Jagir	714.543	19	Punjla	289.022
08	Dhand	172.536	20	Sangariya	0.409
09	Digadi	938.927	21	Shree Yaden Gaon	123.275
10	Digadi Veeran	295.086	22	Suthla	380.115
11	Gewan	2279.71	23	Vinaykiya	319.012
12	Golasni	51.682		Total	11852.90

Table2.1: Villages and their area (ha) of Nagar Nigam South, Jodhpur

There are 80 wards of Municipal Corporation South Zone, with total area of 11852.90 hectares. The details of the municipal wards are given below:

Ward No.	Area (Hectares)	Ward No.	Area (Hectares)	Ward No.	Area (Hectares)	Ward No.	Area (Hectares)
1	899.6	21	42.3	41	35.9	70	293.5
2	760.7	22	35.2	42	21.3	71	1065.1
3	9.6	23	34.6	43	16	72	74.7
4	16.8	24	24.4	44	201.7	73	32.9
5	53.1	25	19.8	45	513.8	74	83.6
6	35.7	26	20	46	18.1	75	55.1
7	12.9	27	22	47	36.4	76	32.3
8	131.6	28	21.1	48	46.2	77	81.1
9	502.6	29	34.3	49	48.1	78	647.9
10	120.6	30	21.1	50	102.4	79	397.5
11	154.2	31	9.2	51	95.3	80	824.3
12	74	32	238.8	52	20.8	Total	11852.9
13	95.3	33	210.9	53	38.5		
14	93.5	34	33.8	54	52.1		
15	144.1	35	46.4	55	19.9		
16	29.1	36	214.6	56	30.2		
17	46.7	37	612	57	22.7		
18	30.8	38	86.5	58	74.8		
19	24.6	39	29.1	59	199.5		
20	101.5	40	93.9	60	21.8		

Table2.2: Wards and their area (ha) of Nagar Nigam South, Jodhpur



Map 2.2: Location of wards of Nagar Nigam South

2.2 LAND USE ANALYSIS (AS PER EXISTING CONDITION)

The base Map of the zone is prepared on GIS based platform using various primary and secondary data. Base map contains all the physical feature and building footprints along with plot boundary. Geo-database has been prepared by high resolution satellite Imagery. The Existing Land Use Survey was conducted and on the basis of survey, the Existing Land Use Map is prepared marking all the Land Uses as per the prevailing Land Use Classification

Details of various Land uses are given below:

S. No.	Land Use	Area (Ha.)	Percentage of Developed Area
1	Residential	1659.12	14.00%
2	Commercial	240.2	2.03%
3	Industrial	397.73	3.36%
4	Government/Semi-Government	158	1.33%
5	Government Reserved	1951.34	16.46%
6	Mixed Land use	231.29	1.95%
7	Recreational	184.28	1.55%
8	Hilly & Rocky Area	1618	13.65%
9	Public & Semi-Public	999.01	8.43%
10	Circulation	1812.84	15.29%

11	Water Bodies	299.24	2.52%
12	Vacant Land	1377.94	11.63%
13	Agricultural land	816.74	6.89%
14	Forest Area	105.57	0.89%
15	Eco Sensitive Zone	1.6	0.01%
	Total Area	11852.90	100

Table2.3: Analysis of Existing Land Use of Nagar Nigam South

2.3 PROPOSED LAND USE OF PART AREA (NAGAR NIGAM SOUTH), 2031 (AS PER MASTER DEVELOPMENT PLAN)

S. No.	Land Use	Area (ha)	Area (%)
1	Residential	2896.41	24.4
2	Commercial	251.03	2.1
3	Industrial	397.23	3.4
4	Govt./Semi Govt.	322.16	2.7
5	Recreational	356.65	3.0
6	Public & Semi-Public	948.50	8.0
7	Mixed Land use	231.58	2.0
8	Circulation	1287.14	10.9
9	Govt. reserved	1951.34	16.5
10	Hilly & Rocky Area	1618.48	13.7
11	Water Bodies	143.88	1.2
12	Plantation	1448.49	12.2
	Total Area	11852.90	100.0

Table2.4: Analysis of Proposed Land Use as per Master Plan–2031of Nagar Nigam South

Master Plan Land use

Proposed Landuse in the Nagar Nigam South is the same as given in the Jodhpur Development Plan 2031. It primarily includes Residential, Industrial and Government/ Semi government Area. The other proposed land uses are tourist facilities, commercial center, parks and playgrounds and senior and senior secondary schools, other community facilities, core facility and mixed land use.

Commitments

In south zone planning area, orders for change of landuse were issued from time to time for individual plots/ buildings. The size of plots of commitments is small and it is not possible to show individual plots in proposed landuse plan at scale 1:4000. However, such commitments shall be honored.

3 PLANNING PARAMETERS

For Provision of Physical, Social, Infrastructure and other facilities in Zonal development plans, the following norms dated **4th April 2019 order no:F18(35)UDD/Sector plan/2015(2967-3207)** were set w.r.t URDPFI Guidelines issued by MoUD and as per Rajasthan Land Allotment Policy. For the approval of layout plan under Zoning Regulation and Township Policy, the provisions of facilities as per the above norms are necessary.

3.1 TRANSPORT & CIRCULATION

The standard level set for the right of way of various roads.

S. No.	Category	Minimum Right of Way (m)
1	National Highway and State Highway	60m and 30m, Plantation Corridor on both side of ROW
2	Arterial Road	30-36
3	Sub Arterial Road	24-30
4	Major /Collector Road	18-24
5	Local Street / Road	12-18
6	Internal Road	09-12

Table 3.1: Norms for Road as per category and ROW

3.2 PUBLIC & SEMI- PUBLIC AND INFRASTRUCTURE FACILITIES

The quality of life in any urban area depends on the availability of social, infrastructure and access. These include the following infrastructure:

Social Infrastructure Facilities:

- a) Educational Facilities
- b) Health Facilities
- c) Socio- cultural facilities
- d) Recreational Facilities
- e) Sports Facilities
- f) Security Facilities
- g) Community Center
- h) Banks, etc.

Note: The area of land for social infrastructure facilities as mentioned above can be kept as described in the following tables, according to the Land Allotment Policy 2015 and as per the orders the State by Government and as per norms / requirements issued by concerned department.

Educational Facilities

S. No.	Category	Population Per unit	Area (in sqm)
1	Primary/ Middle School	4000- 5000	2000- 3000
2	Secondary/ Senior Secondary School	7500- 10000	4000- 8000
3	School for Specially Abled	As per Requirement	2000- 4000

Table 3.2: Norms for Educational Facilities

Health Facilities

S. No.	Category	No. of Beds	Population Per unit	Area (in sqm)
1	Large Hospitals	above 51	15000	8000
2	Dispensary / Small Hospitals/ Nursing Homes / Health Centre / Veterinary / Rehabilitation Centre	25- 50	5000- 15000	500- 4500

Table 3.3: Norms for Healthcare Facilities

Socio- cultural Facilities

S. No.	Category	Population Per unit	Area (in sqm)
1	Anganwadi / Creche	As per Requirement	200-300
2	Community Hall	5000	1000
3	Community Hall ,BaratGhar,Library	15000	2000
4	Religious Place (Temple, Devra, Ashram, Mosque)	As per Requirement	400
5	Cremation / Burial Grounds	As per Requirement	4000
Kabristan and shamshan to be proposed in the perimeter control area as much as possible. With the site, the facilities like religious places, open area, public utility facilities etc. should also be ensured.			

Table 3.4: Norms for Socio-cultural and Religious Facilities

Recreational Facilities

S. No.	Category	Population Per unit	Area (in sqm)
1	Proposed Park per zone	10000- 15000	Till 10000
2	Proposed Playground per zone	10000- 15000	Till 10000

Table 3.5: Norms for Recreational Place

Police, Fire Safety

S. No.	Category	Population Per unit	Area (in Sq.m.)
1	Police Chowki	50000 as per URDPFI	500
2	Police Station	90000 as per URDPFI	2000
3	Traffic / Police Control Centre	As per Requirement	As per Requirement
4	Fire Station / Fire Post / Control Centre	1 in every 2-4 km Radius	Till 0.6 Hectares

Table 3.6: Norms for Police Facilities and Fire Safety Facilities

Distribution Services

Petrol Diesel/CNG Filling stations will be permissible in the Zonal Development Plan as per rules in the following areas (except restricted area)

- Community/ commercial center (Filling Station only)
- Residential and Industrial Area
- National and State highway
- Developed Rural Area
- Freight Complex
- Major roads

Other Distribution Services

Category	Population	Gas Storage Capacity (in kg)	Area of Plot (Sq.m.)
LPG / Cooking Gas Godown	As per requirement excluding Residential Areas	2000-10000	1000
		10000-12000	1200
		12000-15000	1500
		15000-20000	2000
		20000 above	2500

Table 3.7: Norms for Other Distribution Services

Other Facilities

Provision for other facilities like special educational facility, specific market, transport related facilities, parking, grid sub- station, water supply point, sewage pumping station, etc., to be kept as per the requirement of area.

Guidelines for fire Station and other firefighting facilities:

- a) It is necessary to have a fire station located in an area so that fire service can reach site within a maximum time of 3- 4 minutes
- b) Fire stations may be located on the corner plot and main road and it is necessary to have two exit gates.
- c) Provision should be made for proposal of underground pipeline for fire hydrant in newly developed area
- d) In areas where it is not possible to set up a fire station (extreme dense area) necessary provision of fire hydrant and water pipelines should be made in the underground or on the site.
- e) It will be necessary to get approval from the fire office before the fire agency makes fire provisions.

3.3 SOCIO- ECONOMIC FACILITIES**Commercial /Professional Structure**

S. No.	Category	Area (Ha.)	Population	No. of Shops
1	Local Market	0.15	5000	1 no. per100 persons
2	Local Market, Service Centre, etc.	0.46	15,000	1 no. per 200 persons
3	Weekly Market	0.40	1 or 2 Place per 1 Lakh	As per requirement
4	Informal Spaces / Vending Zone	As per requirement	On the basis of survey	1 per 10 plots
5	Milk distribution centre / Dairy Booth	As per requirement	As per requirement	As per requirement

Table 3.8: Hierarchy and Norms for Commercial Centers

Infrastructure Planning:

- a) Parking and other open spaces in commercial center shall be proposed in such a way that weekly market can be established there at other times.
- b) Solid waste management and other public facilities should also be proposed along with the informal sector.

Permitted activities in commercial zone of proposed area plan- retail trade, informal shopping, commercial office, cinema, hotel, guest house, bank, ATM, nursing home, auditorium, library, weekly

market, Local government and non-government office, electric sub-station, Post office, Sub-fire station, police station, shopping center.

Norms for Incidental Trade

S. No.	Use Zone/Use Premises	No. of Informal Shops /Units
1	Retail Trade Centre	3 to 4 units per 10 formal shops
2	Government and Commercial Offices	5 to 6 units per 1000 employees
3	Wholesale trade and Freight Complexes	3 to 4 units per 10 formal shops
4	Hospital	3 to 4 units per 100 beds
5	Bus Terminal	1 unit for two bus
6	School: Primary Secondary/Senior Secondary	3- 4 units 5- 6 units
7	Parks	2- 3 units
8	Residential Area	1 unit/10 plots
9	Industrial Area	5- 6 units per 1000 employees
10	Railway Station	As per Situation

Table 3.9: Norms for Informal Shops / units for Urban Street Vendors

Demarcation of Vending Zones

Zonal Development plan will have to mandatorily determine the boundaries of Vending zones, restricted vending zones and Non-restricted vending zones

3.4 PARKS & OPEN SPACES

- Formulation of work plan to ensure development of 15% (minimum) green cover in cities.
- The development of the park located in the urban area by the each urban local body to ensure dense plantation with public support at open sites. Reserved land for Parks/ open space proposed in Master Plan to be demarcated and developed on PPP model or other suitable methods and ensure dense plantation.
- In urban areas, dense plantation along major roads and in median to be ensured.
- Minimum one Children Park to be developed each year in every city.
- Major Park situated in urban area to be developed as Central Park. Facilities for children and senior citizens should be ensured in the central park.
- The parks available in schemes of urban areas to be listed and in each scheme at least one park per year should be developed for children and senior citizens with necessary facilities.

4 PROPOSALS- STRATEGIES AND POLICIES

Methodology Adopted in Plan-Making of Jodhpur Zonal Plan

While venturing to prepare the Zonal Development Plan for Jodhpur, basic studies were made in the form of a survey. Primary studies related to existing village population, site conditions, those related to water source like river, nallas /water table, forest land etc. were also carried out.

On the selected area, thorough analysis was made of the given assets and constraints. In addition to the above Proposed Master Plan roads and Land uses were studied.

4.1 LANDUSE PLANNING

The distribution of the land uses is a major phenomenon which controls the spread of the city as well as mobility within the city. This is the basis for Implementation of the Master Development Plan/Zonal Development Plan. Following is a general description of Land Use Classification

LAND USE DISTRIBUTION

Classification of Land uses

- Residential
- Commercial
- Industrial
- Governmental
- Public and Semi-Public
- Recreational facilities
- Circulation

Sub Classification of Land uses

1. Residential

- Plotted development
- Group Housing
- Slum Areas (Katchi Basties)

2. Commercial

- Retail business & General commercial

- Wholesale business
- Warehousing & godowns

3. Industrial

- Large and Extensive Industries
- Small and Medium Industries

4. Governmental

- Government and Semi Government offices
- Government Reserved Areas

5. Public & Semi-Public

- University / College / Professional College
- Secondary, Senior Secondary School
- Hospital / Other Health Centre
- Veterinary Hospital
- Social, Cultural / Religious Place
- Historical Monument
- Other Community Facilities
- Public Utilities
- Cremation / Burial Ground.

6. Recreational

- Parks, Open Spaces & Playground / Stadium
- Fair Ground / Tourist Facility

7. Circulation

- Airports
- Bus Terminals / Truck Terminals
- Railway Line / Railway Station
- Road Network (Hierarchical)

Infrastructure

Physical infrastructure

- Water Supply

- Sewage
- Drainage
- Electricity
- Solid waste Disposal

Social infrastructure

- Educational facilities
- Health care facilities
- Socio- Cultural facilities
- Police
- Fire

4.2 PROJECT- DEVELOPMENT STRATEGY

Development strategy

Development strategy is the process of formulating a strategy for bridging the gap between where the city is and where it wishes to go which depends entirely on the context and initiative of each city.

It consists of

- Planning strategies and
- Development policies

The most important step for development is the provision of urban infrastructure, initially physical infrastructure.

Connectivity in the form of road network, provision of water supply, electricity triggers growth in any area. Road network would lead to development of economic activities further leading to development of settlements.

To enable easy development of upcoming areas, accessible and cheap public transportation plays an important role.

It is necessary to have excellent and cheap connectivity with mother city i.e., from private vehicle dependent city to public transport-oriented development.

Planning Strategy for Zonal Plan

Master Plan: The Master development plan for any town is a long-term plan meaning thereby that the implementation will take a long period of 20 years. This document is also a generalized document and gives broad scheme of different land uses. Such proposals need to be detailed out so that these can be

implemented in a phased manner. The detailing of such proposals and final implementation goes through different stages / levels of planning.

The planning levels can be

- 1) Preparation of Zonal Plans
- 2) Preparation of Sector Plans
- 3) Preparation of Schemes

Zonal Plans:

The Zonal Plan is a comprehensive plan conceived within the framework of current Master Plan, showing therein the existing and the proposed location and general layout of:

- Residential areas
- Commercial areas
- Industrial areas
- Public parks, playgrounds and other recreational facilities
- Public and semi-public uses
- Transportation Network
- Other land uses which are necessary

Priority of selection of zonal plan is done in accordance with the phasing of Development as proposed in Master Plan.

Zonal Development Plan in context to Jodhpur Master Development Plan – 2031

As per proposals in Master Development Plan 2031 and some additional proposals in Zonal Development Plan following are incorporated in Nagar Nigam South (Nagar Nigam):

- 1) Road network of 30M, 24M and 18M are proposed to develop connectivity between Master plan roads. Deviations and Variation in proposed master plan roads have been listed and as required have been updated and incorporated.
- 2) Provision of Safety corridor along High tension lines (11KV-400KV) as per guidelines/circular issued by UDH.
- 3) A 30 M plantation belt around large water bodies and 9M /30ft. all around small water bodies.
- 4) National highways and State Highways shall have 60 M right of way with a plantation corridor of 30 M width on both sides as per Master plan provisions.
- 5) 9M wide Strip along both sides of large nallas, drains, etc.
- 6) As per directions of Government of Rajasthan, mixed landuse is permissible upto 1.5 times of road width of 24 M and above.

This can be done only after detailed survey and its analysis like confirming and non-confirming land uses their extent, existing social facilities, existing road network and other physical features, collection of revenue records, analysis of Government land ownership to know forest areas, lands under lakes, and identification of suitable lands for facilities etc.

Beside above, the proposals given in the Zonal Plan shall include the following:

- i. Road Connectivity has been improved considering the existing alignment of Village Roads. Additional Roads of 30M, 24M & 18M Right of Way are provided in the Zonal Development Plan
- ii. Provision of Other Community Facility is made on Govt. Land at suitable location.
- iii. Identification of Government Land based on requirement of proposed facility.
- iv. Army area buffer of 900M and 500M is proposed.

The study zone is Nagar Nigam – South, Jodhpur city and land use analysis and demographic calculations are based on Master Plan 2031 and report of Master Development Plan-2031 Jodhpur region. Final modifications in Zonal Development Plan can be made after getting permissions from concerned authorities for conducting drone survey.

4.3 DEMOGRAPHIC CALCULATION- NAGAR NIGAM - SOUTH

For Population calculations projections have been detailed below:

Population Projection

Year	Projected Population
2031	651700
Total Proposed Residential Area of Nagar Nigam South = 2896.41 ha	
As per Master plan, Gross Residential Density of this zone is 100 –250 pph	
Considering 225 persons per hectare, total population for year 2031, works out to be $2896.41 * 225 = \mathbf{6,51,700}$	

Table 4.1: Population Projection

4.4 FACILITIES CALCULATION- BASED ON DEMOGRAPHIC CALCULATION

Social Infrastructure

Better social infrastructure offering shall be the prerequisite condition for development of a town. Development of physical infrastructure cannot usher in overall development at the desired level if the social infrastructure is not simultaneously developed. Education, Health, Social security, public entertainment etc. sectors have to be developed to ensure proper social infrastructure.

Social Development is usually referred to as the commitment towards realizing the vision of the city. The provision of infrastructure facilities such as educational institutes, health care facilities contribute in the socio-economic development of the city. Better social infrastructure played key role in development of Jodhpur.

Educational Facilities

Education decides the development pattern of any city, it exhibits how urbanize a city is through its literacy level and exposure to different education facilities. It is observed that people expects social infrastructure such as schools and primary and secondary clinics/hospital close to their residential facilities. However, generally people are ready to travel at longer distance for post-graduation and tertiary health care.

Strategies:

- Emphasis on good quality education by providing primary, secondary, high schools, colleges and universities.
- Nursery and Primary schools preferably may be located within 1 Km. distance. Senior secondary school may be located on main roads for use of adjoining regions also.
- Provisions for higher education especially in the scientific fields to become an attractive place to stay.
- Provisions for medical and engineering colleges.
- Professional and vocational colleges need to be given importance for setting up employment development resources through education and training programs.

Health Facilities

Towns outside mother city lack emergency health care services at night. The citizens have to come to Jodhpur for accessing good health facilities in case of emergency.

Strategies

- To reduce the dependency on the mother city for specialized services by providing for an all facility 100 to 300 bedded hospital.
- Provisions of city facilities such as Intensive Care Unit (ICU), Burn Ward, blood bank and a medical college.
- To promote Better Social infrastructure in terms of educational institutes and health care facilities

Recreational Facilities and Open Spaces

Recreation facility improves the quality of life. The URDPFI guidelines recommend that the cities should have provision of 10-12 Sq. m per person for recreation.

Water bodies are an integral part of city open spaces and at the same time it provides at time larger open space to the city. It also maintains eco-system. It provides immense potential to tourism in the city.

Create Recreation Facilities

- Creating recreational facilities such as parks, maidan, playgrounds, botanical/zoological gardens or other multi-purpose open spaces.
- Instead of small parks, if possible large parks may be promoted. These may be located to include the low lying areas so that the cost of leveling and soil disturbance is kept minimum. Some area can be developed in the lake catchment area as green space/parks as recreation.
- Taking up a tree plantation program along the roads to make city a Green city.
- To preserve and develop the large open spaces, water bodies.
- Private sector participation in revitalization of the existing water bodies of the city to create amusement parks, etc.
- Provision for a sports complex in the Govt. land available.
- Protect or restore existing water bodies, so as to promote biodiversity.
- Set-up nurseries develop some areas as woodlands to effectively manage landscapes, so as to promote biodiversity.
- Enhance the landscape experience by providing amenities like drinking water facilities, toilets, seating, shaded structures and cafeteria (only in parks).

NAGAR NIGAM - SOUTH (Total Area –11852.90 Ha) Projected Population -6,51,700										
Projected Population Calculated as per Zonal Development Plan Guidelines										
Sr No.	Category	Population Per Unit	No. of Beds	Area (Sq. Mt.)	Required Units (as per ZDP guideline) 2031 (A)	Existing Units	Required Units/ Area as per 'A'	Area Required in Remaining Facility (Sq. Mt.)	Total Area Required for Remaining Facility (ha.)	Final areas and Remarks
INSTITUTIONAL FACILITIES										
1	Primary School / Middle school	4000-5000		2000 - 3000	145	104	41	102500	10.25	In secondary / senior secondary school, there are many schools which are from primary to sr. secondary.
2	Secondary / Senior Secondary School	7500-10000		4000-8000	74	73	1	6000	0.6	
3	University (college)	125000 as per URDPFI		10H - 60H	5	29	0	-	-	Additional not required
MEDICAL FACILITIES										
1	Large Hospitals	15000	above 51	8000	43	84	0	-	-	Additional not required
2	Dispensary / Small Hospitals/ Nursing Homes / Health Centre / Veterinary/ Rehabilitation Centre	5000-15000	25-50	500-4500	65	34	28	70000	7.0	Additional requirement
SOCIO-CULTURAL FACILITIES										
1	Anganwadi / Creche	As per Requirement		200-300	-	1	-	-	-	Additional not required
2	Community hall/center	5000		1000	130	34	96	96000	9.6	Additional requirement
3	Library	15000		2000	43	11	32	64000	6.4	Additional requirement

4	Cremation / Burial Grounds	As per Requirement		4000	-	7	-	-	-	Additional not required
5	Religious Place (temple, Devra, Ashram, Mosque)	As per Requirement		400	-	333	-	-	-	Additional not required
CIVIL DEFENCE SERVICES										
1	Police Station	90000 as per URDPFI		2000	7	10	3	-	-	Additional not required
2	Traffic / Police Control Centre	As per Requirement		On Site	-	-	-	-	-	Additional not required
3	Fire Station / Fire Post / Control Centre	1 in every 2-4 km Radius		Till 0.6 Hectares	0	0	-	-	-	Additional not required
DISTRIBUTION FACILITIES (As per URDPFI Guidelines)										
1	LPG Godown/ Gas Godown	40000-50000		520	14	3	11	5720	0.57	Additional requirement

Table 4.2: Existing and Required Zone Level Facilities

Note: In Master plan level public and semipublic area of 948.50 hectare has also been provided. Various schemes like Shastri Nagar, Sardarpura, Golf Course Scheme, Chopasni Housing Board etc. are there in this zone which are catering requirements of green areas & facilities like schools, hospitals, police stations, post office, GSS, overhead water tank etc. In future more residential, commercial & other developments are expected to develop in this area which will further add total facility and green area.

4.5 DEVELOPMENT STRATEGY

Development strategy

Development strategy is the process of formulating a strategy for bridging the gap between where the city is and where it wishes to go which depends entirely on the context and initiative of each city.

Salient Features of Zonal Development Plan.

Connectivity: Connectivity in The Form of Road Network, Would Lead to Development of Economic Activities Further Leading to Development of Settlements. To promote connectivity roads of 18m, 24 m and 30m are proposed to interconnect Master Plan roads. The zonal roads proposed are to promote Neighborhood concept.

INFRASTRUCTURE:

The most Important Step for Development Is the Provision of Infrastructure, Initially Physical Infrastructure and Social Infrastructure

The quality of life in any urban area depends on the availability of social, infrastructure and access. These include the following infrastructure:

Social Infrastructure Facilities:

- a) Educational Facilities
- b) Health Facilities
- c) Socio- cultural facilities
- d) Recreational Facilities

The facilities provided in Master Plan 2031, Commitment facilities and existing facilities were compiled and the gap analysis as to the need of land required for the calculated population has been calculated.

Proposed Facilities:

To conserve natural water bodies and hills following are proposed.

- Khasra water bodies and some existing water bodies have been provided with 9m plantation buffer.
- Safety Corridor marked along H.T. Lines & road is proposed after safety corridor.
- Community Level Facility areas have been proposed in several villages as per requirement for police station, dispensary/hospital, school, community hall, fire station, anganwadi.
- As per directions of Government of Rajasthan, mixed landuse is permissible upto 1.5 times of road width of 24 M and above.