

Zonal Development Plan of

**Nagar Nigam Jodhpur (North) Zone
2031**



**JODHPUR DEVELOPMENT AUTHORITY, JODHPUR
GOVERNMENT OF RAJASTHAN**

CONTENTS

1	INTRODUCTION	7
1.1	REGIONAL SETTING	7
1.1.1	PHYSIOGRAPHY	7
1.1.2	REGIONAL CONTEXT	7
1.1.3	ROAD LINKAGES	8
1.2	HISTORICAL BACKGROUND	9
1.2.1	DEMOGRAPHY OF THE TOWN – GROWTH TRENDS	10
1.3	MASTER DEVELOPMENT PLAN – 2031	12
1.4	ZONAL DEVELOPMENT PLAN	14
1.4.1	DELINEATION OF ADMINISTRATIVE ZONE	14
1.4.2	DELINEATION OF WORK AREA	14
2	ANALYSIS OF NAGAR NIGAM NORTH ZONE	16
2.1	LAND USE ANALYSIS AS PER MASTER PLAN	16
2.2	LAND USE ANALYSIS (AS PER EXISTING CONDITIONS)	17
2.2.1	RESIDENTIAL	18
2.2.2.	COMMERCIAL	18
2.2.2	MIXED LAND USE	18
2.2.3	INDUSTRIAL	18
2.2.4	GOVERNMENT AND SEMI-GOVERNMENT	19
2.2.5	PUBLIC SEMI-PUBLIC	19
3	PLANNING POLICES AND PARAMETERS	22
3.1	RESIDENTIAL	22
3.2	COMMERCIAL & MIXED	22
3.2.1	COMMERCIAL, MIXED, WHOLESALE, WAREHOUSING	22
3.2.2	URBAN STREET VENDORS	23
3.2.3	NORMS FOR URBAN STREET VENDORS	23
3.3	SOCIAL INFRASTRUCTURE	24
3.3.1	EDUCATIONAL	24
3.3.2	HEALTHCARE	25
3.3.3	SOCIAL, CULTURAL AND RELIGIOUS	25
3.3.4	OTHER COMMUNITY REQUIREMENTS	26

3.3.5	SAFETY MANAGEMENT	26
3.4	PHYSICAL INFRASTRUCTURE	27
3.4.1	WATER SUPPLY	27
3.5	POWER SUPPLY	28
3.5.1	DRAINAGE SYSTEM	28
3.5.2	SEWERAGE SYSTEM	28
3.6	SOLID WASTE MANAGEMENT	29
3.7	RECREATIONAL	29
3.7.1	ORGANIZED GREEN SPACES / SPORTS FACILITIES	29
3.8	TRANSPORTATION	30
3.8.1	ROAD	30
<u>4</u>	<u>PROPOSALS – STRATEGIES AND POLICIES</u>	<u>32</u>
4.1	PROJECT DEVELOPMENT STRATEGY	32
4.2	POPULATION PROJECTION 2031	32
4.3	FACILITIES CALCULATION AS PER PROJECTED POPULATION	34
4.4	PROPOSED FACILITIES FOR NORTH NAGAR NIGAM ZONE	35
4.4.1	PROPOSED ZONAL FACILITY AREA:	35
4.4.2	PROPOSED ROADS	36
4.4.3	PROPOSED SAFETY FACILITIES:	36
4.4.4	PROPOSED PLANTATION:	36

List of Figures

FIGURE 1 LOCATION OF JODHPUR	8
FIGURE 2 VIEW OF JODHPUR CITY	10
FIGURE 3 PROPOSED LAND USE PLAN JODHPUR- 2031	13
FIGURE 4 MAP SHOWING LOCATION OF NAGAR NIGAM NORTH ZONE ON MAP OF PLANNING ZONES FOR JODHPUR	15

List of Tables

TABLE 1-1 POPULATION GROWTH DURING 1911-2011	10
TABLE 1-2 WARD WISE POPULATION 2011	11
TABLE 2-1 ANALYSIS OF PROPOSED LAND USE AS PER MASTER DEVELOPMENT PLAN – 2031	16
TABLE 2-2 EXISTING LAND USE CLASSIFICATION	17
TABLE 2-3: ANALYSIS OF EXISTING COMMERCIAL LAND USE	18
TABLE 2-4: DETAILED ANALYSIS OF EXISTING EDUCATIONAL FACILITY	19
TABLE 2-5: DETAILED ANALYSIS OF EXISTING HEALTHCARE FACILITY	19
TABLE 2-6: DETAILED ANALYSIS OF EXISTING SOCIAL, CULTURAL & RELIGIOUS FACILITY .	20
TABLE 2-7: DETAILED ANALYSIS OF EXISTING RECREATIONAL FACILITY	21
TABLE 3-1: HIERARCHY AND NORMS FOR RESIDENTIAL AREAS	22
TABLE 3-2: HIERARCHY AND NORMS FOR COMMERCIAL CENTERS	22
TABLE 3-3: NORMS FOR INFORMAL SHOPS / UNITS FOR URBAN STREET VENDORS.....	24
TABLE 3-4: HIERARCHY AND NORMS FOR EDUCATIONAL FACILITIES.....	25
TABLE 3-5: HIERARCHY AND NORMS FOR HEALTHCARE FACILITIES.....	25
TABLE 3-6: HIERARCHY AND NORMS FOR SOCIO-CULTURAL AND RELIGIOUS FACILITIES ...	25
TABLE 3-7: NORMS FOR CREMATION AND BURIAL GROUND.....	26
TABLE 3-8: NORMS FOR POLICE FACILITIES	26
TABLE 3-9: NORMS FOR SAFETY FACILITIES.....	26
TABLE 3-10: DISTRIBUTION SERVICES	27
TABLE 3-11: PROPOSED WATER SUPPLY REQUIREMENT OF THE ZONE	28
TABLE 3-12: HIERARCHY AND NORMS FOR ORGANIZED GREEN SPACES	29
TABLE 3-13: HIERARCHY AND NORMS FOR SPORTS FACILITIES	30
TABLE 3-14: MINIMUM STANDARD FOR ROW OF VARIOUS ROAD WIDTHS	30

TABLE 3-15: CARRIAGEWAY WIDTH FOR EACH TYPE OF ROAD	30
TABLE 4-1: ESTIMATED POPULATION PROJECTION FOR NORTH NAGAR NIGAM ZONE, JODHPUR	33
TABLE 4-2: EXISTING ZONE LEVEL FACILITIES OF NAGAR NIGAM NORTH ZONE.....	34

1 INTRODUCTION

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. For this, the 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 centre 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.

1.1.1 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.

1.1.2 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.

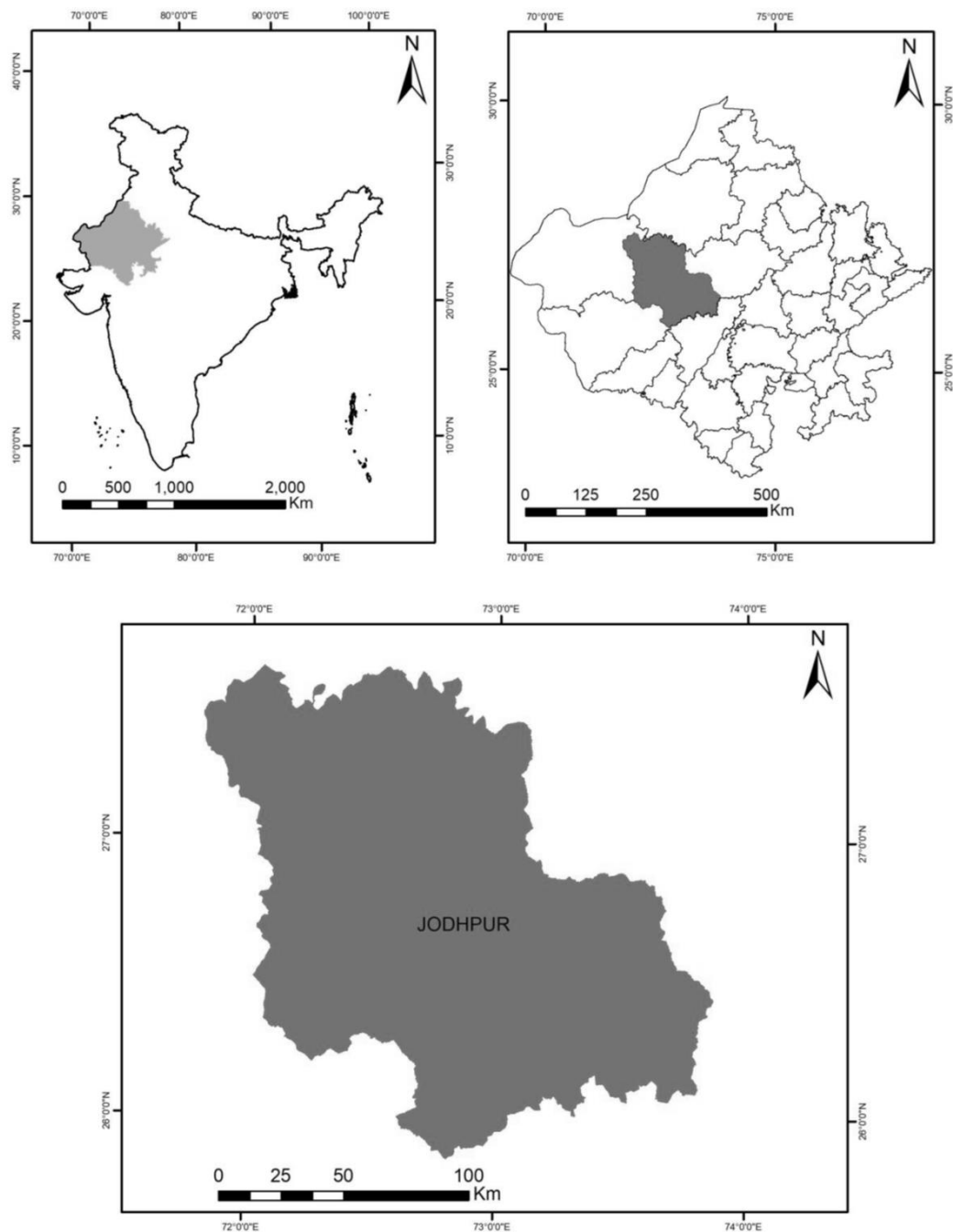


Figure 1 Location of Jodhpur

1.1.3 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, connecting Jaitaran-Bilara-Kaparda-Jodhpur Kalyanpur Pachpadra-Balotra-Tilwara-Kher-Bagundi Dhudhwa-Madhasar-Kawas and terminating at its junction with NH 68 near Barmer.

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, and Samdari.

1.2 Historical Background

The Jodhpur city is the administrative headquarters of the district. Jodhpur with strategic location is one of the important city of western Rajasthan famous as Sun City established on 12th May 1459 by Rao Jodha. Jodhpur is the second largest city in Rajasthan, after Jaipur, and one of the most visited. 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 Marwar. Even today, the fort is an awesome sight, especially when seen from the old town.

Jodhpur has culturally been known by the name of Jodhana by the locals. The city is famous for its food and its popularity can be judged by the fact that one can find sweet shops named "Jodhpur Sweets" in many cities throughout India.

The city is also home to several educational institutions, the most prominent being All India Institute of Medical Sciences, Jodhpur, Indian Institute of Technology Jodhpur, Dr. Sampurnanand Medical College, DSRRAU Jodhpur, and National Law University, Jodhpur, and many research institutes, such as Indian Space Research Organisation,

Defence Research and Development Organisation, Central Arid Zone Research Institute, Arid Forest Research Institute, and Desert Medicine Research Centre are also located in the city.



Figure 2 view of Jodhpur City

1.2.1 DEMOGRAPHY OF THE 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.

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

Table 1-1 Population Growth during 1911-2011

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	44083	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

Table 1-2 Ward Wise population 2011

Ward Number	Population (Census 2011)	Ward Number	Population (Census 2011)
1	7702	41	7421
2	6426	42	6399
3	8854	43	9975
4	6462	44	6805
5	7454	45	9349
6	8329	46	11530
7	5912	47	7089
8	7328	48	5639
9	5932	49	6201
10	5929	50	6064
11	7409	51	6645
12	7457	52	6076
13	7463	53	5114
14	7129	54	6353
15	6974	55	6701
16	6862	56	6194
17	7847	57	6006
18	6354	58	4278
19	10289	59	4096
20	6744	60	4974

21	6319	61	5283
22	6462	62	5291
23	5873	63	6019
24	6821	64	4292
25	6510	65	7051
26	4777	66	6506
27	5975	67	7156
28	5436	68	8373
29	4845	69	10253
30	5423	70	4304
31	6270	71	5009
32	4751	72	4274
33	6244	73	4180
34	6443	74	2805
35	6029	75	9310
36	5875	76	7671
37	6828	77	4013
38	5932	78	6307
39	5848	79	6722
40	5088	80	8749

Source: Census 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 Plans are being prepared under Jodhpur development authority act in order to detail out proposal of master development plan.

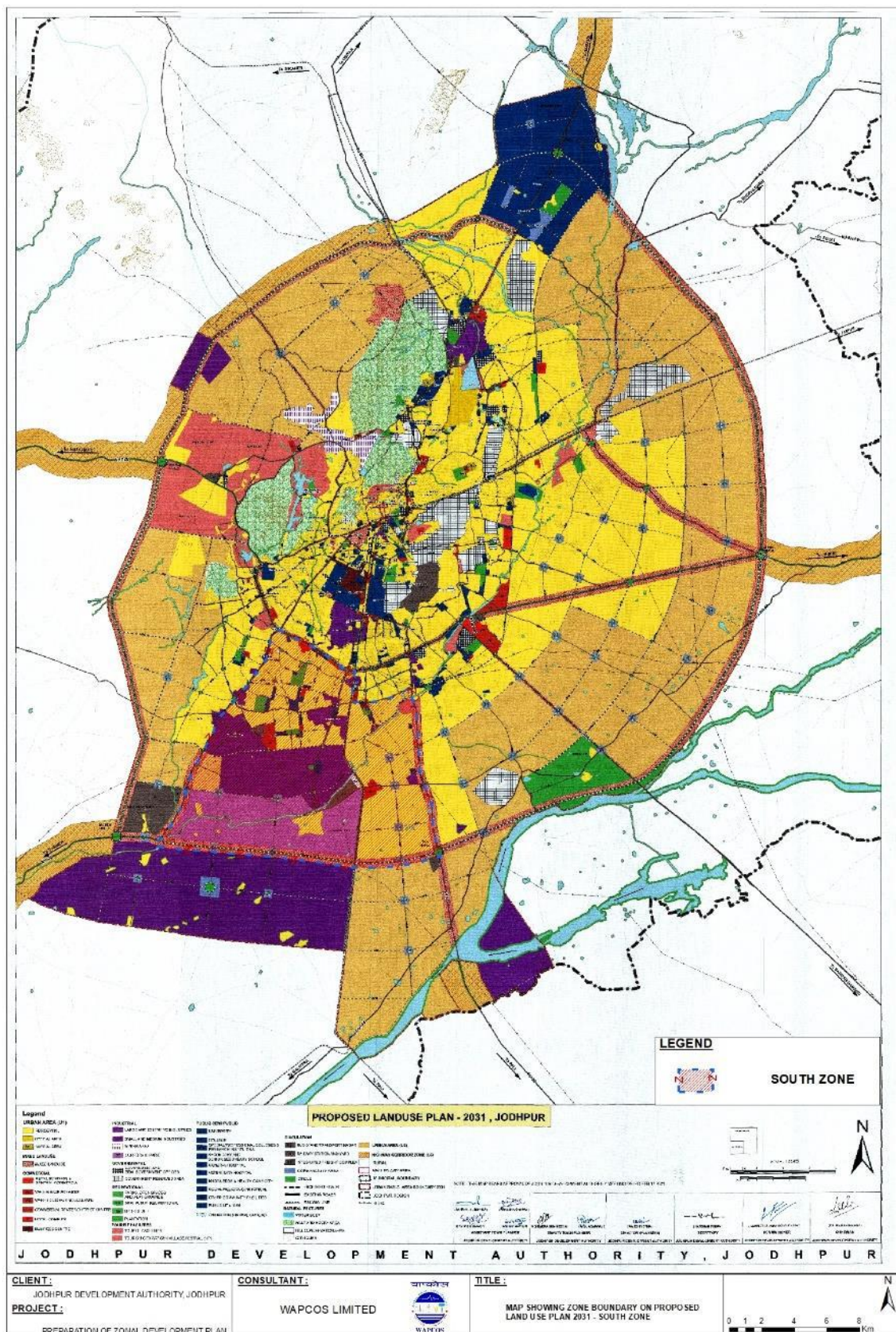


Figure 3 Proposed Land Use Plan Jodhpur- 2031

Source- Jodhpur Development Authority

1.4 Zonal Development Plan

The Master Plan – 2031 for Jodhpur Urban Area shows the proposed land uses required at the city level based on the population projection for the horizon year 2031. However, in the absence of proposals for zonal level land uses, the requirement of zone level facilities is not ensured while approving layout plans. It is therefore, felt necessary to prepare Zonal Development Plan in order to provide proper infrastructure and urban facilities in accordance with the requirements of the growing population of the zone and to ensure a healthy environment for the public. Urban Development, Housing and Local Self Government Department, Government of Rajasthan, has issued the guidelines for the preparation of Zonal Development Plans which will detail out the proposals of Master Plan and thus will act as a link between the layout plans and Master Plan, containing a zonal base map, existing land use map, land uses as per Master Plan, land use, facilities, road network plan required at zone level and land reservations for water bodies & forests etc. as per revenue record and other specific provisions as per zone requirement, if necessary. The Zoning Regulations will further ensure the zone level social infrastructure facilities and will provide guidelines to permit various uses / activities in the proposed use zones of Zonal Development Plan.

1.4.1 DELINEATION OF ADMINISTRATIVE ZONE

Jodhpur Master Plan 2013-2031 is proposed for an area of 446733.94 hectare with 395 Revenue Villages & Jodhpur city. They are as below:

- South Planning Zone
- North Planning Zone
- West Planning Zone
- East Planning Zone

1.4.2 DELINEATION OF WORK AREA

As per Jodhpur Master Development Plan 2031, there are 4 Major zones which are further subdivided into 18 zones Planning Zones.

Nagar Nigam North is assigned to Acro Ventures Limited Pvt. Ltd.

The extension of Preparation of Zonal Plan Nagar Nigam North. Covering about 11609 hectares.

2 ANALYSIS OF NAGAR NIGAM NORTH ZONE

Nagar Nigam North Zone is lies in the centre of the Jodhpur city. NH 62 and SH 61 is passes through the zone.

The zone consist of following villages:-

- Gewa
- Basni Malyan
- Basni Tamboliyan
- Punjla
- Chainpura
- Bhadwasia
- Jodhpur
- Bagan
- Golasni
- Mandore

2.1 Land use analysis as per Master plan

Proposed Landuse in the Master Development Plan 2031 of the Nagar Nigam North Zone includes majorly residential, commercial center, industrial and corporate park area. The other proposed land uses are tourist facilities, Parks and Playgrounds and secondary and senior secondary schools, other community facilities, core facility and mixed land use.

Table 2-1 Analysis of Proposed Land Use as per Master Development Plan – 2031

S. No.	Land Use	Area (in Hectare)	Percentage of Urbanisable Area (%)	Percentage of Urban Area (%)
1	Residential	3960	37.31%	34.11%
2	Commercial	222.4	2.09%	1.91%
3	Industrial	3621	34.11%	31.19%
4	Government / Semi-Government	174	1.63%	1.49%
5	Recreational	1717	16.1%	14.78%
6	Public and Semi Public	478	4.5%	4.11%
7	Circulation	441	4.1%	3.79%
8	Special Planning Area	0	0	0
	Urbanisable Area	10613	100.00%	91.38%
9	Agricultural, Plantation and Vacant Area	278		2.39%

10	Government Reserved	375		3.23%
11	Water bodies /Nalah	343		2.95%
Urban Area		11609		100.00%

2.2 Land use analysis (as per Existing conditions)

Base Map and existing land use map has been prepared using Ground Survey by DGPS and TOTAL STATION with establishment of control points in project area and by using very high resolution latest Satellite Imagery for digitizing all buildings along with their existing use, roads, railway lines, water bodies, culverts, bridges, high/low tension lines, parks, playgrounds, wetlands, important landmarks, heritage buildings, vacant lands etc.

Generalized existing land use of Nagar Nigam North Zone is mentioned below:-

Table 2-2 Existing land use classification

S. No.	Land use		Area (in Ha.)	Percentage of Total Area (%)	
1	Residential		Residential	1593	13.72
2	Commercial		Retail Business and General Commercial	60.66	0.52
			Warehousing and Godowns	1.72	0.01
			Wholesale Business/Malls/Hotels/Others	36.69	0.32
3	Mixed Use		Mixed Use	115.43	0.99
4	Industrial		Small & Medium	125.77	1.08
5	Government 7 Semi Government		Government& Semi-Government Office	398.45	3.43
6	Recreational		Parks / Open Space	86.5	0.74
			Stadium	9.12	0.08
7	Public – Semi Public	Social Infrastructure	Educational	159.67	1.37
			Health Care	9.01	0.07
			Religious / Social-Cultural	56.31	0.48
			Other Community Facilities	90.54	0.78
		Physical Infrastructure	Public Utilities	89.8	0.77
8	Circulation		Railway Station / Bus Stand/Parking lots	9.51	0.08
			Roads	725.27	6.25
Developed Area			3567.45	30.73	

9	Open/ Agricultural/Vacant	Open/Agricultural/Vacant	7865.6 5	67.75
10	Water Body	Water	176	1.52
Total Developed Area			8041.6 5	69.27
TOTAL AREA			11609	100

2.2.1 RESIDENTIAL

Residential Use accounts to 1593 hectare of area, making it 13.72% of the total area.

S.No.	Name of Activity	Number	Area (Ha.)
1	Plotted & Flatted / Group Housing	5081	1592.26
2	Individual Housing	22	0.74
Total		5103	1593

2.2.2. COMMERCIAL

Commercial use shares only 0.85% of the total area, contributing to 99.07 hectare of land.

Table 2-3: Analysis of Existing Commercial Land Use

S. No.	Land use		Area (in Ha.)	Percentage of Developed Area (%)
1	Commercial	Retail Business and General Commercial	60.66	0.52
		Warehousing and Go downs	1.72	0.01
		Wholesale Business/Malls/Hotels/Others	36.69	0.32
Total			99.07	0.85

2.2.2 MIXED LAND USE

Zone has prevalent mixed land use character constituting to 115.43 hectare i.e., 0.99% of total area.

2.2.3 INDUSTRIAL

As per existing land use, Industrial land use comprises of many Industrial use occupied plots and 125.77 Hectare land i.e., 1.08% of the total area of the zone.

2.2.4 GOVERNMENT AND SEMI-GOVERNMENT

Government offices like Bank office, Police station etc. are situated in this zone area covering an area of 398.45 hectare and 3.49% of the total area of the zone.

2.2.5 PUBLIC & SEMI-PUBLIC OFFICES

The public semi-public land use in the zone occupies 405.33 Hectare area of land, which is around 3.49% of the total area and includes social and physical infrastructure facilities present in Zone.

2.2.5.1 Social Infrastructure

2.2.5.1.1 Educational

Educational facilities stand out to be 159.67 hectare of land and 1.37 % of total area of zone which comprises of primary, secondary and senior secondary schools, Colleges, Universities, Professional Colleges, Institutes.

Table 2-4: Detailed Analysis of Existing Educational Facility

S.No.	Name of Activity	Number	Area (Ha.)	Percentage of Developed Area (%)
1	Primary / Secondary School	169	54.05	0.465
2	Senior Secondary School	40	13.445	0.116
3	College/ I.T.I.	51	92.17	0.794
Total		260	159.67	1.37

2.2.5.1.2 Healthcare

Area towards Healthcare Facilities contribute to a least of 9.01 hectare area of land and 0.07% of total area of the zone having Private Hospital and Government Hospitals both.

Table 2-5: Detailed Analysis of Existing Healthcare Facility

S.No.	Name of Activity	Number	Area (Ha.)	Percentage of Developed Area (%)
1	Dispensary/ Hospital/ Sub-Health Centre / Nursing Home/ Others	123	8.51	0.07
2	Veterinary Hospital	1	0.5	0.004

Total	124	9.01	0.07
--------------	------------	-------------	-------------

2.2.5.1.3 Social, Cultural and Religious and Other Community Facilities

Social, Cultural and Religious facilities together contribute to 1.26 % of the total area of the Zone having an area of 146.85 hectare including Fort, dharamshalas, parks & religious places like Mandir and Masjid.

Table 2-6: Detailed Analysis of Existing Social, Cultural & Religious Facility

S. No.	Name of Activity	Number	Area (Ha.)	Percentage of Developed Area (%)
1	Religious	79	30.61	0.26
2	Socio-cultural	13	25.7	0.22
3	Other Community Facilities	132	90.54	0.78
Total		224	146.85	1.26

2.2.5.2 Physical Infrastructure

Public Utilities account for 89.8 Hectares and 0.77% of the total area of the zone which includes Electric Sub-Station, Power House, water works, Community water tanks, etc.

2.2.5.2.1 Water supply

Currently water is supplied in the zone using tube wells and overhead tanks. Presently there are around 50 Elevated Service Reservoirs present in this zone and 135 LPCD is being supplied in this zone.

2.2.5.2.2 Power Supply

Electricity is distributed through L.T lines and H.T. lines, from Power stations.

2.2.5.2.3 Drainage System and Sewerage System

Efficiency of the drainage system is lacking in the North area of Nagar Nigam, Jodhpur. There is one STP located in Salawas in south zone with capacity of 100 MLD

2.2.5.3 Recreational

Zone has prevalent recreation land use character constituting to 95.62 hectare i.e., 0.82% of total area. This Recreational use consists of Playgrounds, Parks and Stadiums.

Table 2-7: Detailed Analysis of Existing Recreational Facility

S. No.	Name of Activity	Number	Area (Ha.)	Percentage of Developed Area (%)
1	Parks / Open Spaces	106	86.5	0.74
2	Stadiums	6	9.12	0.08
Total		112	95.62	0.82

2.2.5.3.1 Transportation

Circulation is one of the important components, which comes under major land use category. This zone has the main Jodhpur junction railway station. This zone has important roads on the periphery such as NH-62, SH-16, Soorsagar Bypass, Surpura Bypass. Existing roads consists of BT/CC roads, katcha rasta.

2.2.5.3.2 Railway

There is the main Jodhpur junction Railway station in the zone and Railway Track stretching from the station to other zones passes through various wards of the zone including their overpasses at many areas.

2.2.5.3.3 Public Transportation – Bus Services, Autorikshaw, Cycle etc.

The main Bus stand of the city is present in the zone, there is no public transport facility other than private auto rickshaws. DPS circle serves as temporary bus stop

2.2.5.3.4 Parking

There is lack of designated parking space in the Zone. Presently majority of vehicles are parked along roads which include all types of modes i.e. two wheelers, cars, trucks etc. This situation finally leads to the decrease in the effective carriageway width, which in turn creates bottlenecks at some locations and hampers the movement of traffic.

2.2.5.3.5 Forests, Hills and Water Bodies

The major water bodies present in the zone are Kailana Lake, Balasamand Lake, Baiji ka Talab, Toorji ka Jalra (Stepwell). The Major hill on which Mehrangarh Fort is located is situated in the Zone. There are forests and a major Botanical Zoo Forest that is Machiya Biological Park is also present in the zone near Kailana Lake.

3 PLANNING POLICES AND PARAMETERS

In order to have planned, balanced and integrated development of the zone certain planning parameters are proposed to be followed, these parameters will be the guidelines for Proposed Zonal Development Plan.

3.1 RESIDENTIAL

Residential development for the zones could be considered on the basis of density or the building height. The below table show the density from which residential area can be proposed. These densities have to be followed while proposing the residential development.

Table 3-1: Hierarchy and Norms for Residential areas

S. No.	Category of Density	Classification	Color Code
1	R1 (0-75 PPA)	Low Density	
2	R2 (75-150 PPA)	Medium Density	

3.2 COMMERCIAL & MIXED

3.2.1 COMMERCIAL, MIXED, WHOLESALE, WAREHOUSING

It is recommended that single plot depth or 1.5 times of the road width whichever is less could be considered for mixed development on National and State Highway roads. Property depth above 0.5 times of road width could be considered by the competent statutory committee.

The sub Zonal Development Plan shall be prepared as per requirement for specific area function Traffic Management Plan, Street Vendor's Plan, Redevelopment Plan, and Heritage Management Plan.

Table 3-2: Hierarchy and Norms for Commercial Centers

Unit	Category	Area (Ha.)	Population	No. of Shops
Housing Area	Convenience Shopping	0.15	5000	1-110 persons
Neighborhood	Local Shopping Centre	0.46	15,000	1-200 persons
	Weekly Market	0.40	1 or 2 Place per 1	As per requirement

Community			Lakh	
	Informal Spaces / Vending Zone	As per requirement	On the basis of survey	1 per 10 plots
	Milk distribution centre / Dairy Booth	As per requirement	As per requirement	As per requirement

3.2.2 URBAN STREET VENDORS

The informal and un-organized sector is a major source of employment in the economic fabric of the city for which the following approach is proposed:

- Earmarking of 'Hawking' and 'No Hawking' Zones at neighborhood and cluster levels.
- New areas for informal retail shops to be developed and integrated with housing, commercial, institutional and industrial areas.
- Provision of common basic services like toilets, water points, etc.
- Area for essential retail outlets e.g., Milk Booth, Fair Price Shop, Bank ATM, Restaurant etc. may be provided.
- Provisions for informal retail units and weekly market to be made, wherever necessary by the local body / development authority.
- Vegetable markets are to be earmarked by the local body/ development authority / at neighborhood level.

The township policy makes provisions for informal sector in upcoming township schemes. As per norms 6 % commercial area is to be earmarked in townships and accordingly

- 2% area from 6% commercial to be set apart for convenient shopping/ Kiosks / informal sector.
- Colonies developed by Jaipur Development Authority/ RHB/ provides for 2% towards informal sector.
- Residential complex provides for 1.5% plinth area reserved for informal sector (Kiosk) on stilt level. The space shall be allotted at concessional price.

3.2.3 NORMS FOR URBAN STREET VENDORS

The informal sector retail commercial activities should be incorporated in the planned development in various use zones. The provision of informal sector trade units should

be ensured at the time of sanction of building plans / layout plans as per the norms given in the Table

Table 3-3: Norms for Informal Shops / units for Urban Street Vendors

S. No.	Use Zone/Use Premises	No. of Informal Shops /Units
(i)	District Centre, Community Centre, Convenience Shopping Centre,	2 to 3 units per 10 formal shops (to be provided in informal bazaar/service market components)
(ii)	Government and Commercial Offices	5 to 6 units per 1000 employees
(iii)	Wholesale trade and Freight Complexes	3 to 4 units per 10 formal shops
(iv)	Hospital	3 to 4 units per 100 beds
(v)	Bus Terminal	1 unit for two bus bay
(vi)	Secondary/Senior Secondary	2-3 units
(vii)	Parks Community Park District Park	to 3 units to 4 units at each major entry
(viii)	Residential	1 unit/10 plots
(ix)	Industrial	5 to 6 units per 1000 employees

Source: URDPFI Guideline

3.3 SOCIAL INFRASTRUCTURE

Location of social infrastructure should be decided by taking into account of preferable 300m – 800m walkable distance (located within 5-15 minutes" walk) in each neighborhood level.

Thus, neighborhood level facility requirement can be derived by taking maximum of 800 m distance buffer to the existing facilities of neighborhood and simultaneously the proposed population with respect to the proposed density of that zone.

3.3.1 EDUCATIONAL

Determination of Educational facilities should not only be made on the basis of threshold population given in the table below, but also by considering literacy rate, in and dropout rate of pupils.

Table 3-4: Hierarchy and Norms for Educational Facilities

Planning unit	Category for Educational facilities	Area (Ha.)	Population
Housing Area	Primary School / Upper Primary	0.2 – 0.30	5000
Neighborhood	Secondary School / Senior Secondary School	0.40– 0.80	7500
Community	School for Specially Abled	0.2 – 0.40	As per Requirement

3.3.2 HEALTHCARE

As per the recommendations made in URDPFI guidelines, considering the Indian Public Health Standards, the calculation of number of beds is recommend as 4 beds per 15,000 population and category-wise details of area of various Healthcare Facilities with respect to population are given below as per URDPFI guidelines:

Table 3-5: Hierarchy and Norms for Healthcare Facilities

Planning unit	Category for Healthcare Facilities	Area (Ha.)	Population
Neighborhood	Dispensary / Sub-Health Centre / Nursing Home / Small Hospital (25-50 beds)	0.05 – 0.45	5000 - 15000
Community	Hospital (more than 50 beds)	0.08	15000

3.3.3 SOCIAL, CULTURAL AND RELIGIOUS

Table 3-6: Hierarchy and Norms for Socio-cultural and Religious Facilities

Planning unit	Category for Socio-Cultural and Religious	Area (Ha.)	Population
Neighbourhood	Anganwadi / Child Care Centre / Creche	0.02 to 0.03	As per requirement
	Multi-purpose Community Room	0.1	5000
	Community Hall (Barat Ghar)	0.2	15000
	Religious Facility	0.04	As per requirement

3.3.4 OTHER COMMUNITY REQUIREMENTS

3.3.4.1 Cremation / Burial Ground

Cremation and Burial Grounds are preferred to be proposed in the periphery control belt and these facilities may include ancillary facilities like place of worship, open area, public utility facilities, etc. within the premises.

Table 3-7: Norms for Cremation and Burial Ground

Category for Distribution Services	Area (Ha.)	Population
Cremation Ground/ Burial Ground	0.40	As per requirement

3.3.4.2 Police & Safety facility

Table 3-8: Norms for Police Facilities

Category for Distribution Services	Area (Ha.)	Population
Police Post	0.05	50,000
Police Station	0.20	1 Lakh
Traffic Police Control Room	As per site	As per requirement

Source: URDPFI Guidelines

3.3.5 SAFETY MANAGEMENT

Fire stations should be located so that the fire tenders are able to reach any disaster site within 3- 5 minutes of time and should be located on the corners plots of main roads with minimum two entries as far as possible.

In new layouts, concept of underground pipelines for fire hydrants on the periphery exclusive for firefighting services should be considered and necessary provision for laying underground/ over ground firefighting measures, water lines, hydrants etc. may be kept wherever provision of fire station is not possible.

Table 3-9: Norms for Safety Facilities

Planning unit	Category for Distribution Services	Area (Ha.)	Distribution of Population
Neighborhood	Sub-Fire Station / Fire	0.60	Within 2-4km radius

	post		
Community	Fire Station	1.0	2 Lakh / within 5-7 km radius

Source: URDPFI Guidelines

3.3.5.1 Distribution Services

Table 3-10: Distribution Services

Planning unit	Category for Distribution Services	Area (Ha.)	Population
Neighborhood	Petrol / Diesel Filling and Service Centre	As per prevailing Bylaws and Government Orders	As per requirement
	Compressed Natural Gas (CNG) Filling Centre	0.108 (36m x 30m)	As per requirement
	Milk Distribution / Dairy Booth	As per requirement	As per requirement

Planning unit	Category for Distribution Services	Area (Ha.)		Population
Community	LPG / Cooking Gas Godown	Gas Godown Capacity (in kg)	Area of Plot (Sq.m.)	As per requirement except in Residential Areas
		2000-10000	1000	
		10000-12000	1200	

Source: URDPFI Guidelines

3.4 PHYSICAL INFRASTRUCTURE

3.4.1 WATER SUPPLY

The recommended maximum water supply level as per the CPHEEO standards, for cities provided with piped water supply where sewerage system is existing / contemplated is 135 lpcd, whereas in metropolitan and mega cities with same system

is 150 lpcd and in towns provided with piped water supply without sewerage system is 70 Lpcd.

Table 3-11: Proposed Water Supply Requirement of the Zone

S.No.	Sector	Standard Demand
1	Domestic	135-150
2	Public	20
3	Industrial	30
4	Commercial	10
5	Water Loss	20
6	Total	215-230
7	Fire Fighting	1% of total demand

Source: URDPFI Guidelines

3.5 Power supply

Low voltage lines (less than 11kv)- a minimum horizontal clear distance of 1.2 m from nearest conductor of low voltage electrical lines having capacity less than 11 KV shall be mandatory from any structure or projected part of a building including balcony. The minimum safety corridor shall be marked as “NO CONSTRUCTION ZONE” in layout plan. No road, pathway, hoardings or signage or plantation or any other construction shall be permissible into the minimum safety corridor others – Public Facilities.

Public toilets in public areas / open areas, parks, plazas, parking areas, fuel stations etc. shall be provided at every 1 km and shall be disabled-friendly and in 50-50 ratio of male-female, along with proper signage, helpline numbers, modes – pay and use or free and proper maintenance.

3.5.1 DRAINAGE SYSTEM

As per CPHEEO manual on Sewerage and Sewage Treatment System, sanitary sewers are not expected to receive storm water. Strict inspection, vigilance, proper design and construction of sewers and manholes should eliminate this flow or bring it down to a very insignificant quantity. Therefore, it is evident to plan a separate system to carry storm water.

3.5.2 SEWERAGE SYSTEM

As per Central Public Health and Environmental Engineering Organization (CPHEEO) manual 80% of the water supply may be expected to reach the sewers. However, it

recommends designing the system by considering minimum waste water flow of 100 liters per capita per day.

Least water intensive sanitation and sewerage systems with decentralized sewage treatment plants should be incentivized. It has been emphasized that if sewage from the urban and semi-urban areas were reused for a variety of non-potable uses, the demand on the potable water supply would be reduced.

3.6 Solid waste management

Municipal Solid Waste Management (MSWM) refers to systematic process that comprises of waste segregation and storage at source, primary collection, secondary storage, transportation, secondary segregation, resource recovery, processing, treatment and final disposal of solid waste.

Zero Land-fill for Solid Waste Management projects to maintain environmental sustainability. In fact, each project should aim to improvement in the environment, rather than on „minimizing the damage“. Measures to be taken for recycling and reuse in the solid waste management system.

3.7 RECREATIONAL

3.7.1 ORGANIZED GREEN SPACES / SPORTS FACILITIES

Considering open spaces, including recreational space, organized green and other common open spaces, all require provision of minimum 10 to 12 sq. m per person as a desirable area for small towns, 14 to 16 sq. m. for medium towns and 12 to 14 sq. m. for large and metropolitan cities, whereas in the built up areas minimum norms as per National Building Code suggests 3.0 sq. m. per person. Along with the above mentioned norms, category-wise organized green space area requirement is detailed out in the table given below:

Table 3-12: Hierarchy and Norms for Organized Green Spaces

S.no.	Category	Population per Planning unit	Number of Organized Green Spaces	Area Requirement (Ha.)
1	Housing Cluster Park	10000-15000	1 or 2 parks of 0.50 ha.	1.0
2	Housing Cluster Playground	10000-15000	1 or 2 playgrounds of 0.50 Ha.	1.0

Source: URDPFI Guidelines

In addition to the above norms and standards, any recreational space shall have minimum area of 450.00 sq. m. and its minimum average dimension shall not be less than 7.5 meter and length shall not exceed 2.5 times the average width. Also, if at all any building line is lining close to the recreational space then shall at least 3 meter away from the boundary of the recreational open space.

Green areas and other associated activities to be preferably proposed on Government reserved land. In case government land is not available and is to be proposed on privately owned land, then the local authority / body shall provide fair compensation as per laws or otherwise can work out a feasible model offering fair means of income along with fulfilling the purpose of developing and maintaining green spaces.

Table 3-13: Hierarchy and Norms for Sports Facilities

S.no.	Category	Population per Planning unit	Area Requirement (Ha.)
1	Housing Cluster Play area	5000	0.50
2	Neighborhood Play area	15000	1.50
3	Community Sports Centre	1 Lakh	8.0
4	City / District Sports Centre	10 Lakh	20.0

Source: URDPFI Guidelines

3.8 TRANSPORTATION

3.8.1 ROAD

Table 3-14: Minimum Standard for ROW of various road widths

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

Source: URDPFI Guidelines

Table 3-15: Carriageway Width for each type of road

S.no.	Category of roads	Minimum Lanes	Width of car lane (m)	Width of Bicycle Track (m)	Width of Green Belt (m)
1	National Highway/State Highway	6	3.0-3.5	-	30
2	Arterial Road	6	3.0-3.5	1.9-2.5	30-36
3	Sub Arterial Road	4	3.0-3.5	1.7-2.0	24-30
4	Major / Collector Road	4	2 lanes of 3.0-3.5	1.5	18-24
5	Local Street / Road	1-2	2.75-3.0	1.5	12-18
6	Internal Road	1-2	2.75-3.0	1	09-12

4 PROPOSALS – STRATEGIES AND POLICIES

The Planning and Building Act understands public participation as an individual's or a group's right to take part in and influence public assessment and decision-making processes. This means that those who live in a community get involved in planning its future.

4.1 PROJECT DEVELOPMENT STRATEGY

Public participation in a planning process is mindful of the best possible plan", and will, as described in the guide, aim to:

- Ensure good solutions that pay attention to everyone's needs
- Enable all affected and interested parties to present their views
- Promote creativity and enthusiasm, and be an arena for democratic participation in the local community
- Provide a solid basis for decision-making

Public participation is a basic condition in local democracy. It allows the population to participate and contribute to bring about better planning solutions. The population's active role in planning and decision-making processes is highlighted to safeguard our shared values and basic living conditions in a sustainable society. Good facilitation of public participation in planning is vital in securing well-functioning and efficient planning processes. Commencing too quickly, without sufficient involvement from the affected groups and interests, does not necessarily lead to more efficient planning processes.

The development of the city ultimately depends upon the expectations and encouragement of its residents. In order to achieve the objectives, set out in the Zonal Development Plan, the active participation and cooperation of its residents is required. The citizen awareness could enable the city to become self-competent and sustainable. Therefore, it is necessary for the city's residents to provide their full support in implementing the programs proposed in the Zonal Development Plan. PPP and BOT are also proposed to be initiated for basic infrastructure and public amenities.

4.2 POPULATION PROJECTION 2031

The existing population was 519082 for North Nagar Nigam according to Census Data 2011. North Nagar Nigam is the developable area of the city, 30% growth rate is assumed for which the projected population comes out to be 674806 for 2021 and 877248 for 2031 which is again with the assumed growth rate of 30%.

Table 4-1: Estimated population projection for North Nagar Nigam Zone, Jodhpur

POPULATION PROJECTION						
Population 2011 (Census.) (North Nagar Nigam Zone)	Growth Rate (%)	Incremental Growth from 2011- 2021	Population 2021 (North Nagar Nigam Zone)	Growth Rate (%)	Incremental Growth from 2021- 2031	Population 2031 (North Nagar Nigam Zone)
519082	30	155724	674806	30	202442	877248

4.3 FACILITIES CALCULATION AS PER PROJECTED POPULATION

Table 4-2: Existing Zone Level Facilities of Nagar Nigam North Zone

Category of Facilities		Norms/Guidelines					Master Plan		Remarks
Indicator	Sub Indicator	Req. Facilities for Proposed Population	Area Required/ Unit	Facilities required as per norms	Total nos. of Existing Facilities	Additional Required Units	Additional Required Area (Hectares)	Proposed Area in Master Plan (Hectares)	
Educational Facilities	Primary	One for 4000-5000 population	2000-3000	175	169	6	1.5	Total proposed in MDP 478 Ha – Existing Area 406 ha = 72 Hactares available for addisiton al required units	Not additional requirement
	Upper Primary								
	Secondary	One for 7500-10000 population	4000-8000	88	40	48	28.8		
	Senior Secondary								
	Degree College/Professional College	80000 to 1 Lac Population	-	9	51	0	-		
Health Facilities	General Hospital	One for 15000 population	8000	58	61	0	-		
	Dispensaries/ Medical Stores	One for 5000 - 15000	500 -4500	58	62	0	-		
Recreational	Parks/Stadium/Playground	10000-15000	10000	88	112	0	-	-	Not additional requirement
Socio- Cultural	Community Facilities + Religious	One for 15000 population	--	58	224	0	-	-	

Civil Defence Services	Police Chowki	One for 50000 population	500	17	7	10	0.50	-	As per requirement, Police chowki can be established in any MDP use as per DCR.
	Police Station	One for 90000 population	2000	10	11	0	-	-	No
	Traffic/ Police Control Centre	As per Requirement	On Site	-	1	-	-	-	No
	Fire Station/ Fire Post/ Control Centre	1 in every 2-4 km Radius	Till 0.6 Hectares	3	3	-	-	-	No
Distribution Facilities	LPG Godown/ Gas Godown	40000- 50000	520	17	7	10	-	-	New gas godowns are allowed in periphery and rural area, so no any further requirement in this zone.

4.4 PROPOSED FACILITIES FOR NORTH NAGAR NIGAM ZONE

4.4.1 PROPOSED ZONAL FACILITY AREA:

As per the gap analysis of existing infrastructure in the North Nagar Nigam Zone of Jodhpur, it is analysed that the zone requires additional social infrastructure provision especially for the projected population. Zonal Facility Area is proposed for the allotment of land for the future development of social infrastructure to meet the needs of the zone as per the Zonal Development plan 2031.

These Zonal facility Area is proposed in two areas that are Mandore and Gewan with the areas of 2.27 Ha in Mandore, 2.65 Ha in Gewan. The Khasra numbers for the two zones are 129 and 59 respectively.

4.4.2 PROPOSED ROADS

Proposed Sub Collector and local roads on the either side of the Tiwari Road, proposed a road link connecting the upper part of the Kailana Lake parallel to the Kailana Road. The Road widths of the proposed roads are shown in the below table.

4.4.2.1 Special Roads

The following roads are marks as special roads in Zonal Development Plan

1. From Asuji pyau to NLU electric substation via Amritlal Stadium
2. From Mandore Police station to Ram Sagar Chauraha, via Gokul ji pyau and Bhati circle
3. Nagaur road Krishi mandi to Kishor bagh
4. From Mata ka Than to 8 mile Nagaur Road via aanganwa

The right of way of these special roads are different in different parts, the determination of right of way of these roads can be determined after the recommendation of the committee mentioned in Note 2. (Page number 129) of Table 29 of the Master Development Plan 2031 report. The right of way for these roads will be valid as per the master plan till the time it is decided by the committee as above.

4.4.3 PROPOSED SAFETY FACILITIES:

Safety Corridor marked along H.T. Lines, possible road has been proposed on both sides of the line. The proposed security corridors will be valid as per the orders of the State Government dated 08.03.2017 on both sides of the HT lines.

4.4.4 PROPOSED PLANTATION:

A plantation strip of 30 meters has been proposed around the large reservoirs and a plantation strip of 9 meters (30 feet) wide has been proposed around the smaller reservoirs. A 9 meter wide plantation strip has been proposed around the big drains and water flow system.

Linear extension of the canal which is situated on the hills on the north side of Mandore, 30 meter plantation buffer is proposed on both sides of the canal. It is proposed to extend up to NH 65 road connecting Mandore area.