



Master Plan-2033

TURKYAMJAL MUNICIPALITY

Prepared by

Cities and Governance (2022-24 Batch)

School of Public Policy and Governance

Tata Institute of Social Sciences, Hyderabad

Anchored by: SPA Bhopal



Regional Settings

CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

01

HISTORY

Turkayamjal was a Census Town in the erstwhile Andhra Pradesh State during the 2011 census with an area of 20.53 sqkm. It was constituted as a municipality in the year 2018.

PRESENT GROWTH FACTORS

- The Turkayamjal Municipality has been experiencing the really boom ever since it was constituted as a municipality. This is evident from the mushrooming of real estate companies in this locality and the exorbitant prices that the plots were sold. This demand is due to its proximity to the major roads viz. ORR, NH65, Nagarjuna Sagar Road, and the International Airport. However, the development has been haphazard with inadequacy in basic services like drainage system, public transport and housing among others.
- The Municipality hosts a variety of educational institutions and Adibatta, the defence and aerospace hub of Hyderabad is 12km away.

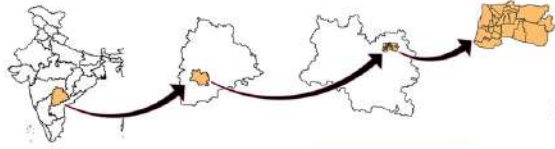
DEMOGRAPHICS

- Population Density - 575 persons per sqkm
- Total no. of households - 25320
- Sex Ratio - 942 females per 1000 male
- Number of Wards - 24

According to the Census of India 2011, the total population of the municipality was 41868 persons. The number of males was 21562 and females were 20306.

Ward 3 had the highest population of 5349 persons.

The present estimated population was 102000(Source - Town Profile Draft-Turkayamjal Municipality).



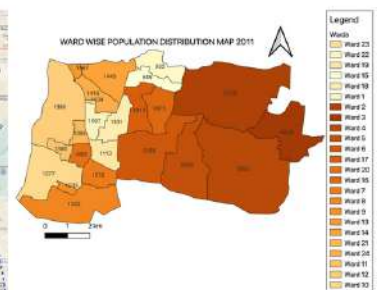
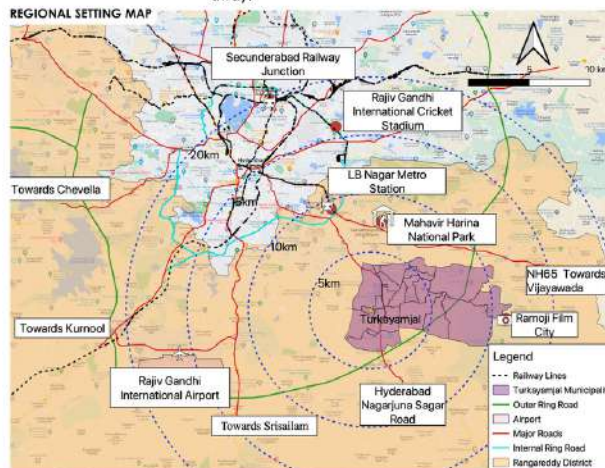
PHYSIOGRAPHY

Total Area - 72.80 sqkm
 Latitude - 17° 15' 38.75" N
 Longitude - 78° 35' 24.77" E
 Temperature - 42°C(high) 15°C(low)
 Rainfall - 960.1 mm

REGIONAL SETTING

Turkayamjal municipality is located in Abdullapurmet Mandal, North West of RangaReddy district in the state of Telangana. The area of extent of the municipality is 72.80 sqkm.

- The Turkayamjal Municipality is in the southeast zone of Hyderabad, located 30km away from the state capital
- The Outer Ring Road passes through the wards of Turkayamjal.
- The nearest metro station LB Nagar is 25 minutes away.
- The Secunderabad Railway Junction is 26km away.
- The international airport is 40 minutes away.
- The Nagarjuna Sagar road cuts through its wards.
- The Mahavir Harina National Park is 12.5km away and Ramoji Film City is few minutes away from Ward numbers 3 and 4.



CLEAN & GREEN INITIATIVES

Turkayamjal received the award as the fastest moving city (25K-50K) in Swachh Survekshan 2022 awards. 7 RRR (Reduce, Recycle, Reuse) centres have been started recently.

INTRODUCTION

SUBMITTED BY

CITIES AND GOVERNANCE
 TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



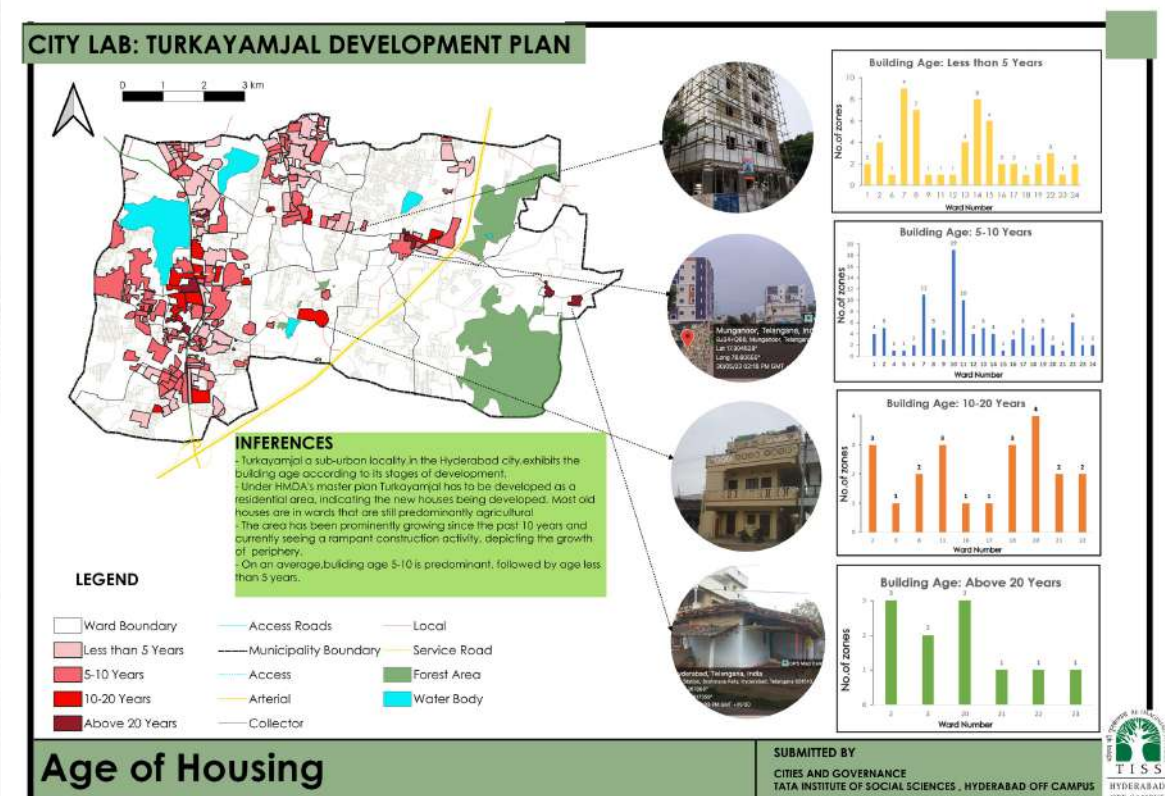
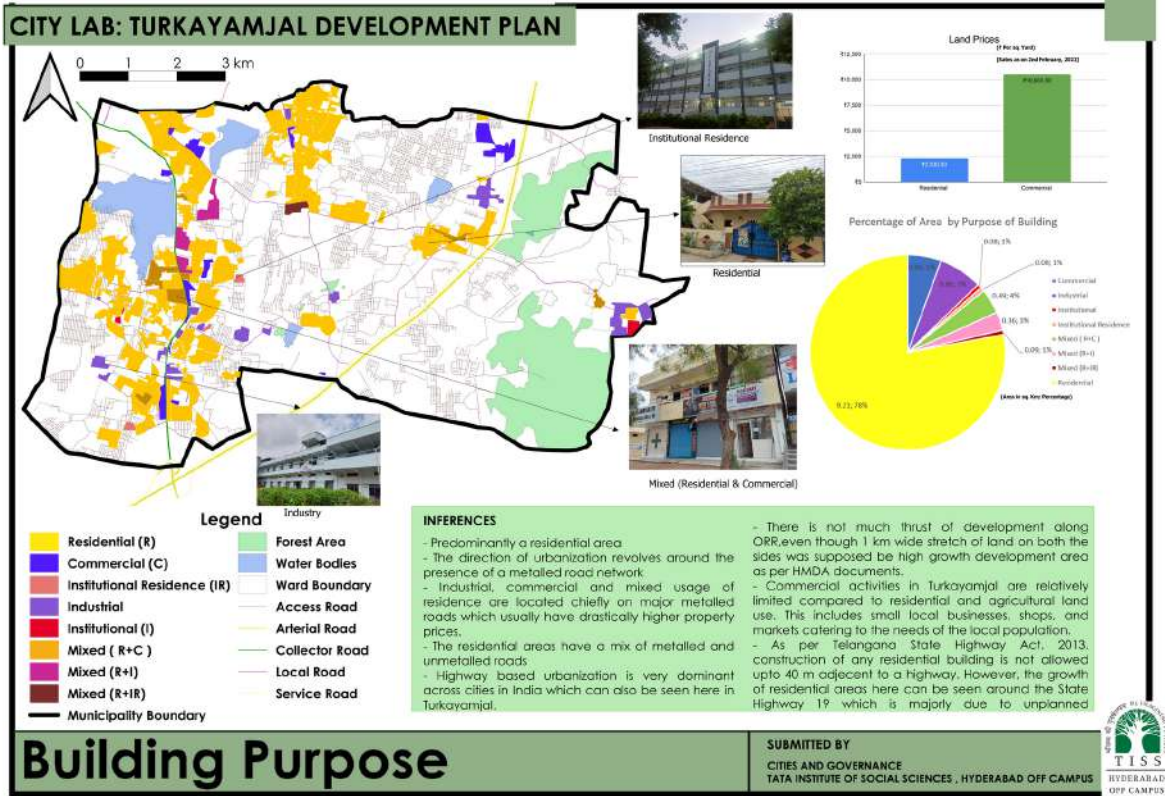
Turkayamjal municipality is located in Abdullapurmet Mandal, North West of RangaReddy district in the state of Telangana. The area of extent of the municipality is 72.80 sqkm.

Latitude - 17° 15' 38.75" N
 Longitude - 78° 35' 24.77" E
 Temperature - 42°C(high) 15°C(low)
 Rainfall - 960.1 mm

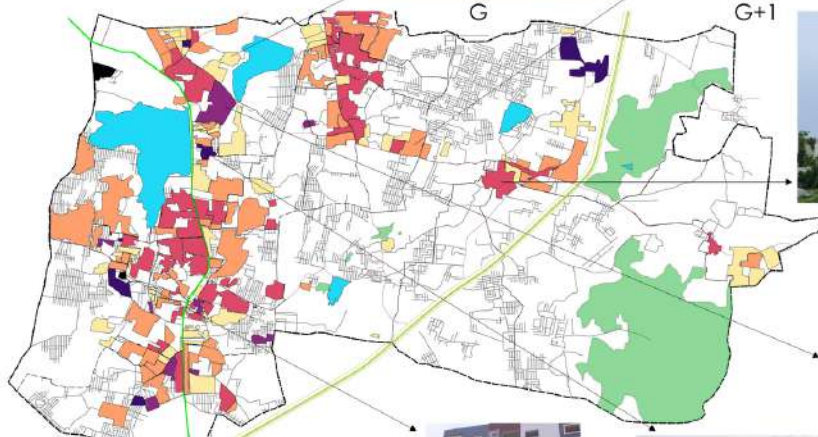
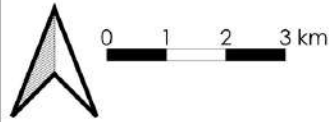
Population Density - 575 persons / sqkm
 Total no. of households - 25320
 Sex Ratio - 942 females per 1000 male
 Number of Wards - 24

Existing Situation

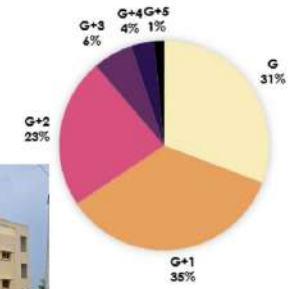
Housing



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



Building Height



- Average Building Height of G and G+1 constitute 66% of the zones.

- Average Building Height: G in 13 wards and G+1 in 9 wards.

- Majority of the G+2 buildings are situated in close proximity to the Nagarjuna Sagar road (Collector road)

G+3 Average Building Height in every Ward

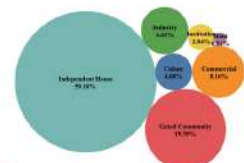
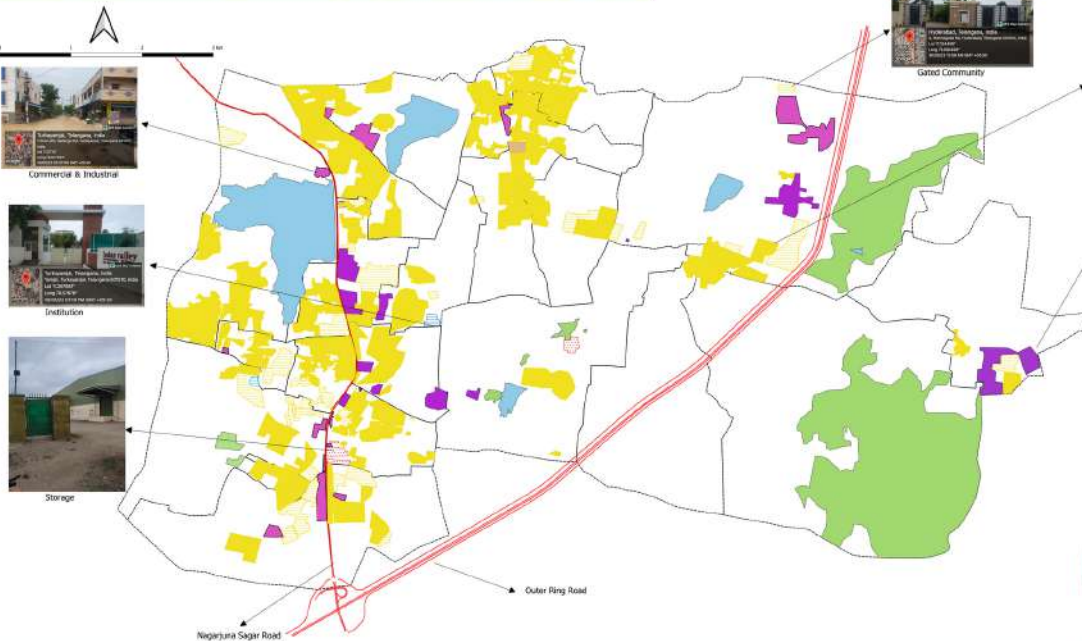


Building Height

SUBMITTED BY
CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



LEGEND

Commercial & Industrial	Storage	Institution	Forest Area
Independent House	Administrative	Slum	Water Body
Industry	Built Flats	Arterial Road	Ward Boundary
Industry	Gated Community	Collector Road	

INFERENCES

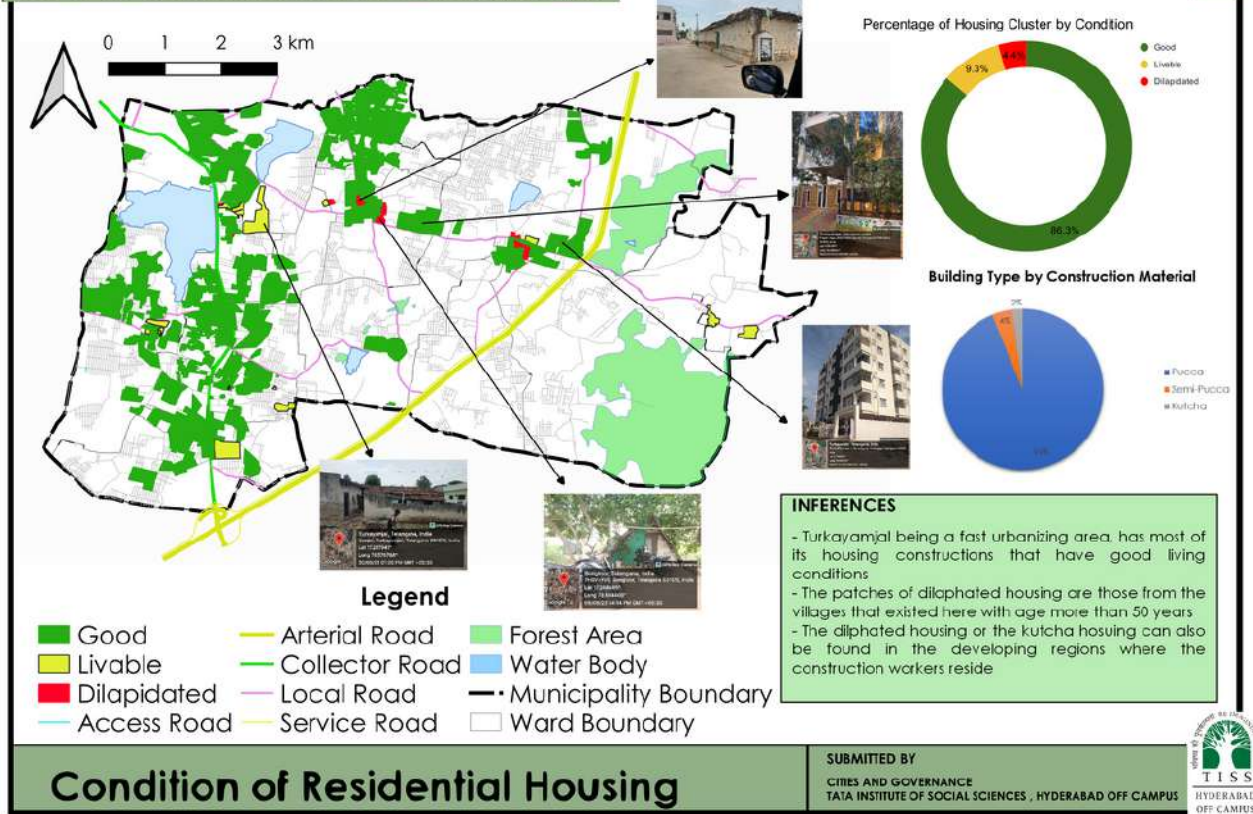
1. Turkayamjal is majorly expanding and developing around the Nagarjuna Sagar State highway.
2. Among the various settlements in Turkayamjal, the most prevalent are independent houses and gated communities.
3. The upcoming residential area is primarily in the form of housing societies and gated communities, the presence of gated communities further reinforces the idea of a relatively affluent population, as these communities offer amenities and high-end security features.
4. The significant number of commercial activity zones, warehouses, and industries suggests economic activity and opportunities for businesses, contributing to socio-economic growth of the area.

Settlement Type

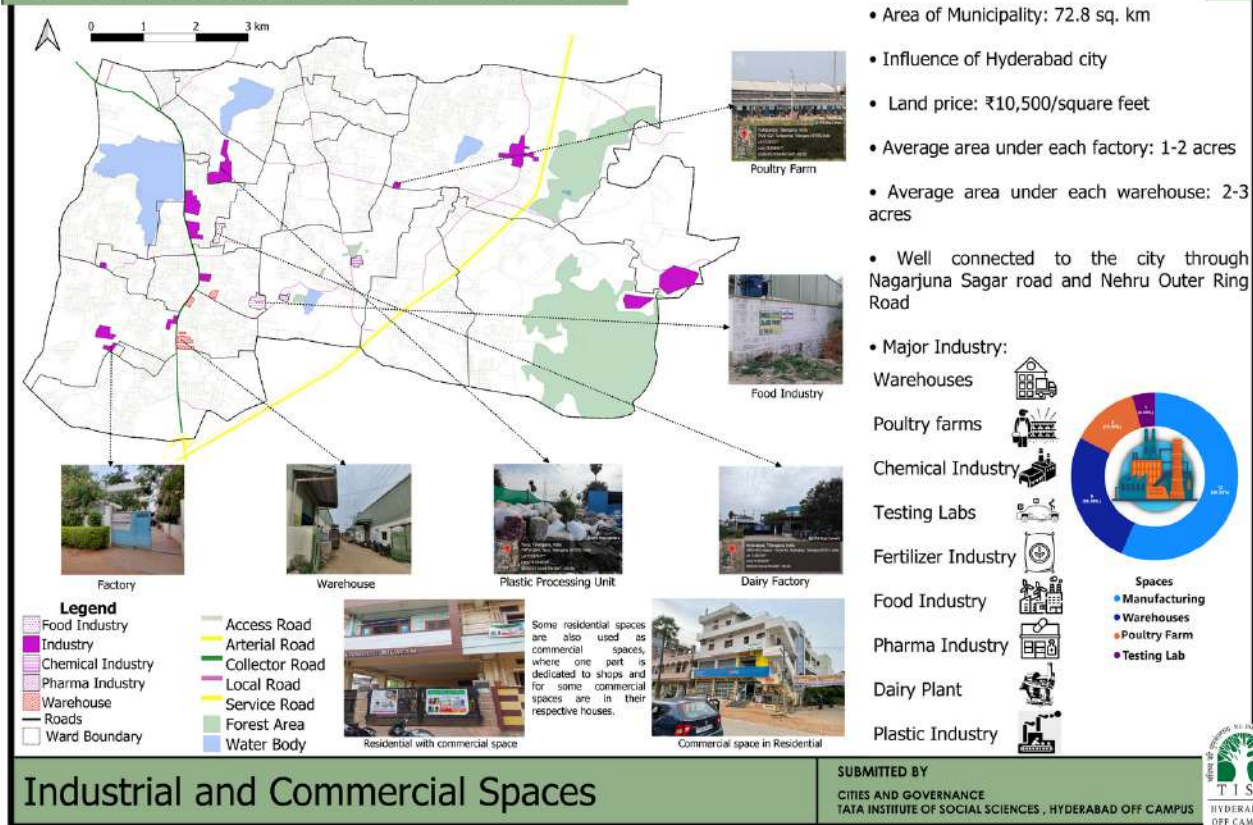
SUBMITTED BY
CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



Transportation

CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

01



SNAPSHOT

Total Area - 72.80 sqkm
 Latitude - 17° 15' 38.75" N
 Longitude - 78° 35' 24.77" E
 Population - 41868 (Census 2011)
 Population density - 575 per sq km

- Turkayamjal Municipality lies in the southeast zone of Hyderabad, located 30 km away from the state capital.
- Covers a total area of 72.80 km.
- Designated Statutory Town formed by 9 erstwhile gram panchayats.
- 6 revenue villages in the municipality - Koheda, Omarkhanguda, Turkayamjal, Injapur, Munaganoor, Thorur.
- 4 basins - Turkayamjal, Injapur, Omarkhanguda, Koheda.
- The road network comprises of arterial, collector, local and access roads.
- Alternatively, the road network in the municipality can be classified a CC, BT, WBM and Kutcha Roads.
- The largest share of roads is taken up by Kutcha roads.

Type of Road	Length (km)
CC Road	95.055
BT Road	106.011
WBM Road	47.002
Kutcha Road	373.822
Total	621.89

GHMC OVERLAP



TURKAYAMJAL	GHMC	
	Ward no. / Name	Area (sq km)
	B N Reddy Nagar	Hayathnagar
12	0.471	-
13	0.215	-
14	0.355	0.538
1	-	0.231

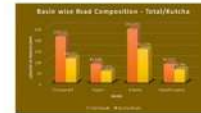
INFERENCES

- Turkayamjal Municipality overlaps with Greater Hyderabad Municipal Corporation (GHMC).
- Wards 1, 12, 13 and 14 - namely, Munaganoor, Turkayamjal and Injapur - overlap Ward 13 and 14 - namely, Hayathnagar and B N Reddy Nagar.

Basins	Length in km				Total
	CC Road	BT Road	WBM Road	Kutcha	
Turkayamjal	42.712	42.377	13.536	109.812	209.03
Injapur	18.583	9.263	4.070	52.372	84.68
Koheda	30.455	32.367	28.581	152.239	243.64
Omarkhanguda	2.905	21.504	0.715	59.399	84.52
Total	95.055	106.011	47.002	373.822	621.8

Major forms of Transport (Not-private)

- Telangana State Road Transport Corporation (TSRTC) operates intracity, intercity and interstate bus services and they are operational in this municipality.
- Buses have been procured by the Telangana State government under the Jawaharlal Nehru National Urban Renewal Mission (JNURM) scheme and are operational in HMDA's peri-urban municipalities. They ply along the arterial and collector roads in Turkayamjal.
- Auto-rickshaws commonly known as "auto", are used frequently by the residents to commute.



INTRODUCTION

SUBMITTED BY

CITIES AND GOVERNANCE
 TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

ROAD HIERARCHY AND POINT OF INTERSECTION MAP



Scope

Assessing the current state of road networks in the municipality and suggest measure to improve connectivity, safety, accessibility and right of way.

Data Limitations

Based on primary survey
 Lack of secondary data to validate findings.

Issues

Complete absence of footpaths.
 Single lane roads causing traffic congestion.
 Sparse distribution of public amenities and road discontinuity.
 Lack of traffic signals and increased risk of accidents.
 Lack of footover bridge.

Source: Author Generated



Figure Showing Arterial Road

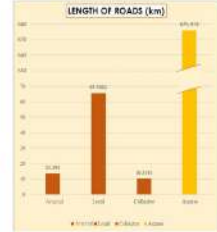
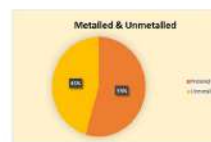


Figure Showing Collector Road

Active Zones receive high pedestrian footfall and high traffic volume. There is congestion due to encroachment by street vendors and parked vehicles.

Points of Intersection connect collector road to local roads. All major access points fall on the collector road i.e. intersections with access/local roads.

Composition of Roads



Road Type	Length (km)	% of Roads
Arterial	13.393	1.75%
Local	65.5062	8.56%
Collector	10.3143	1.34%
Access	675.973	88.34%

Source: Author Generated

Inference

The major road in the municipality is the Collector road where most of the active zones lie. However there is traffic congestion due to improper traffic facilities

ROAD HIERARCHY AND MAJOR POINT OF INTERSECTION

SUBMITTED BY

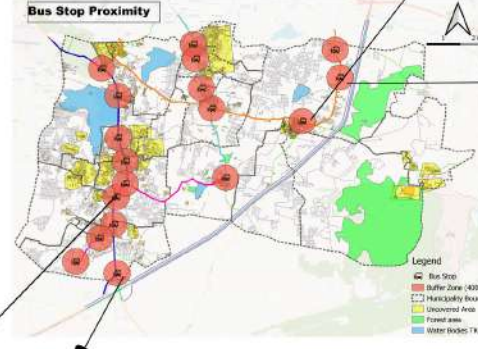
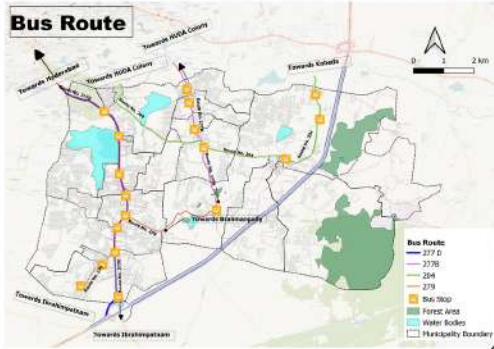
CITIES AND GOVERNANCE
 TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

- TSRTC has 9,232 operating bus from 99 depot. (6410 RTC Buses, Hired Buses 2822)
- There are 344 bus station in the state.
- The total number of bus stop identified in our study area is 19.
- The total number of routes is 3,315 while the routes identified in our study area is 4.

• The Koheda area is unserved. Only one bus is available in the area, and that has a frequency of seven hours. In a day only three buses are available to cater to the population of 29674 (estimated figure for 2021 year) in ward number 2,3,4 and 5.



Lack of basic infrastructure in many of the bus stops as per the Ministry of Road Transport and Highway Guidelines.
Absence of ramps for disabled is one of the pressing concerns observed in the municipality.
In low of the bus stops there is no infrastructure



Inferences

- As per the URDPFI guides lines, A bus stop covers an area of radius 400 meters.
- The absence of a bus route is indicated by the yellow area, leaving people with limited alternatives such as private transportation or their own vehicles.

Availability of Public Transportation/ 1000 population = 0.00104 (the population figure taken is estimated figures for 2023)

- Most of the buses run through the collector street, thus limiting the last-mile connectivity reach. People have to walk or rely on other transportation to reach the State Highway to access the bus facility.

Bus No	Starting Point	Ending Point	Distance (Km)	First Bus	Last Bus	Frequency	Trip
277 B	Brahmanpally	Koti Women College	23	5:20 AM	8:55 PM	55 min	19
277 D	Koti Women College	Ibrahimpatnam	32	4:30 AM	9:26 PM	20 min	51
279	JBS Bus Stop	Ibrahimpatnam	39	5:00 AM	9:35 PM	30 min	33
204	Koheda	Koti Women College	24	6:00 AM	9:45 PM	7 hrs	3

(Data Source: TSRTC)

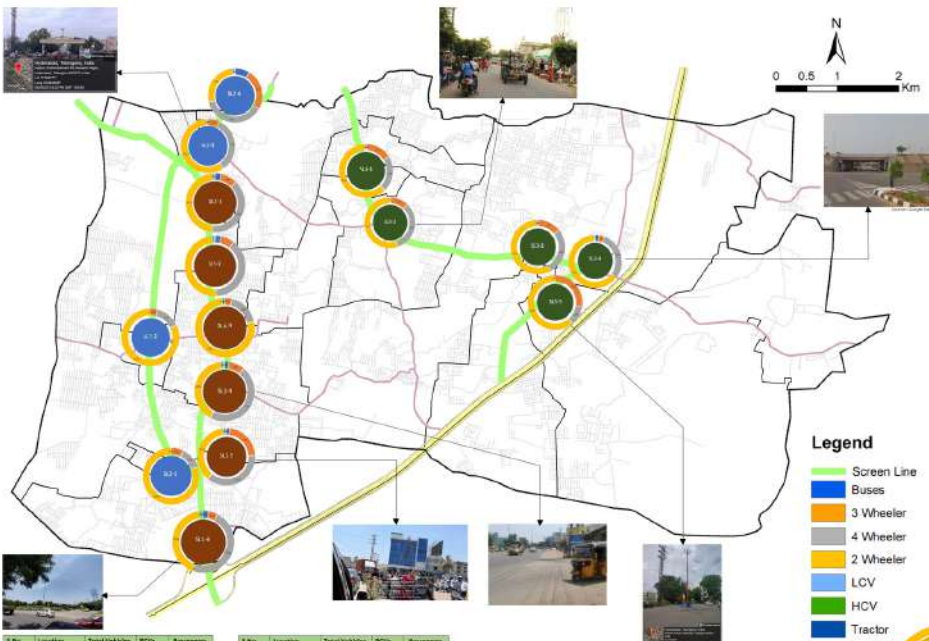
Bus Route and Bus Stop Proximity

SUBMITTED BY
CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

To study the traffic flow entering and leaving the study area, traffic volume count surveys during peak hours were performed at all the screen line points to understand the traffic characteristics of the study area (Turkayamjal Municipality).



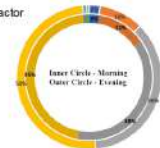
Points	Location	Direction
SL1-1	Turkayamjal Lake Point View	Towards Indira Nagar
		Towards BN Reddy Nagar
SL1-2	Masqati Ice-Cream Parlor	Towards SiramNagar Colony
		Towards Indira Nagar
SL1-3	A.R. Brothers Clothing Store	Towards Turkayamjal Road
SL1-4	Ibrahimnampally Bus Stop	Towards Nagarjuna Sagar Road
		Towards Nagarjuna Sagar Road
SL1-5	Nagarjuna Sagar Road	Towards Ragannaguda
		Towards Nehru Outer Ring Road
SL1-6	Round About Nagarjuna Sagar Service Road	Towards Manneguda
		Towards Nehru Outer Ring Road
SL2-1	Manneguda Road	Towards AV Nagar
SL2-2	Shivaji Statue	Towards Nagarjuna Sagar Road
		Towards Nadergul Road
SL2-3	ZPHS School	Towards YSR Colony
		Towards Nagarjuna Sagar Road
SL2-4	Academic Heights Public School, Injapur	Towards Injapur
		Towards Neeladri Nagar
SL3-1	Surya Nagar	Towards Munganoor
		Towards Hayathnagar
SL3-2	Injapur-Toroor Road Junction	Towards Surya Nagar
		Towards Thorur Lake
SL3-3	Government High School, Koheda	Towards Koheda
		Towards Thorur Road East
SL3-4	Thorur Road and Nehru ORR Intersection	Towards Koheda
		Towards Amberpet
SL3-5	Koheda T-Point	Towards HMDA Layout Road
		Towards Uppuguda

S.No.	Location	Total Vehicles	PCUs	Average
1	Towards the Turkayamjal Municipality	1762	1462	5446
2	Away from Turkayamjal Municipality	2478	1284	4757

The morning peak hour, there are on average of 18,804 vehicles entering Turkayamjal Municipality and 21,444 vehicles leaving. This represents an average of 15,115 passenger car units (PCUs) entering and 18,804 PCUs leaving the study area. This is the highest to an average of 62,852 passenger entering and 72,342 passenger leaving Turkayamjal Municipality in the morning peak hour.

There is an average of 17,762 vehicles entering Turkayamjal Municipality and 12,766 vehicles leaving in the evening. This represents an average of 14,622 passenger car units (PCUs) entering and 11,884 PCUs leaving the study area. This is the lowest to an average of 34,846 passenger entering and 42,274 passenger leaving Turkayamjal Municipality in the evening peak hour.

PCU Factor for various types of vehicles on Urban Roads (Percentage composition of vehicles type in traffic stream), Peak Hour Factor and Lane Road Categorization are calculated as per the IRC Guidelines. Due to infeasibility in conducting the primary survey, the 10 minutes peak hour volume is obtained considering the common characteristics. The directional flow is assumed to be equal at some locations and extrapolation is done to obtain only approximate and hour volume. As per the URDPFI guidelines, the classified traffic volume counts were taken keeping in mind the traffic characteristics in terms of size composition and vehicle, directional and temporal. This is done to establish the level of service on the road network system.



Buses accounted for a small proportion of the vehicles with 1% in the morning and 2% in the evening, including a relatively the presence throughout the day. Four-wheelers represented the largest vehicle category, comprising 85% in the morning and 85% in the evening, suggesting a significant number of cars on the road during both periods. Two-wheelers, particularly mopeds, accounted for 10% of the morning and evening traffic, with 4% and 2% respectively, indicating a high reliance on these vehicles for commuting. Commercial vehicles (LCV and HCV) and tractor had minimal presence (1% or more) during both periods, suggesting limited commercial and agricultural activity during the day.

PEAK HOUR TRAFFIC VOLUME COUNT: ANALYSIS

SUBMITTED BY
CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

COMPREHENSIVE AND CLASSIFIED TRENDS OF PEAK HOUR TRAFFIC IN TURKAYAMJAL



Figure: Capturing the urban mobility context for the project

Classification	%
Private	86%
Public	14%
Passenger	76%
Commodity	24%



Figure: The traffic mobility study and congestion problem

Private vehicles dominate the peak hour traffic volume, accounting for 86% of the total. This highlights the significant reliance on privately owned vehicles for commuting and transportation during busy hours.

Public vehicles contribute to 14% of the peak hour traffic volume. This includes buses, taxis, and other forms of public transportation, indicating the importance of public transit systems in managing traffic congestion and providing alternative transportation options.

Passenger vehicles constitute the majority of the peak hour traffic volume, making up 76% of the total. This emphasizes the high demand for personal transportation and the need for efficient infrastructure and road management to accommodate this traffic.

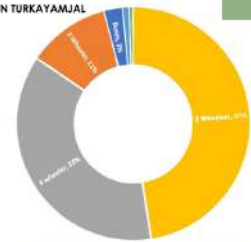
Commodity vehicles represent 24% of the peak hour traffic volume. These vehicles are crucial for the transportation of goods and underline the significance of a well-functioning logistics and supply chain network to support economic activities.



Figure: The vehicle queue behavior in city centers needs to improve for sustainable development



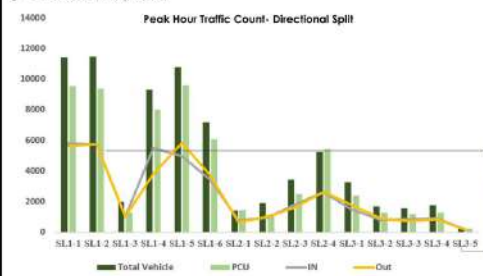
Figure: Bicycles in the urban landscape can ease off public transport



- 2-wheelers private vehicles occupied the maximum share of 47%, followed by 4-wheelers comprising 37% of the entire traffic volume.
- As the interior wards has lower credibility of State run transport facilities, shared autos play a crucial in commuting within the municipality, attributing to 11% of 2-wheelers in the composition.
- Only 3% of the vehicle composition comprises of buses, which also includes school and private buses used by office goers for daily commuting.
- SL1 has the highest coverage by buses as it is along the SH19, decreasing substantially in SL2 and SL3 as public connectivity is less in the interior wards of the municipality.



TRANSPORT ISSUES IN TURKAYAMJAL



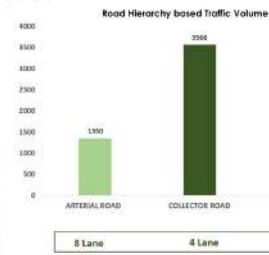
Maximum traffic can be found in SL1.1 and SL1.2 along the biggest road, which also has the highest volume of vehicles moving in and out of the Municipality. 47% and 39% of vehicles composition in SL1.1 consist of 2-wheelers and 4-wheelers respectively.

Most of the in and out movement is due to the placement of State Highway 19, as the highway connects the municipality to adjacent centres like LB Nagar in the north and Brampuram in the south. Further SH19 connects to main arterial road which is the gateway to Rajiv Gandhi Airport.

The least traffic volume is found of SL3.5, which has the local built-up areas in the municipality. This area is slightly elevated, with sparse population leading to low traffic in the area.



Figure: Support and Request: Pw. Disabled in Access



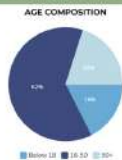
PEAK HOUR TRAFFIC VOLUME COUNT: ANALYSIS

SUBMITTED BY
CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



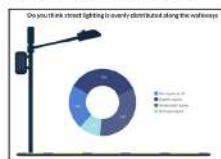
CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

Survey Stats
Number of Responses: 445
Male Participation 54.1%
Female Participation 44.6%



This survey datasheet summarizes the accessibility and safety parameters collected through field surveys. It offers insight into the community perspective in all 24 wards. The survey has been designed to focus on critical areas concerning safety, convenience and comfort of pedestrians.

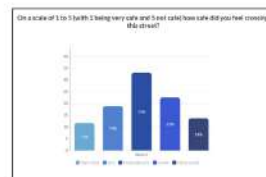
SAFETY AND SECURITY



-Responses indicate a mixed perception regarding the even distribution of street lighting.

-45.5% agree that lighting is evenly distributed

-More than 50% agree for unevenly distribution of street lighting



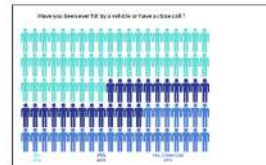
-While 11.7% felt very safe, 13.7% expressed a lack of safety.

-50% and more fell in the neutral to somewhat unsafe range.



-More than 60% of people cross the road in under a minute.

-The majority of the roadways are access streets(88%) and local streets(9%), thus crossing them takes hardly any time at all.

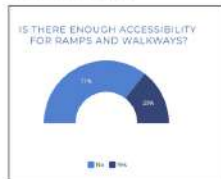


-Over 50% of respondents (49%) said they have never been in danger of being hit by a car or had a near encounter.

-24% had faced an accident

-27% had experienced a close call while crossing the road

ACCESSIBILITY



The report emphasises the significant absence of ramps and walkways in the municipality. There aren't enough pavements for people to walk on, and the areas next to streets and roads are either too narrow for walking or are taken up by vehicles parked there



Inferences:

- Insufficient street lighting on access and local streets
- Absence of well developed pedestrian paths
- There is no traffic signal throughout the municipality
- Inaccessible Local and Access streets in the interior part of the municipality

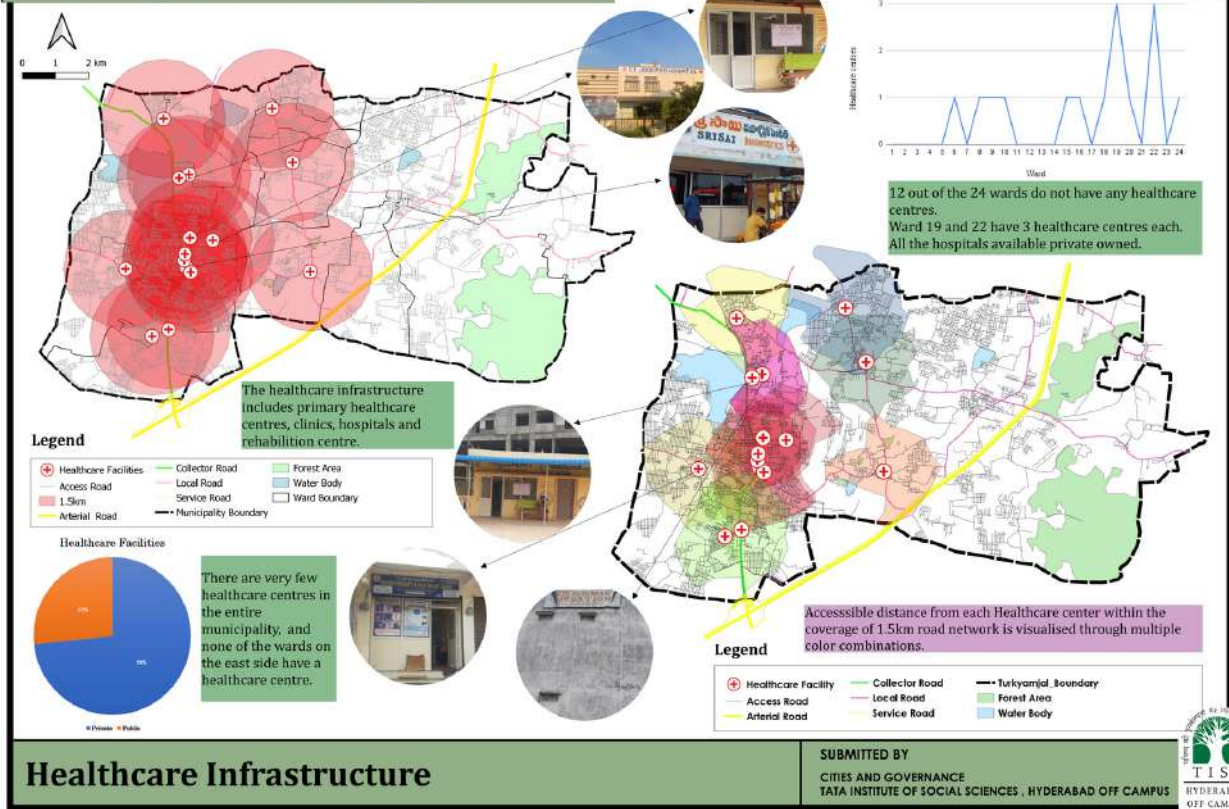
Perception of Pedestrian's Amenities and Safety

SUBMITTED BY
CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS

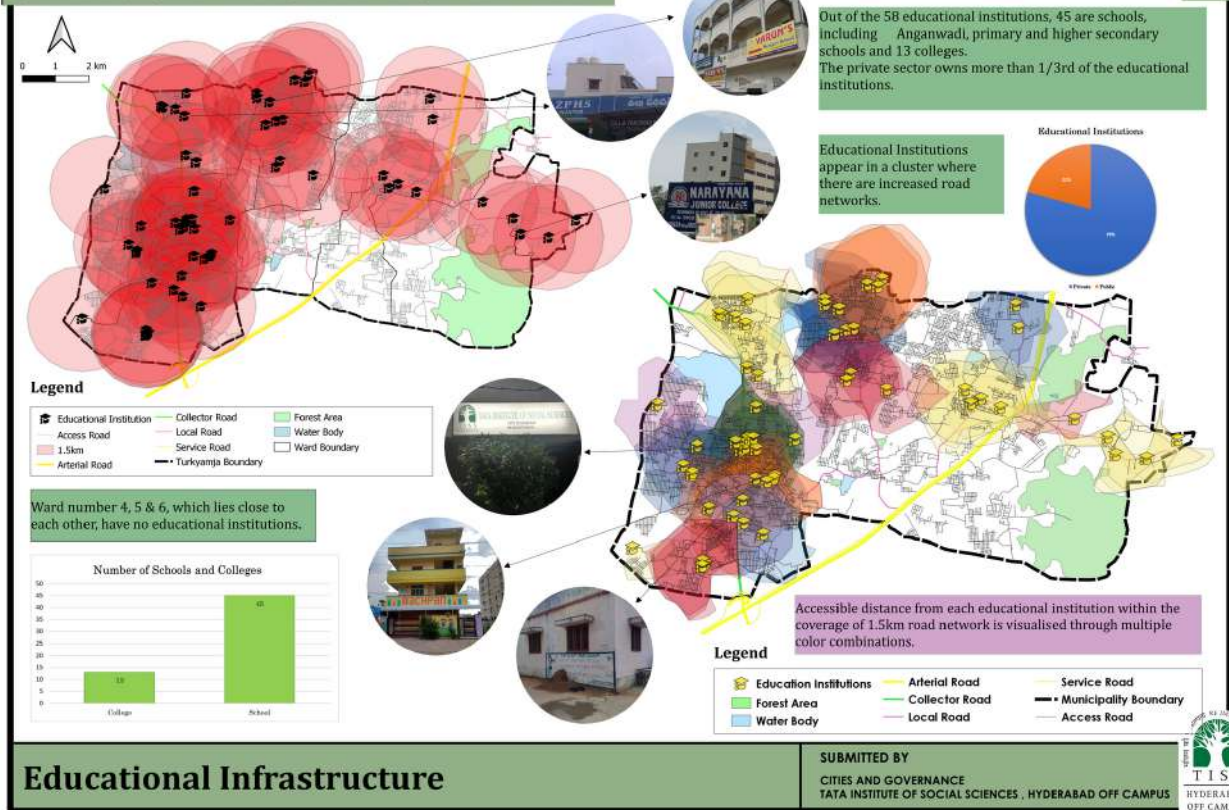


Social Infrastructure

CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



Image-Raganiguda Post office

- There are 3 post offices within the municipality boundary.
- 8 local bodies, including gram panchayat, revenue offices and municipalities.
- Civic bodies are a total 3 in number



Image-Raganiguda Ward Office



Image- Revenue Office



- Legend**
Social Infrastructure Type
 E-Suvidha Center
 Electricity Office
 Local Body
 Post Office
 RTA Office
 Revenue Office
 Turkayamjal Boundary



Image-Electricity office



Image-Brahmanpally Ward office

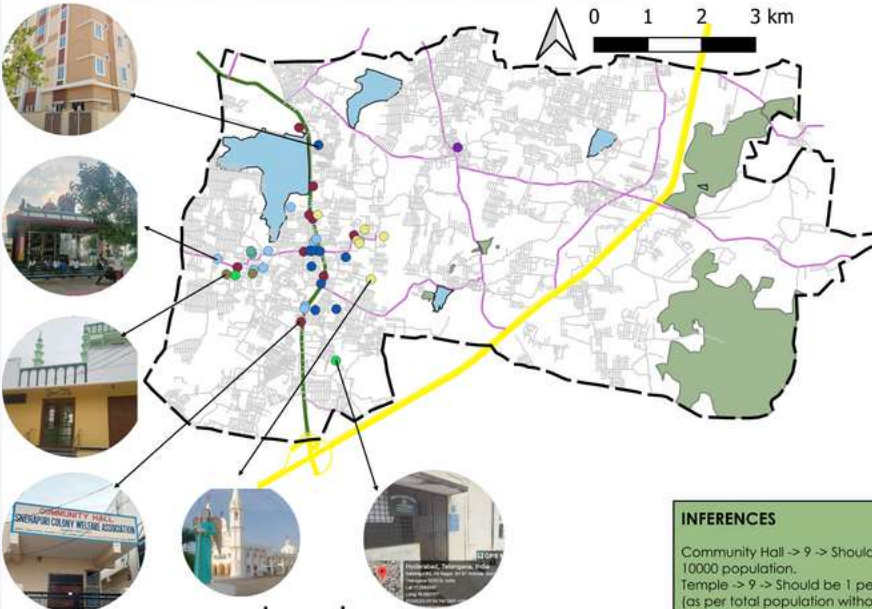
- There is no police station or fire station within the municipal boundary
- The nearest emergency service from both has to be availed from Vanasthalipuram and Hayatnagar respectively

Administrative Building

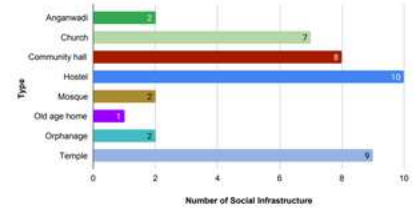
SUBMITTED BY
 CITIES AND GOVERNANCE
 TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



Social Infrastructure Facilities



INFERENCES

Community Hall -> 9 -> Should be 1 unit for per 15000 population. Turkayamjal has 1 unit for 10000 population.
 Temple -> 9 -> Should be 1 per 5000 population. Turkayamjal has 1 per 10000 population. (as per total population without any religious segregation)
 Church -> 7 -> Should be 1 per 5000 population. Turkayamjal has 1 per 10000 population. (as per total population without any religious segregation)
 Mosque -> 2 -> Should be 1 per 5000 population. Turkayamjal has 1 per 10000 population. (as per total population without any religious segregation)
 Anganwadi -> 2 -> Should be 1 per 5000 population. Turkayamjal has 1 per 46000 population.
 Hostel -> 10 -> Should be 1 per 10 lakh population. It has 10 for almost a lakh population.
 Old age Home -> 1 -> Should be 1 per 5 lakh population.
 Orphanage -> 2 -> Should be 1 per 10 lakh.

SOCIO-CULTURAL FACILITIES

SUBMITTED BY
 CITIES AND GOVERNANCE
 TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS

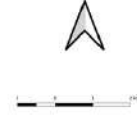


Physical Infrastructure

CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



- Treated water coming from Kodandapur Water Treatment Plant (WTP), which is 100Km away from the study area
- Water is coming from Krishna Drinking Water Supply Scheme Phase-2
- Connection From Reservoir to the water tank is mostly underground



- Legend
- Water Supply (KWS) Pipeline
 - Water Supply Line
 - Overhead Tank
 - Water Tank
 - Water Line (100mm)
 - Water Line (150mm)
 - Water Line (200mm)
 - Water Line (250mm)
 - Water Line (300mm)
 - Water Line (400mm)
 - Water Line (500mm)
 - Water Line (600mm)
 - Water Line (800mm)
 - Water Line (1000mm)
 - Water Supply Line
 - Water Supply Line



- There are 42 functional Over Headed water tanks across in the study area.
- There are 13,150 tap connections, and approximately 600 litres of water are supplied to each household.
- It is less than the total demand of the population
- Many new over headed water tank construction works are in progress



Water Supply

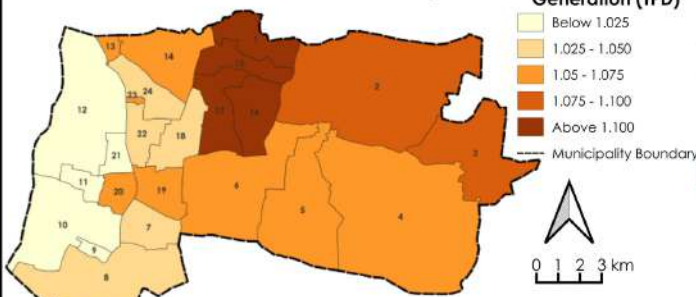
SUBMITTED BY

CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

Estimated Solid Waste Generation Map, 2021

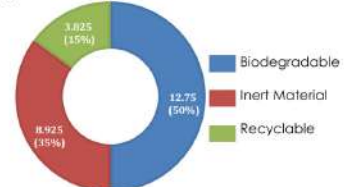
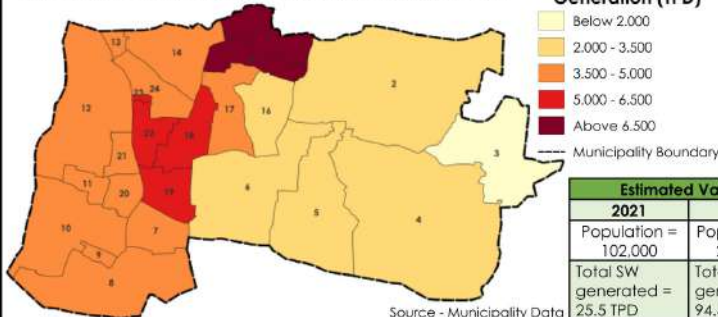


- User charges per household - ₹100
- Waste Collection Frequency - Once per week in few wards and twice per week in others
- No segregation of waste at the collection points
- Open burning of waste



Physical Composition of Waste

Estimated Solid Waste Generation Map, 2031



Estimated SW Generation over different time spans

Estimated Values	
2021	2031
Population = 102,000	Population = 290,544
Total SW generated = 25.5 TPD	Total SW generated = 94.43 TPD



Solid Waste Generation

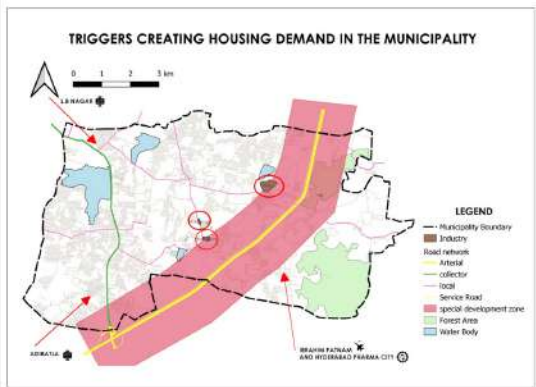
SUBMITTED BY

CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS

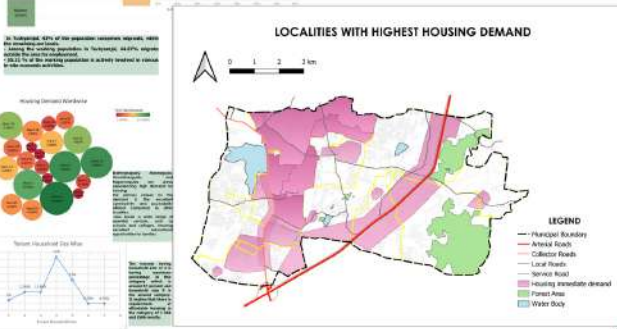
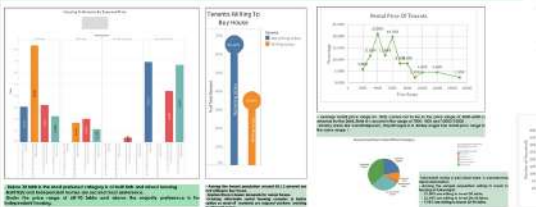


Proposal Housing

CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



- 1) Look East Policy of Telangana State Government for Hyderabad eastern part to make this region as vibrant IT hub
- 2) Hyderabad Pharma City in Rangareddy district to make world's biggest pharmaceutical industry Proposed Regional Ring Road to foster the growth of periphery area of Hyderabad which include the Turkayamjal area
- 3) Also the nearby areas such as Adibatla and Ibrahimpatnam will help the Turkayamjal development



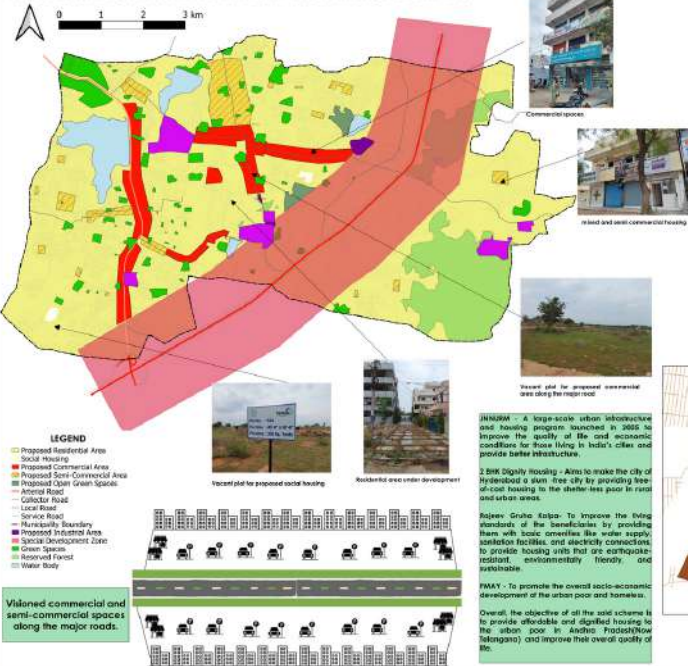
ANALYSIS OF HOUSING DEMAND

SUBMITTED BY
CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

PROPOSAL FOR RESIDENTIAL AND COMMERCIAL AREAS



PROPOSALS

1. Major Residential Hub - Turkayamjal is primarily a residential area, mainly because of the small proportion of industrial land that has existed or has been allocated there. Also, the nearby regions like IB Nagar, Adibatla and the upcoming pharma city are in the vicinity, which will attract many workers who are expected to reside in Turkayamjal.
 2. Commercial and Semi-Commercial spaces along major roads - Turkayamjal is pre-dominantly a service sector based economy. The commercial areas have been expanded in an unorganized manner, with a mixed use. Thus, looking at the trend and the future requirements to cater to huge number of residents, we are proposing commercial as well as semi-commercial areas in the region. The commercial areas along the proposed widened roads will be following a buffer of 200-300 meters on both the sides.
 3. Social Housing - Social housing is crucial for affordable housing, poverty alleviation, social cohesion, housing stability, urban development, housing market stabilization, and government responsibility. Since there are a lot of industries coming around and the work force for the economic system won't be restricted to formal workers, we would need social housing to cater the informal workforce who are often marginalized.
 4. Open Green Spaces - Integrating agricultural land into cities for food security, sustainability, community engagement, biodiversity preservation, economic opportunities, and resilience. It enhances local food production, educates communities, improves air quality, and creates green spaces. Urban agriculture requires strategic planning, collaboration, and supportive policies to ensure its successful integration into city plans.
- SDG 1 - No poverty** - Affordable housing in cities can improve the living conditions of the people, that come in search for opportunities, which can bring them out of poverty.
- SDG 7 - Affordable and clean energy** - Proposal for solar rooftop panels in the affordable housing.
- SDG 8 - Decent Work and Economic Growth** - Hence proposed the housing and accommodation in locations which are accessible to existing and upcoming industries.
- What type of social housing?**
We are proposing two types of social housing. One is vertical built up and another is Dwellery.
- Area Allocation for social housing:**
8 acre or 16000 sq. m.
- Minimum plot size:**
Not less than 32sqm. Every dwelling unit should have at least two habitable rooms. Hall rooms of minimum 8 sqm and width of 2.8 m. Other rooms shall be min 8.8 sqm with minimum width of 2.1 m provided the total area of both the rooms shall not be less than 18.6 sqm.
- For dormitory - Dormitories/beds:** have bed size of 10sqm
- Guidance rules of amenities distance:**
Basic amenities like schools and PCC should be under 50m away.
ATM and big hospitals should be under 50m distance.
- Why we chose these location:**
Adibatla and Ibrahimpatnam being emerging IT hub and Pharma city being economically highly influential industry will attract large amount of migrants from different class. To cater the need of economically weaker section's migrants we need social housing.
- All figures in Meter (m)**
-

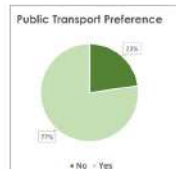
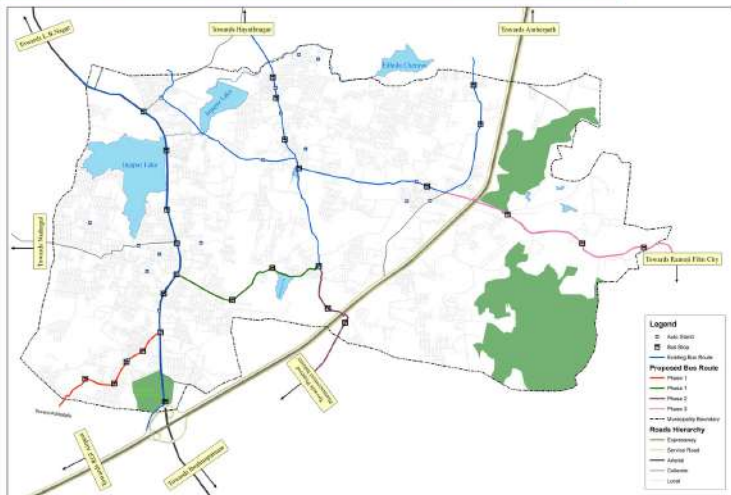
PROPOSAL FOR RESIDENTIAL AND COMMERCIAL AREAS

SUBMITTED BY
CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



Transportation

CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



Based on a household survey conducted on a sample of 260 households, it was discovered that 73% of respondents expressed their willingness to opt for public transport if there is an improvement in last-mile connectivity.

Advancing Equitable & Eco-Friendly Future Mobility

- Climate change is a pressing issue, effective action requires promoting public transport and eco-friendly vehicles. **13 ACTION**
- Our proposals are working to ensure the expansion of public transport which is accessible and safe for all. **11 ACTION**
- 3 ACTION PLAN: 1. Promoting Public Transport, 2. Encouraging Eco-Friendly Vehicles, 3. Supporting Infrastructure Development.

EV Charging Infrastructure Analysis

Particulars	EV Fast Charging	EV Slow Charging
Time taken to Charge	45 mins	8 hrs
Installation Cost of Fast Location	1,00,000	3,00,000
Installation Cost of Slow Location	10,000	10,000

Supporting the transition to EVs - Meeting the growing demand - Encouraging local economic growth - Enhancing urban resilience and sustainability - Encouraging Public-Private Partnerships

Goals

- Integrating IPT with Transport Regulators
- Integrating IPT with Transport Regulators
- Integrating IPT with Transport Regulators

- ### Issues
- Inadequate Coverage:** Most bus routes run through SHgs, thus limiting the last-mile connectivity in the interior wards of the municipality.
 - Poor frequency and higher waiting time.**
 - Lack of parking places for IPT modes (Auto stands & Taxi).**
 - The increased distance between bus stops results in their inaccessibility, requiring commuters to travel longer distances to reach them.**



- ### Strategies
- Enlarge coverage of city bus service to all parts of the city.
 - Increase the frequency of bus trips.
 - Interlinking bus routes
 - Establishing bus routes and stops to cater to the growing residential, commercial, and industrial requirements
 - Ensure adequate last-mile connectivity through electric rickshaws, tuk-tuks, autos also cater to the environmental issues.

Proposals	Proposed Schemes	Phase 1 2023-2027	Phase 2 2027-2030	Phase 3 2030-2033
Road Improvements	Widening of roads	•	•	•
	Metalling of the roads	•	•	•
	Signals	•	•	•
Pedestrian Facility	Elevated Intersections	•	•	•
	Footpaths	•	•	•
	Elevated crossings	•	•	•
NMT Facility	Street lighting	•	•	•
	Cycling tracks	•	•	•
Public Transport System	Bicycle Stations	•	•	•
	Creating Bus Route	•	•	•
	Adabala to Secunderabad	•	•	•
Parking	Brahmanapally to Kotheda	•	•	•
	Kotheda to Ramoji Film City	•	•	•
	Kotheda to proposed Industrial Area	•	•	•
	Residential and Commercial Parking	•	•	•
	Need-based Parking	•	•	•

Through a combination of infrastructure development, policy support, and community engagement, we can transform our municipality into a model of modern transportation that meets the needs of residents, supports economic growth, and enhances the overall quality of life.

TRANSPORTATION PROPOSAL: ISSUES AND RECOMMENDATIONS

SUBMITTED BY
CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

- ### Objectives
- Road Network system, which is adequate in capacity, appropriate in pattern and hierarchical in structure.
 - Pedestrian and Non-Motorized Transport facilities which are extensive, adequate, attractive and safe.
 - Parking policy and parking areas which provide for orderly parking of modes and support traffic management objectives.
 - Public Mass Transport System, which is extensive in coverage, appropriate in technology mix for the size of the city, equitable and inclusive in access to service, affordable and which caters to a large share of the travel demand.

Proposal

Mode	Length (km)
4 New Bus Routes and 13 Stops	3.8
Road widening 17.8 km	17.8
Footpath Length 27 km	27
Cycleway Length 9.3 km	9.3
Parking Area 54,111 sqm	54,111

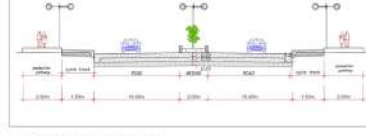


- ### Road Expansion
- #### ISSUES
- Lack of allocated and approved space for hawkers, forcing them to encroach roads.
 - The carriageway width reduced on State Highway 49 due to unmanaged traffic and illegal parking.
 - Road and junction geometric issues
 - Irregular road surface.
 - No standard width of roads.
 - Unmanned junctions.



- #### STRATEGIES
- To establish a uniform carriageway width of 7 meters for proposed roads, which will bypass traffic congestion from SHgs.
 - To install traffic signals at significant intersections.
 - Construction of elevated intersections along the newly expanded roads with pedestrian tracks.
 - Prohibition of encroachment on road space and capacity.

Pedestrian, Walkability & Non Motorised Track



- Implementation of design changes in the surrounding areas to encourage safe and pedestrian only routes along with provision of street light infrastructure.
- Create raised crosswalks and prohibit one-way entry.
- Encouraging people's behavior in order to prevent cycling in the municipality through awareness campaigns.
- Providing appropriate facilities, such as bicycle parking near bus stops.
- Implementing traffic calming measures, such as reduced speed limits, traffic signals and raised speed bumps.

On/Off Street Parking Analysis

- Development of parking spaces which are a mix of both residential and commercial purposes through the PPF model.
- Exploiting smart parking solutions like Parking Management App to manage and share the information with residents on how many parking slots are available and the parking prices.
- Recommending Pedestrian type of parking for future residential colonies and housing projects.
- Encouraging the use of private vehicles and coverage public transport / walking / cycling.
- Seeking input and understanding the unique needs of the various stakeholders to design effective, efficient and inclusive parking.

Traffic Signals & Raised Intersections



There are a junction on State Highway 49 where 5 or more roads intersect and cause traffic congestion with high level of traffic. Thus, we propose a raised pedestrian crossing at the junction to allow for safe pedestrian movement, ease access and organized vehicle movement.

TRANSPORTATION PROPOSAL: ISSUES AND RECOMMENDATIONS

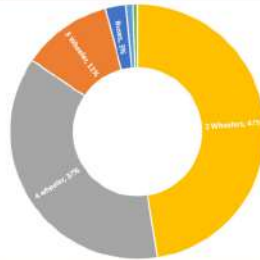
SUBMITTED BY
CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

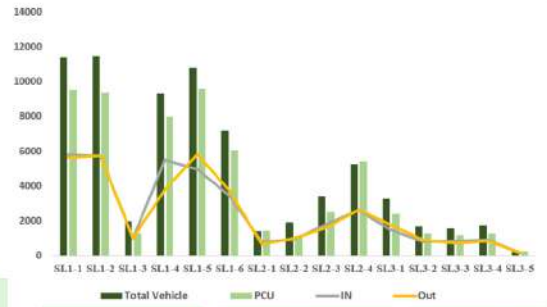
COMPREHENSIVE AND CLASSIFIED TRENDS OF PEAK HOURS TRAFFIC IN TURKAYAMJAL

Classification	%
Private	86%
Public	14%
Passenger	76%
Commodity	24%



- Private vehicles account for 86% of the total traffic.
- Public vehicles contribute 14% to the peak hour traffic volume. This includes buses, taxis, etc.
- Passenger vehicles constitute 76% of the total traffic. Thus the need for efficient infrastructure and road management is needed to accommodate this traffic.
- Commodity vehicles represent 24% of the peak hour traffic volume crucial for the transportation of goods underlying the significance of a well-functioning logistics and supply chain network to support economic activities.

- 2-Wheeler private vehicle occupies 47%, followed by 4 wheelers comprising 37% of the entire traffic volume.
- Inferior wards has lower availability of State run transport facilities, so shared autos comprise 11% of 3 wheelers in the composition.
- Only 3% of the vehicle composition comprises of buses, including school and private buses.
- SL1 has the highest coverage by buses as it is along the SH19, decreasing substantially in SL2 and SL3.



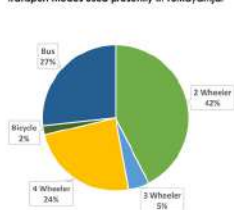
Maximum traffic can be found in SL1-1 and SL1-2 along the Nagarjuna road, which also has the highest volume of vehicles moving in and out of the Municipality. 47% and 39% of vehicle composition in SL1-1 consist of 2 wheelers and 4 wheelers respectively.

Most of the in and out movement is due to the placement of State Highway 19, as the highway connects the municipality to economic centres like LB Nagar in the north and Ibrahimpatnam in the south. Further SH19 connects to Nehru outer ring road which is the gateway to Airport.

The least traffic volume is found at SL3-4, which has the least built-up area in the municipality. This area is slightly elevated, with sparse population leading to low traffic in the area.

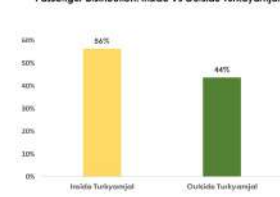
TRAVEL MODE, PASSENGER DISTRIBUTION & PURPOSE OF TRAVEL RESULTS FROM HOUSEHOLD SURVEY

Transport Modes used presently in Turkayamjal



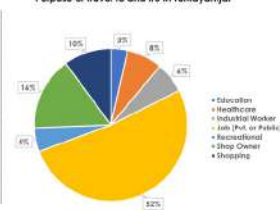
The survey results indicate that public transport is utilized by only 32% of the respondents for their daily commuting, while the majority, 67% of the participants, rely on private 2 and 4-wheelers.

Passenger Distribution: inside Vs Outside Turkayamjal



The survey findings reveal that a significant majority, comprising 56% of the respondents, engage in regular travel within Turkayamjal. Conversely, 44% of the participants reported commuting outside of Turkayamjal as part of their daily routine.

Purpose of travel to and fro in Turkayamjal



The survey indicates that the majority travel comprising 52% of the respondents, travel for coming their livelihoods. The next major activity undertaken for travel is by shopkeepers at 16% with travel for education bringing up the rear at 3%.

LOS-Level of Service

Points	Location	Peak Hour PCU	V/C	LOS	Configeway
SL1-1	Turkayamjal Lake Point View	4766	1.13	F	6 lane divided
SL1-2	Masqafi Ice-Cream Parlor	4682	1.30	F	6 lane divided
SL1-3	A.R. Brothers Clothing Store	639	0.18	A	2 lane undivided
SL1-4	Bhramanpally Bus Stop	3991	1.11	F	6 lane divided
SL1-5	Nagarjuna Sagar Road	4804	1.33	F	6 lane divided
SL1-6	Nagarjuna Sagar Service Road	3032	0.72	C	6 lane divided
SL2-1	Manneguda Road	711	0.47	B	2 lane undivided
SL2-2	Shivaji Statue	570	0.38	B	2 lane undivided
SL2-3	ZPHS School	1244	0.35	B	2 lane undivided
SL2-4	Public School, Injapur	2707	0.75	C	2 lane undivided
SL3-1	Surya Nagar	1206	0.80	C	2 lane undivided
SL3-2	Injapur-Thamur Road Junction	635	0.42	B	2 lane undivided
SL3-3	GHS, Koheda	583	0.39	B	2 lane undivided
SL3-4	Thamur Road and Nehru ORR Intersection	634	0.42	B	2 lane undivided
SL3-5	Koheda T-Point	115	0.08	A	2 lane undivided

The Level of service is calculated from the V/C (Volume/Capacity) ratio. As per IRC 160:1990 Level of Services from A to F is defined as per different V/C ratios. Level of Comfort and Nature of flow. And the V/C is calculated by the Geometric design standards for Urban Roads as per IRC 86: 1993.

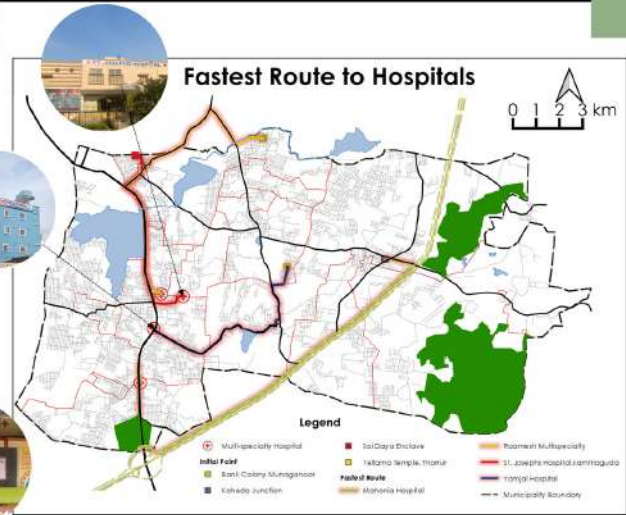
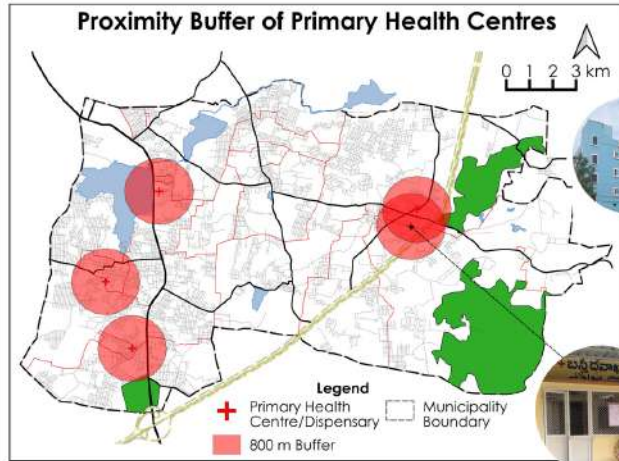
Peak Hour and Survey Analysis

SUBMITTED BY

CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS

Social Infrastructure

CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



Analysis of Existing Healthcare Facilities

Category	URDPI Standard	Existing Units	Current (2023) (Units required as per projected population 124,212)		Future (2033) (Units required as per projected population 353,187)
			Required Units	Gap	Required Units
Dispensary/Health Centre	1 unit for every 15,000 residents	5	8	3	24
Nursing home, Child Welfare and Maternity Centre	30 beds per 100,000 population	20 beds	37 beds	17 beds	106 beds
Multi-Specialty Hospital	200 beds per lakh population	180 beds	248 beds	68 beds	706 beds

Distance & Time Analysis from Hospitals

From	To	Distance (in km)	Time (in hours)
Yellama Temple, Thorur	Yamjal Hospital	5.397	0.213
Koheda Junction	Mahonia Hospital	11.478	0.2
Bank Colony Munaganoor	Ramesh Multi-specialty	7.81	0.176
Sai Daya Enclave	St. Josephs Hospital	5.107	0.124

Inferences

- A clear shortage of provisioning of the healthcare infrastructure in all three mentioned categories.
- Most healthcare facilities provided by private entities. No state-run multi-specialty hospitals.
- Most hospitals located along the SH-19, restricting access for residents residing in the eastern wards.
- Yamjal Hospital is the nearest hospital to Yellama Temple in Thorur. The total time that will be taken by an ambulance from getting the patient and returning to the hospital consumes more than 30 minutes.
- Lack of healthcare facilities in the eastern parts and deficiency of metalled roads restricted access and increased travelling time.

Healthcare Infrastructure

SUBMITTED BY

CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



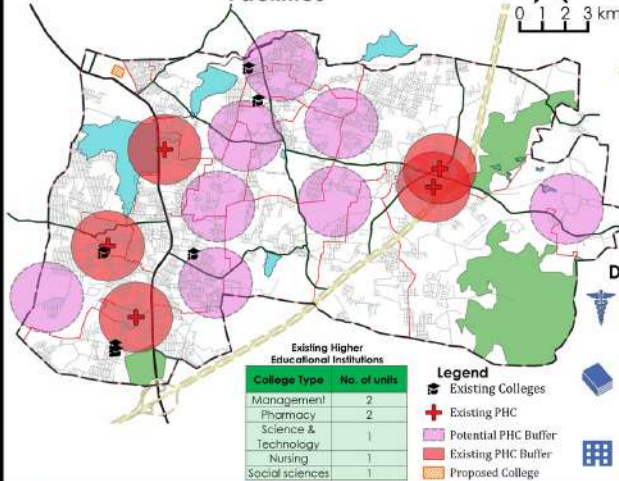
CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

- Objectives**
- Address regional disparities in the provision and distribution of social infrastructure
 - Increase capacity and accessibility of education and health infrastructure
 - Design Open Spaces that provide opportunities for physical activities, relaxation and mental rejuvenation and, contribute to the overall quality of life

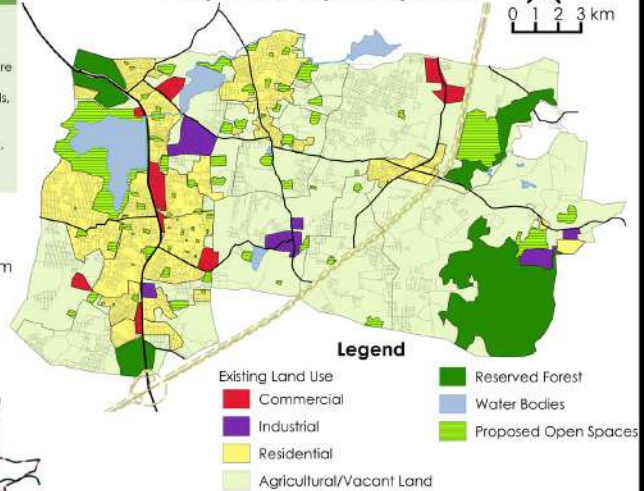
Proposal

Total Area proposed for a college = 0.05 sq km
Total area proposed for open spaces = 4 sq km
Potential Sites identified for establishment of healthcare facilities = 8
Open Spaces proposed near neighbourhoods, schools, anganwadis, community hall and religious places for place-making purposes
Open Spaces to be developed as housing area parks, neighbourhood parks, community parks and sports facilities

Proposed Sites for Educational And Health Facilities



Proposed Open Spaces



UN Sustainable Development Goals

- Ensure healthy lives and promote well-being for all at all ages
- Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Make cities and human settlements inclusive, safe, resilient and sustainable

Govt. Schemes for Development of Social Infrastructure

- | Category | Schemes |
|----------------------------|--|
| Education | <ul style="list-style-type: none"> • Samagra Sarva Siksha Abhiyan (Central) • Mana Ooru - Mana Badi (State) • Ayushman Bharat - Health and wellness Centres (Central) |
| Health | <ul style="list-style-type: none"> • Telangana State Medical Services Infrastructure Development Corporation (State) |
| Recreational spaces | <ul style="list-style-type: none"> • Hariha Haram (State) |

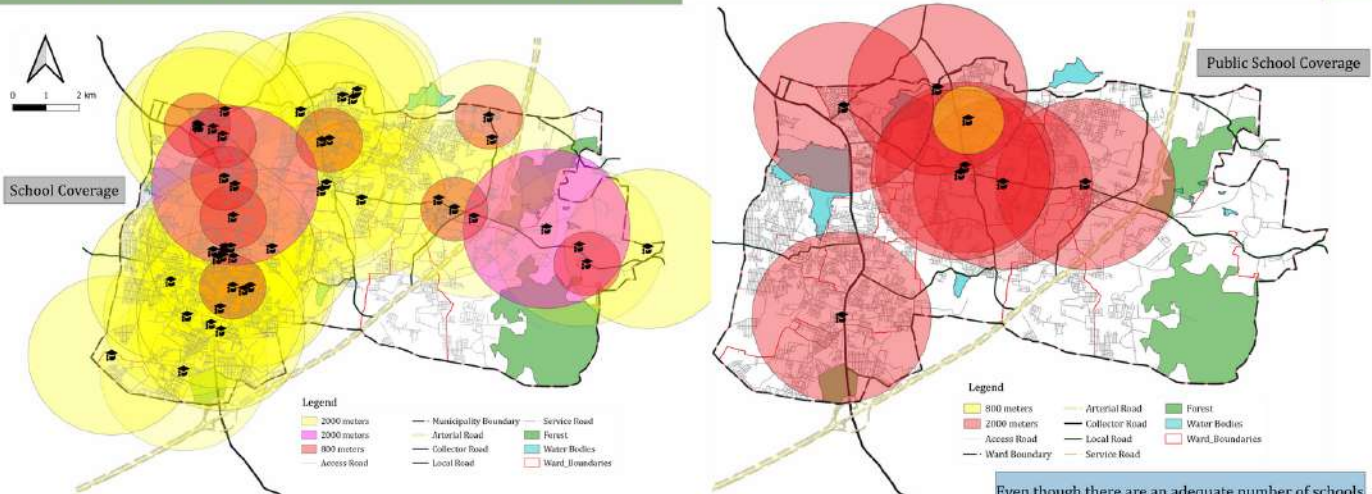
Proposal

SUBMITTED BY

CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



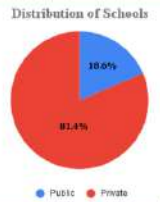
Type of Schools	Existing units	Hostel Facility	Playground
Primary (I to V)	5	-	3
Senior Secondary (VI to XII)	18	5	11
Integrated (I to XII)	14	4	12
Special schools	2	1	1



Even though there are an adequate number of schools in the municipality, most of them are clustered around the state highway. There are two special schools located on each side of the municipality. The eastern part of the municipality has very few schools.

Type of Schools	Population served per unit	Area requirement (in ha) (URDPFR)	Existing units	Total required units (Units required as per projected population: 1,24,212)	Gap (Units)	Existing area (in hectares)	Required area as per population projection: 1,24,212	Gap in Area required	Required units as per 2033 population of 3,53,187	Proposed Units	Required area (in hectares)
Pre-Primary	2,500	0.06	4	59	46	0.434	3.974	3.54	141	137	10.98194
Primary (I to V)	5,800	0.2	5	25	20	0.8755	4.968	4.8925	71	66	13.12748
Senior Secondary (VI to XII)	7,600	6.6	18	17	0	2.2195	8.836	7.7256	47	29	17.85496
Integrated (I to XII)	1,30,000	3.9	14	1	0	2.5977	4.347	1.7493	4	0	0
Special schools	10,00,000	0.2	2	1	0	0.1716	0.024	0	1	0	0
						Total gap area	17.9073		Total required area	41.564424	

Out of the 39 existing schools, only 10 of them have hostel facilities, and 12 do not have a playground. Public schools are highly inadequate. Only 8 schools are public, while the rest are private. All the preprimary schools are owned by the private. There is a huge gap in the area required for each school.



School Infrastructure

SUBMITTED BY
CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



Physical Infrastructure

CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

Proposal for Storm Water Drainage and Lake Protection

Primary Drains meeting Injapur lake:
For treating storm water drain at Injapur lake inlet

- Constructed Wetlands:**
- Designed and constructed to utilize the natural process of wetlands in treating waste water
 - Physical and biological processes are involved in treating waste water, helps in maintaining the quality of water in Injapur lake
 - Treatment capacity varies from 500 L to 10 MLD
 - Creating asthetical public spaces



Field example of Kachputa Drain, Agri, build on wetland concept



0 0.4750 0.95 1.90 2.85 3.80 Kilometers



Field example of Nekkampur lake, Hyderabad

Smaller lakes and Water Bodies

Floating treatment Wetlands

- Floating treatment wetlands are suggested for the smaller water bodies.
- The longer roots of aquatic plants absorb the nutrients and contaminants and they also encourage microbes to grow around the roots in form of biofilm
- A small floating system with dimension of 1.2*1 m with at least 0.8 m depth with plant roots.
- One small floating system can handle upto 10,000 liters of waste water every day. Nekkampur lake in Hyderabad has installed a similar system, with the treatment capacity of 20 MLD.

Storm Water Drains : Secondary and Tertiary drains will have Rain Water Harvesting structures

Recharge pits	Suitable for	Appropriate space required
Recharge Wells	Deep Wells are interconnected to storm water drains or water from roof top. Usually a screen chamber is placed before water entering into the well	3.11 m dia and 30 ft deep wells can store and treat 4000 liters and percolation can take place from 7 to 7 days depending on the type of soil rock

Recharge Pits and Recharge Wells



Field example of Recharge/ Percolator pits (Lalbag, Bangalore)



Field example of Ground Water recharge through storm water drains

Physical Infrastructure Proposal: Storm Water Drainage and Lake Protection

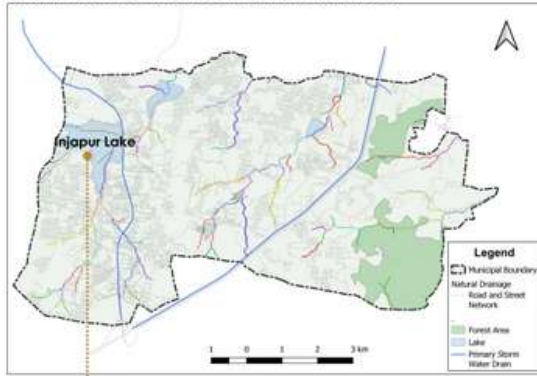
SUBMITTED BY

CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN

STREAM NETWORK AND NATURAL DRAINAGE



Legend

- Municipal Boundary
- Natural Drainage
- Road and Street Network
- Forest Area
- Lake
- Primary Storm Water Drain

Location : Injapur lake

Parameters	Results in 2012	Results in 2022	Acceptable
pH	8.02	8.36	7 to 8.5
TDS	1329 PPM	1831 PPM	300 PPM
Turbidity	18.6 NTU	27 NTU	1 NTU
Conductivity	3,045 millimeters	3.54	
Alkalinity	98.3 Mg/L	58 Mg/L	200 Mg/L
Acidity	7 Mg/L	9 Mg/L	
Chloride Content	1294.1 Mg/L	2230 Mg/L	230 Mg/L
Dissolved Oxygen	1.8 Mg/L	1.8 Mg/L	6.5-8 Mg/L

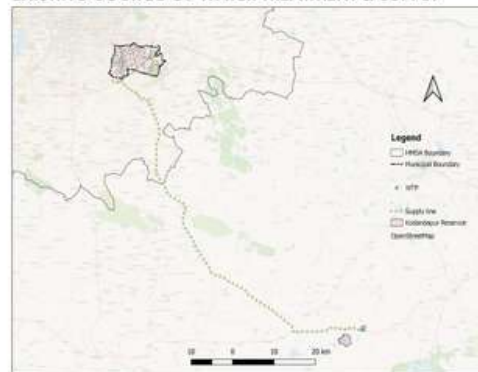
Inference: High turbidity indicate mixing of small particles, including chemical, biological particles. Low dissolved oxygen mean less oxygen available for aquatic life. TDS till 500 PPM is acceptable, beyond 1000 PPM is unsafe for Human use and indicate presence of toxic particles.

Source: Dept of Civil Engineering, JNTU

Water Quality of Injapur Lake

Physical Infrastructure: Water Supply and Storm Water Drainage

EXISTING SOURCE OF WATER TREATMENT & SUPPLY



Legend

- Water Boundary
- Municipal Boundary
- WTP
- Supply line
- Kondandapur Reservoir
- Overhead tank

- Kondandapur Reservoir is the existing source of municipal water supply in Turkayamjal.
- Water Treatment Plant located in close proximity to the reservoir.
- WTP lies at a 100 km distance from Turkayamjal.
- No proper water storage facility within or close to the Municipality Boundary.
- WTP lies 70 km beyond HMDA's boundary.
- Large amounts of unaccounted wastage/loss of water and water pressure.

STORM WATER DRAINAGE



- Expressway (ORR) and Arterial roads (Sagar Ring Road) have integrated underground storm water drainage networks.
- Indiscriminate disposal of solid waste in existing storm water drains has been reported.
- Lack of integrated storm water drainage along Local and Access roads. Turkayamjal receives an average of 900 mm rainfall annually.
- It lies downstream of the Musi River.

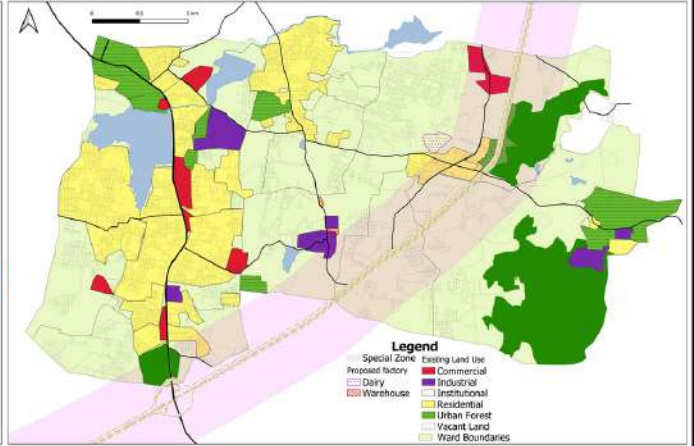
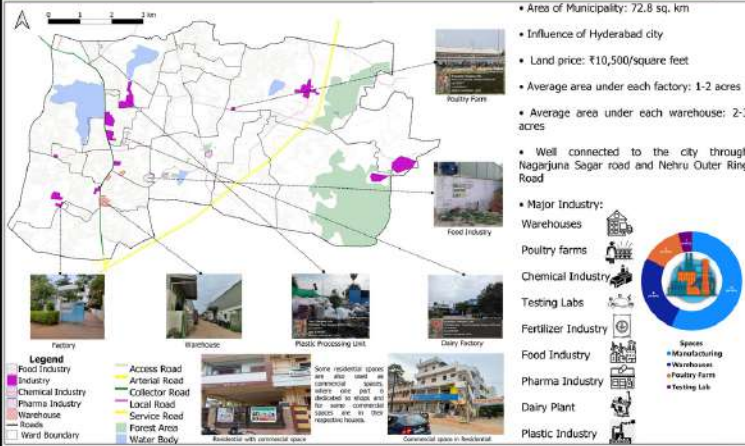
SUBMITTED BY

CITIES AND GOVERNANCE
TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS



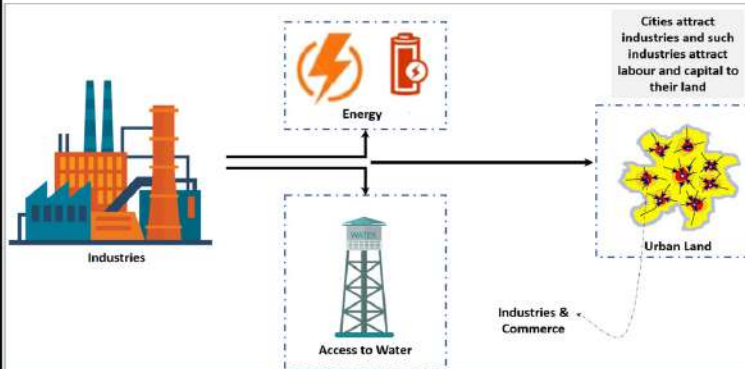
Industry Proposal

CITY LAB: TURKAYAMJAL DEVELOPMENT PLAN



Existing Industry

Proposed Industry



- Turkayamjal is being influenced by Hyderabad and near by areas
- A pharma city and IT industry is coming near to Turkayamjal from which people will be traveling for work due to better amenities available here
- Dairy industries will be coming which will influence the purchase of cattle and fishery
- Mainly the economy will depend upon commercial shops and construction
- Warehouses in this area will grow due to need of storage units

Industrial Proposal

SUBMITTED BY

CITIES AND GOVERNANCE
 TATA INSTITUTE OF SOCIAL SCIENCES, HYDERABAD OFF CAMPUS





**School of Public Policy and Governance
Tata Institute of Social Sciences, Hyderabad
cg.secretariat@tiss.edu**