



TELANGANA STATE ROAD INFRASTRUCTURE ANALYSIS & APPLICATIONS

NRSC USER MEET – 29th March 2022



Lingapuram of Settipelli GP, Gundala M

17°46'32", 80°18'36", 259.0m, 530"

13/10/2017 12:37:02



NATION

WORLD

STATES

CITIES

BUSINESS

SPORT

GOOD NEWS

MOVIES

PHOTOS

STOCK MARKET

BSE

57633.65



886.51(1.56%)

NSE

17176.70

[Home](#) > [States](#) > [Telangana](#)

Telangana: Woman in labour suffers in cut-off Agency village

Due to lack of roads in remote Agency areas of Mancherial district, a pregnant woman who was in labour had to wait a for a couple of hours before she could reach the nearby hospital.



Published: 07th August 2021 08:39 AM | Last Updated: 07th August 2021 08:39 AM

| A+ A- A-



Ambulance workers and locals shift a pregnant woman to the other side of an overflowing river on a stretcher, to take her to a nearby PHC, on Friday | EPS

PRIME ACTIVITIES

- Geospatial Database of Habitations & Road Network
- Interpretation of Road Surface details
- Identification of unconnected Habitations/Gram Panchayats
- Proposed Optimum Road Network for Connectivity
- Prioritisation of Unconnected Habitations/Gram Panchayats
- Scientific Approach Allocation of Funds



Geospatial Database of Habitations & Road Network



Namalapadu 1279559

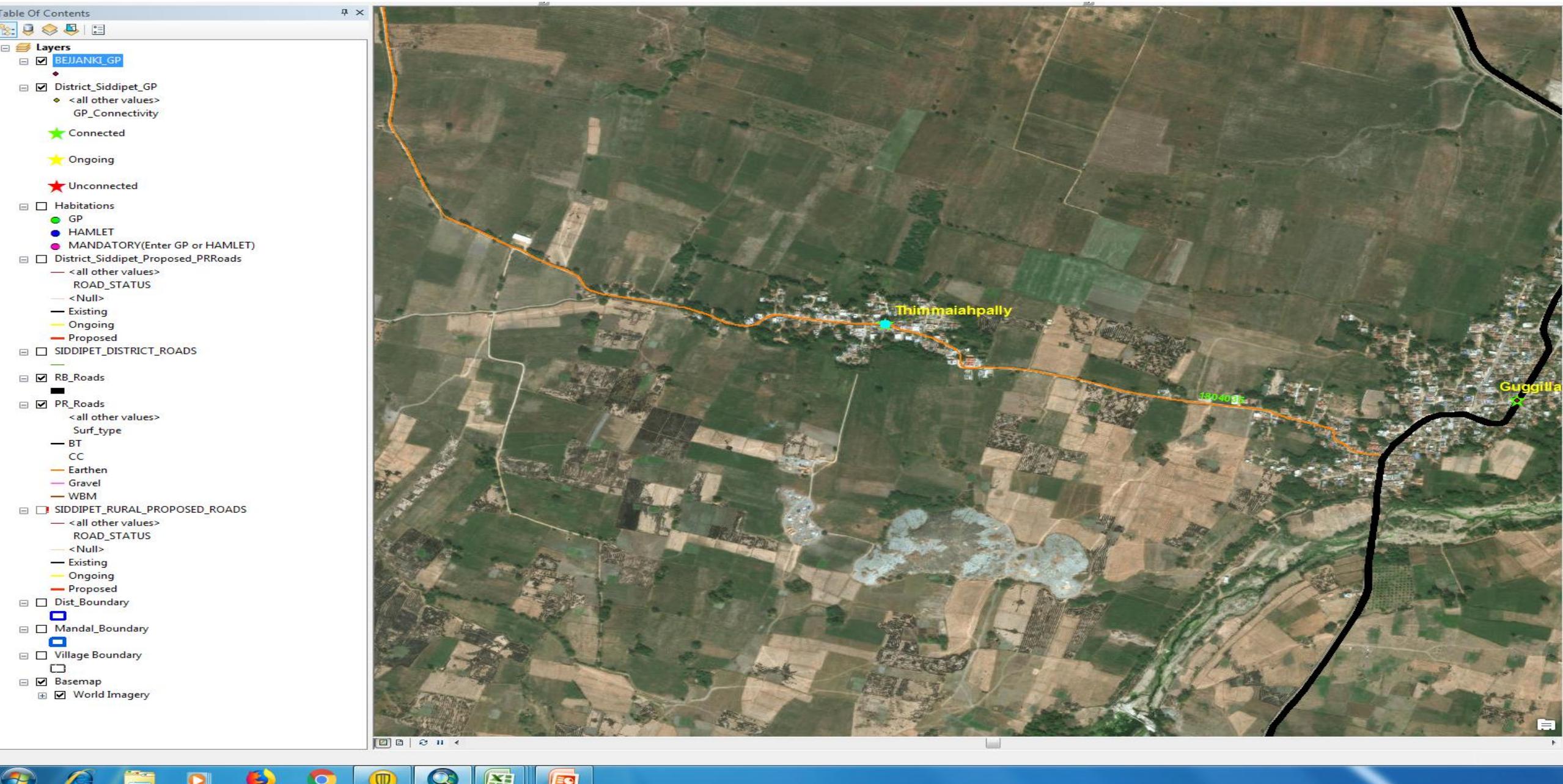
Ravi Kunta 1279560

Ravi Kunta 1279560

Dharmapuram (Ui) 1279559

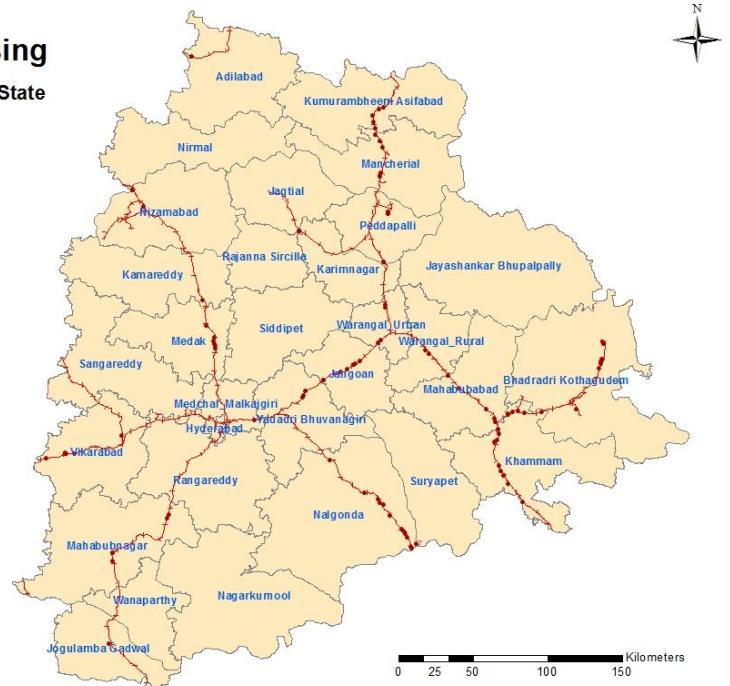


Interpretation of Road Surface details



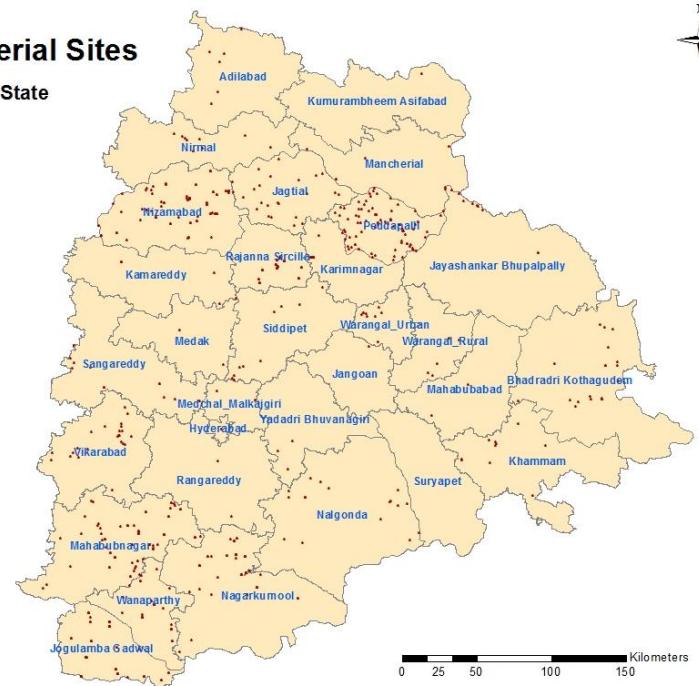
Level Crossing

PRED Telangana State



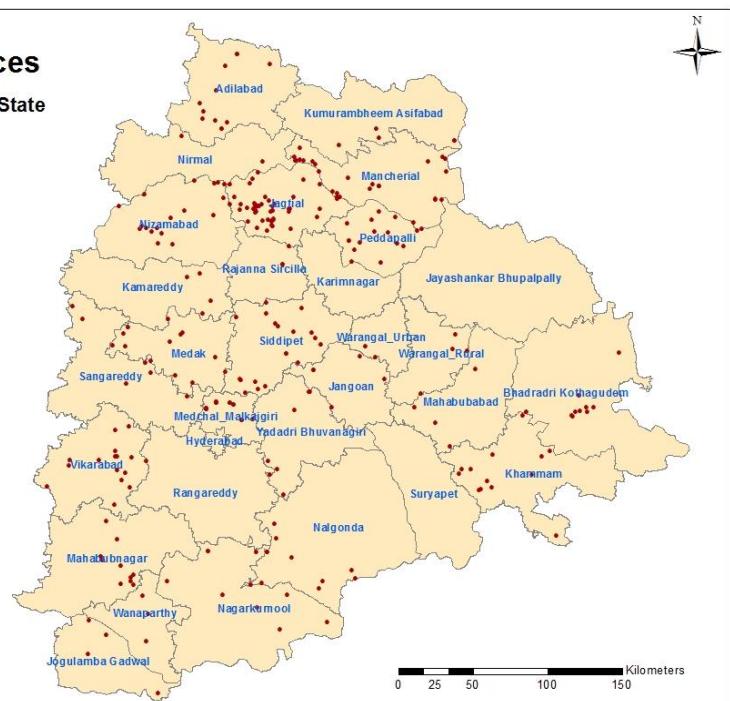
Construction Material Sites

PRED Telangana State



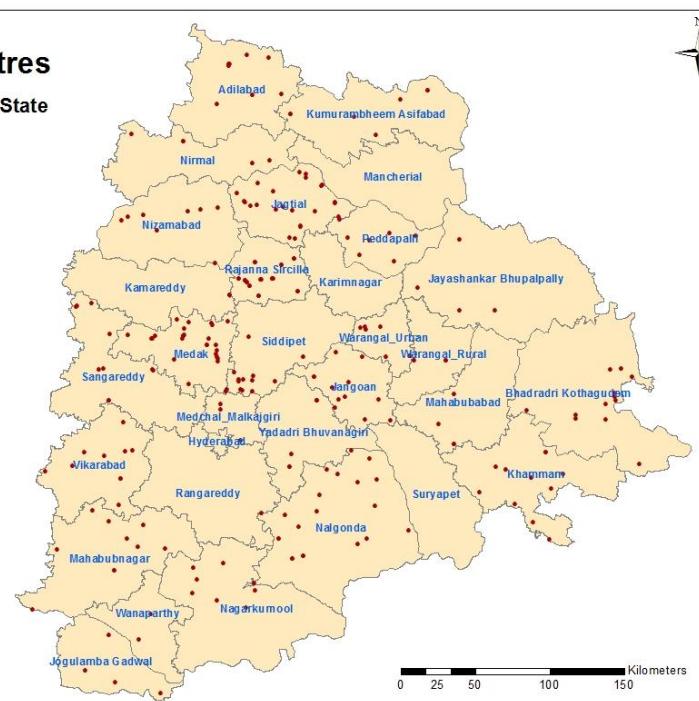
Tourist Places

PRED Telangana State



Market Centres

PRED Telangana State



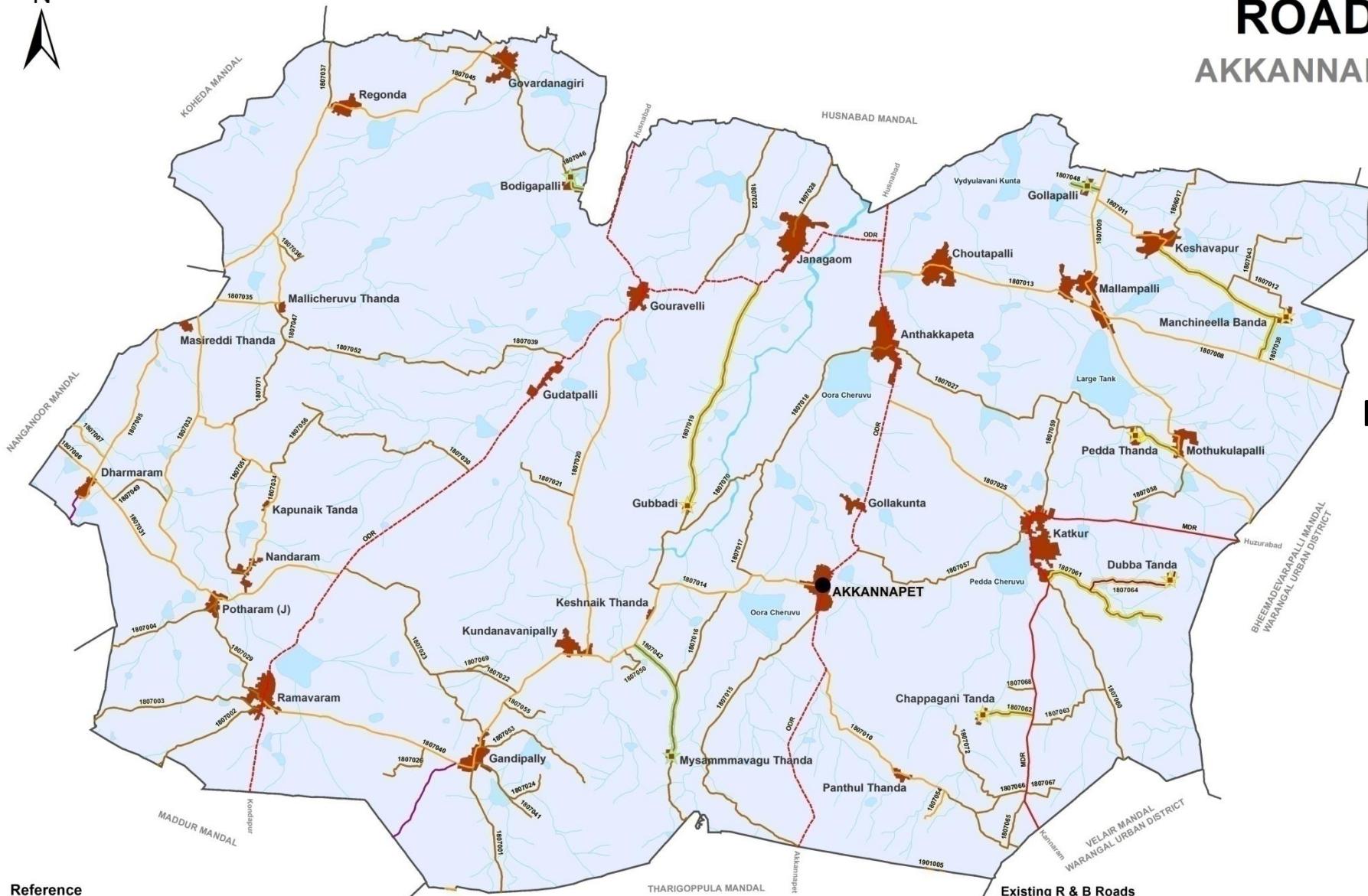


Identification of unconnected Habitations/Gram Panchayats

ROAD CONNECTIVITY MAP

AKKANNAPET MANDAL, SIDDIPET DISTRICT

0 0.5 1 2 km



Road Connectivity Maps
of 589 Mandals in
Telangana state.

Reference

Road Connectivity

- Unconnected Gram Panchayat - 3
- Ongoing Gram Panchayat - 5
- Ongoing - 11.66 km
- Proposed - 3.30 km

- Mandal Head Quarters
- Revenue Division Head Quarters
- District Head Quarters
- Gram Panchayat - 32

- Stream
- Tank
- River
- Reservoir

Existing P R Roads

- Bituminous (BT), Cement Concrete (CC) Road - 63.53 km
- Water Bound Macadam (WBM) Road - 1.52 km
- Gravel, Earthen Road - 107.21 km

Existing R & B Roads

- National Highway (NH) - 0.00 km
- National Highway Proposed (NHP) - 0.00 km
- State Highway (SH) - 0.00 km
- Major District Road (MDR) - 8.13 km
- Other District Road (ODR) - 27.24 km



Proposed Optimum Road Network for Connectivity



ROAD CONNECTIVITY MAP

SULTANABAD MANDAL, PEDDAPALLI DISTRICT

0 0.75 1.5 3 km



Reference

Road Connectivity

- ★ Unconnected Gram Panchayat - 1
- ★ Ongoing Gram Panchayat - 0
- Proposed - 1.10 km
- Ongoing - 0.00 km

Existing P R Roads

- Bituminous (BT), Cement Concrete (CC) Road - 38.09 km
- Water Bound Macadam (WBM) Road - 2.21 km
- Gravel, Earthen Road - 67.46 km

Existing R & B Roads and Rail

- State Highway (SH) - 16.61 km
- Major District Road (MDR) - 9.04 km
- Other District Road (ODR) - 68.39 km
- Railway Network

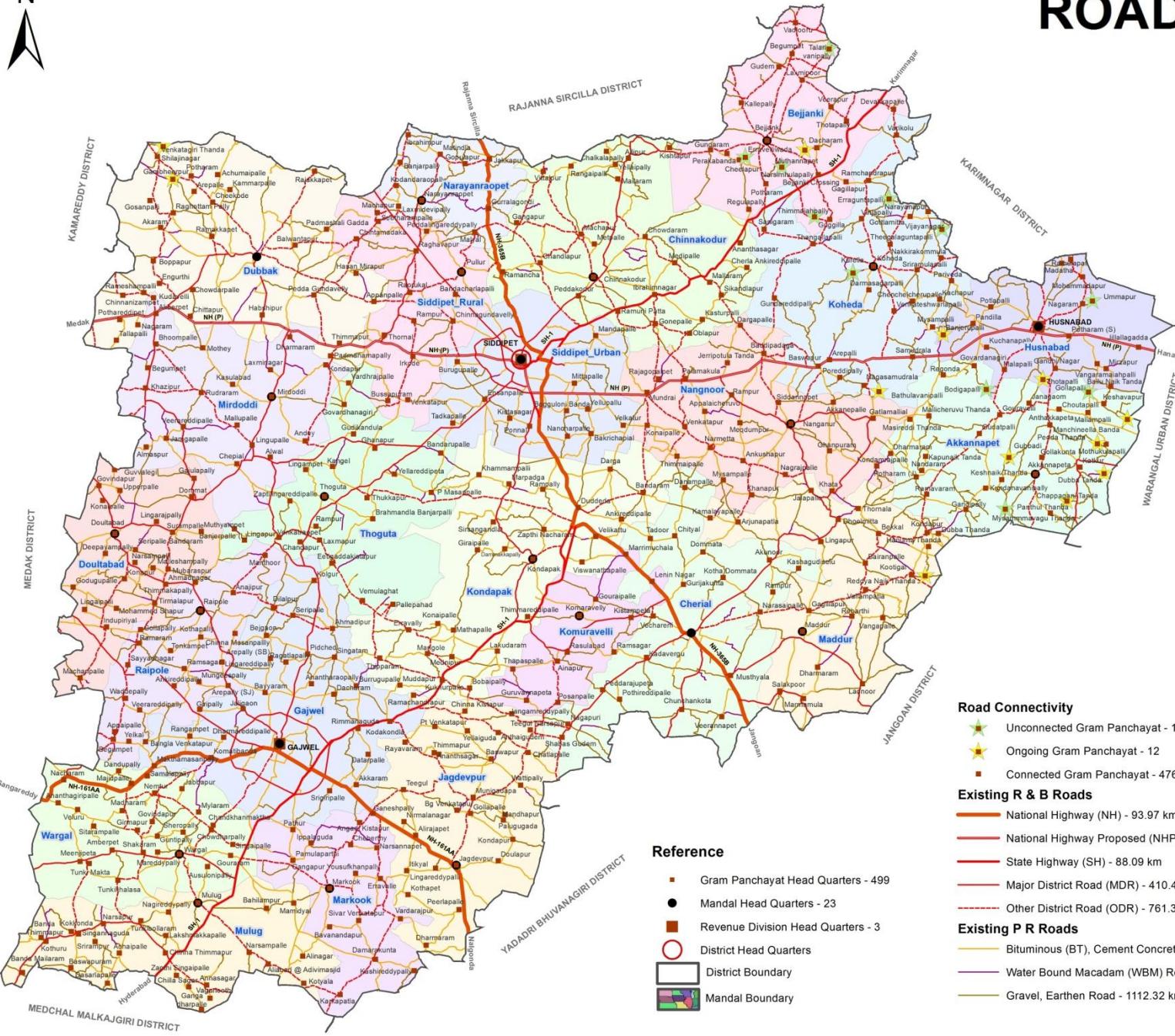
- Habitation
- Gram Panchayat - 27
- Mandal Head Quarters
- Revenue Division Head Quarters
- District Head Quarters
- Stream
- Tank
- River
- Reservoir
- Forest

ROAD CONNECTIVITY STATUS MAP

SIDDIPET DISTRICT



0 5 10 20 km



Road Connectivity Maps of 33
Districts in Telangana state.

ROAD CONNECTIVITY MAP

KARIM NAGAR DISTRICT



0 4.25 8.5 17 km

Reference

Road Connectivity

- ★ Unconnected Gram Panchayat - 22
- ★ Ongoing Gram Panchayat - 01
- Connected Gram Panchayat - 290
- Proposed - 32.50 km
- Ongoing - 4.52 km

Existing P R Roads

- Bituminous (BT), Cement Concrete (CC) Road - 515.44 km
- Water Bound Macadam (WBM) Road - 90.56 km
- Gravel, Earthen Road - 881.49 km

Existing R & B Roads and Rail

- National Highway (NH) - 70.11 km
- National Highway Proposed (NHP) - 81.09 km
- State Highway (SH) - 77.84 km
- Major District Road (MDR) - 47.64 km
- Other District Road (ODR) - 688.86 km

Railway Network

- Gram Panchayat Head Quarters - 313
- Mandal Head Quarters - 16
- Revenue Division Head Quarters - 2
- District Head Quarters

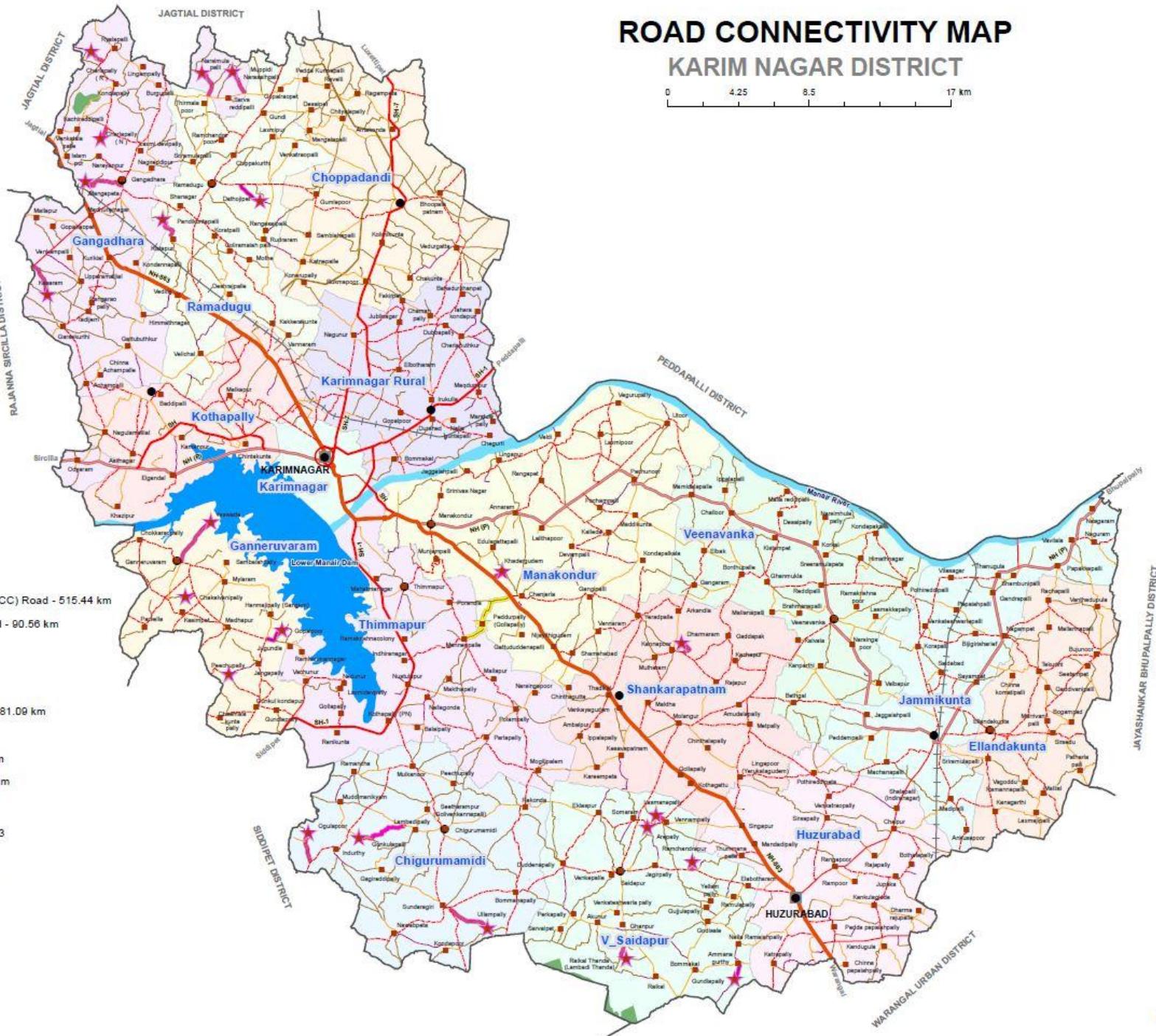
River

Reservoir

Forest

Mandal Boundary

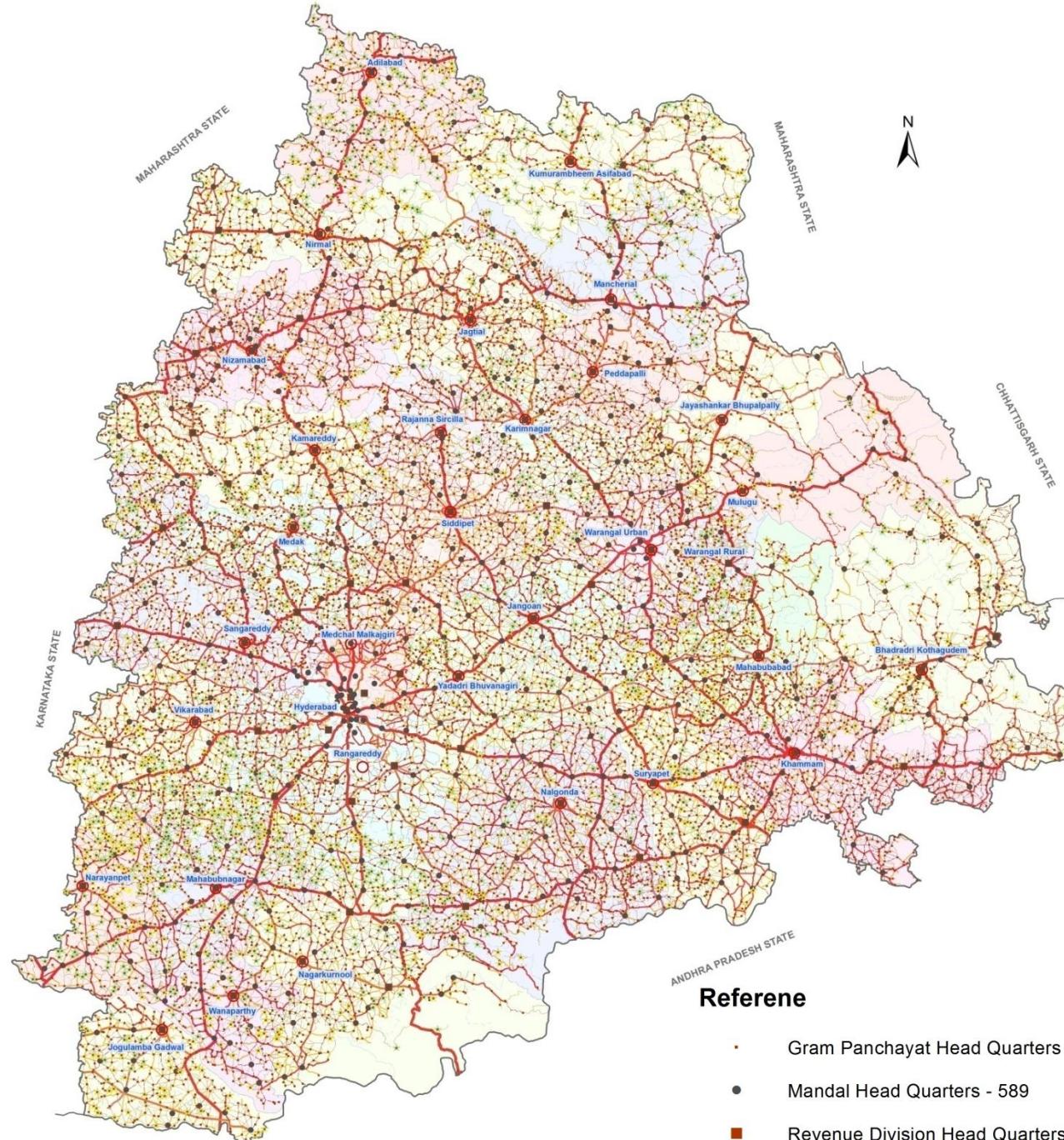
District Boundary



ROAD CONNECTIVITY STATUS MAP

TELANGANA STATE

0 5 10 20 km



Reference

- Gram Panchayat Head Quarters - 12751
- Mandal Head Quarters - 589
- Revenue Division Head Quarters - 69
- District Head Quarters - 33

OBJECTIVE

Connectivity of 12,751 GP's in
Telangana state with BT/CC roads.

Road Connectivity

- ★ Unconnected Gram Panchayat - 839
- ★ Ongoing Gram Panchayat - 716
- Connected Gram Panchayat - 11196

Existing R & B Roads

- National Highway (NH) - 37,32.59 km
- National Highway (Proposed) - 1,567.45 km
- State Highway (SH) - 1,451.69 km
- Major District Road (MDR) - 11,585.85 km
- Other District Road (ODR) - 13,801.13 km

Mandal Boundary



District Boundary



State Boundary

Existing P R Roads

- Bituminous (BT), Cement Concrete (CC) Road - 22,819.62 km
- Water Bound Macadam (WBM) Road - 8,379.90 km
- Gravel, Earthen Road - 28,763.08 km

ROAD (CATEGORY WISE) NETWORK MAP

TELANGANA STATE

N

0 5 10 20 km



Reference

Category *

- National Highway (NH) - 3,782.16 km
 - National Highway (Proposed) - 1,533.49 km
 - State Highway (SH) - 1,451.71 km
 - Major District Road (MDR) - 11,561.72 km
 - Other District Road (ODR) - 13,783.72 km
 - Rural Road - 60,161.02 km
 - Railway Network
- Gram Panchayat Head Quarters - 12,751
 - Mandal Head Quarters - 589
 - Revenue Division Head Quarters - 72
 - District Head Quarters - 33

- Reservoir
- River
- Forest
- Mandal Boundary
- District Boundary
- State Boundary

* Total Road Length in the State - 92,253.82 km



ROAD (SURFACE WISE) NETWORK MAP

TELANGANA STATE

N

0 5 10 20 km



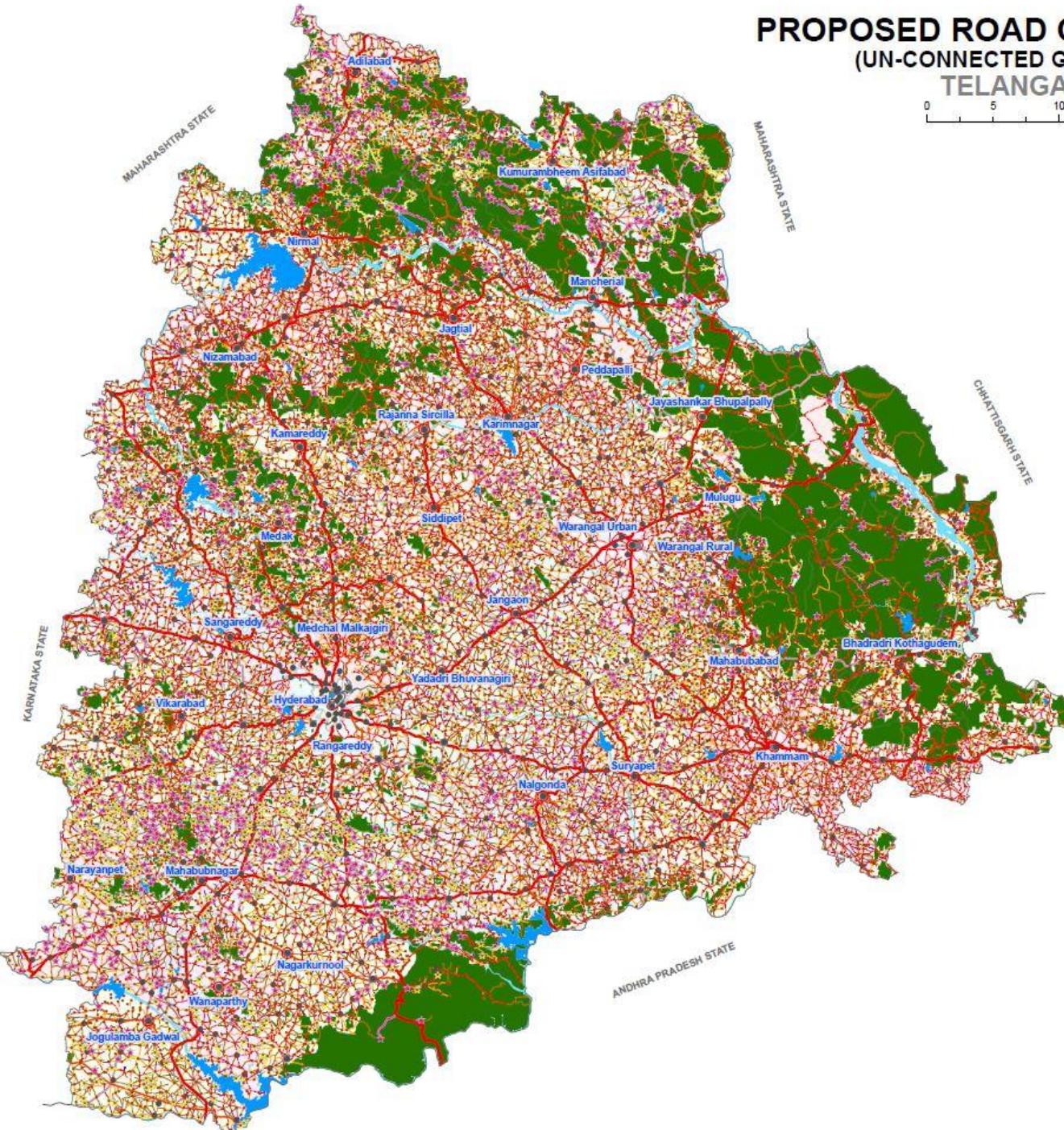
* Total Road Surface Length in the State - 92,253.82 km



PROPOSED ROAD CONNECTIVITY MAP (UN-CONNECTED GRAM PANCHAYATS) TELANGANA STATE



0 5 10 20 km



Reference

Road Connectivity

- ★ Unconnected Gram Panchayat - 839
- Ongoing Gram Panchayat - 718
- Connected Gram Panchayat - 11,196
- Proposed - 1,450.56 km
- Ongoing - 1,751.62 km

Existing P R Roads

- Bituminous (BT), Cement Concrete (CC) Road - 22,813.88 km
- Water Bound Macadam (WBM) Road - 8,387.15 km
- Gravel, Earthen Road - 28,959.99 km

Existing R & B Roads and Rail

- National Highway (NH) - 3,762.16 km
- National Highway (Proposed) - 1,533.49 km
- State Highway (SH) - 1,451.71 km
- Major District Road (MDR) - 11,561.72 km
- Other District Road (ODR) - 13,783.72 km
- Railway Network

- Gram Panchayat Head Quarters - 12,751
- Mandal Head Quarters - 589
- Revenue Division Head Quarters - 72
- District Head Quarters - 33





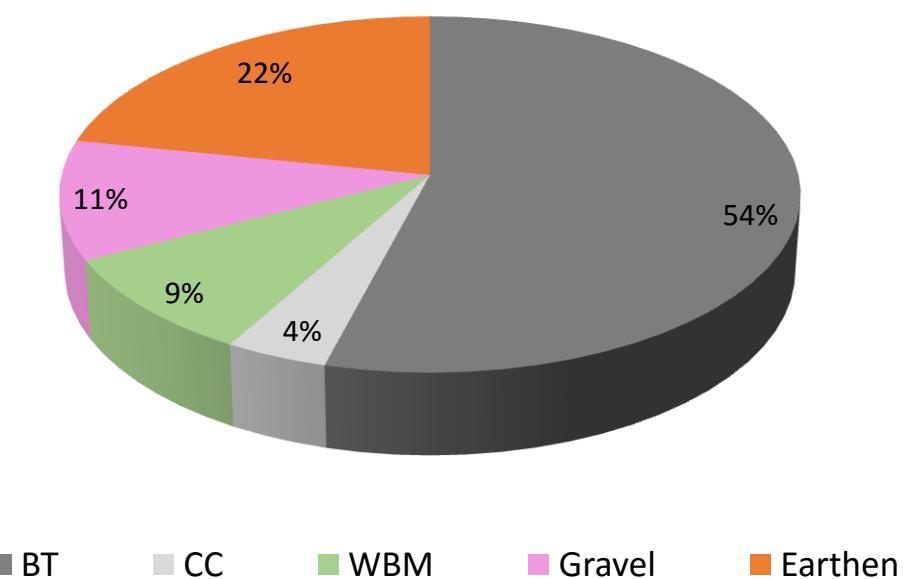
Prioritisation of Unconnected Habitations/Gram Panchayats

ROAD SURFACE TYPE	LENGTH (km)	PERCENT
Cement Concrete (CC)	3,716	4.03
Black Top (BT)	49,933	54.22
Paved Roads Total	53,649	58.0
Water Bound Macadam (WBM)	8,463	9.19
Gravel	9,964	10.82
Earthen	20,026	21.74
Non-Paved Roads Total	38,453	42.0
Rural Roads - Grand Total	92,101	

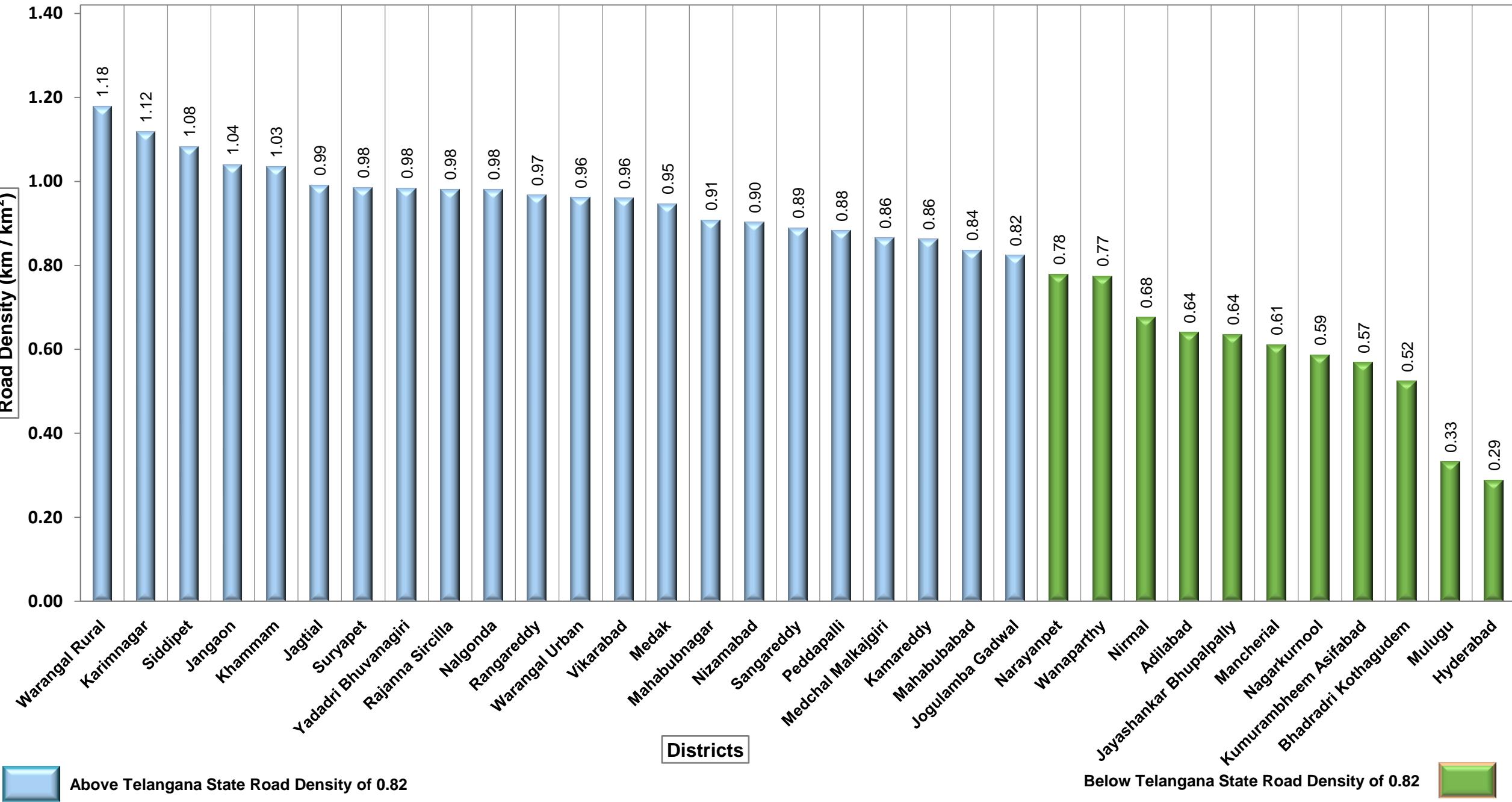
Note - The figures provided above are as per the GIS database created at TRAC, these are yet to be confirmed by PRED field Engineers.

Unconnected GPs with BT /CC Roads – 832

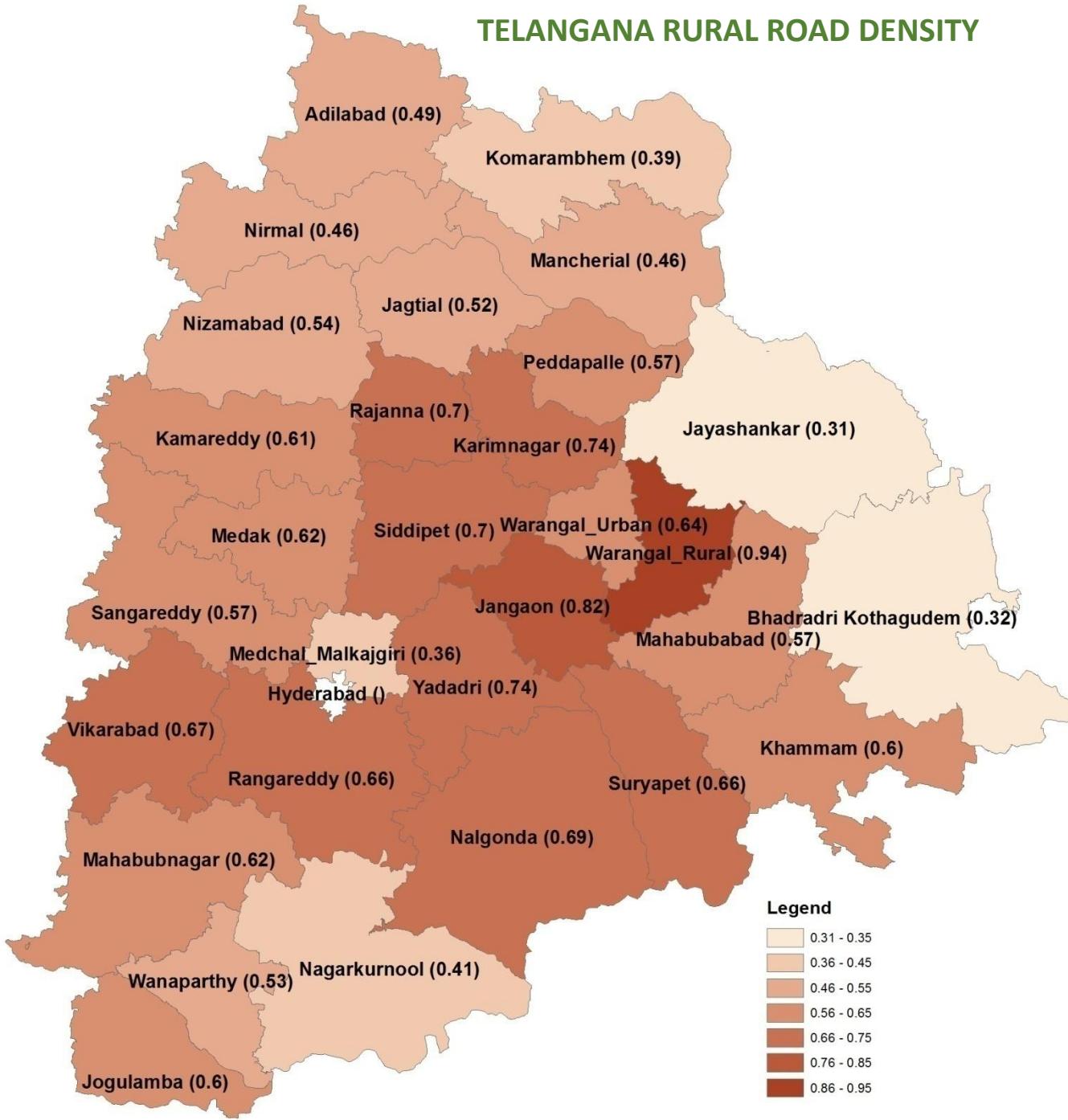
SURFACE TYPE - PERCENTAGE



TELANGANA STATE – DISTRICT WISE ROAD DENSITY

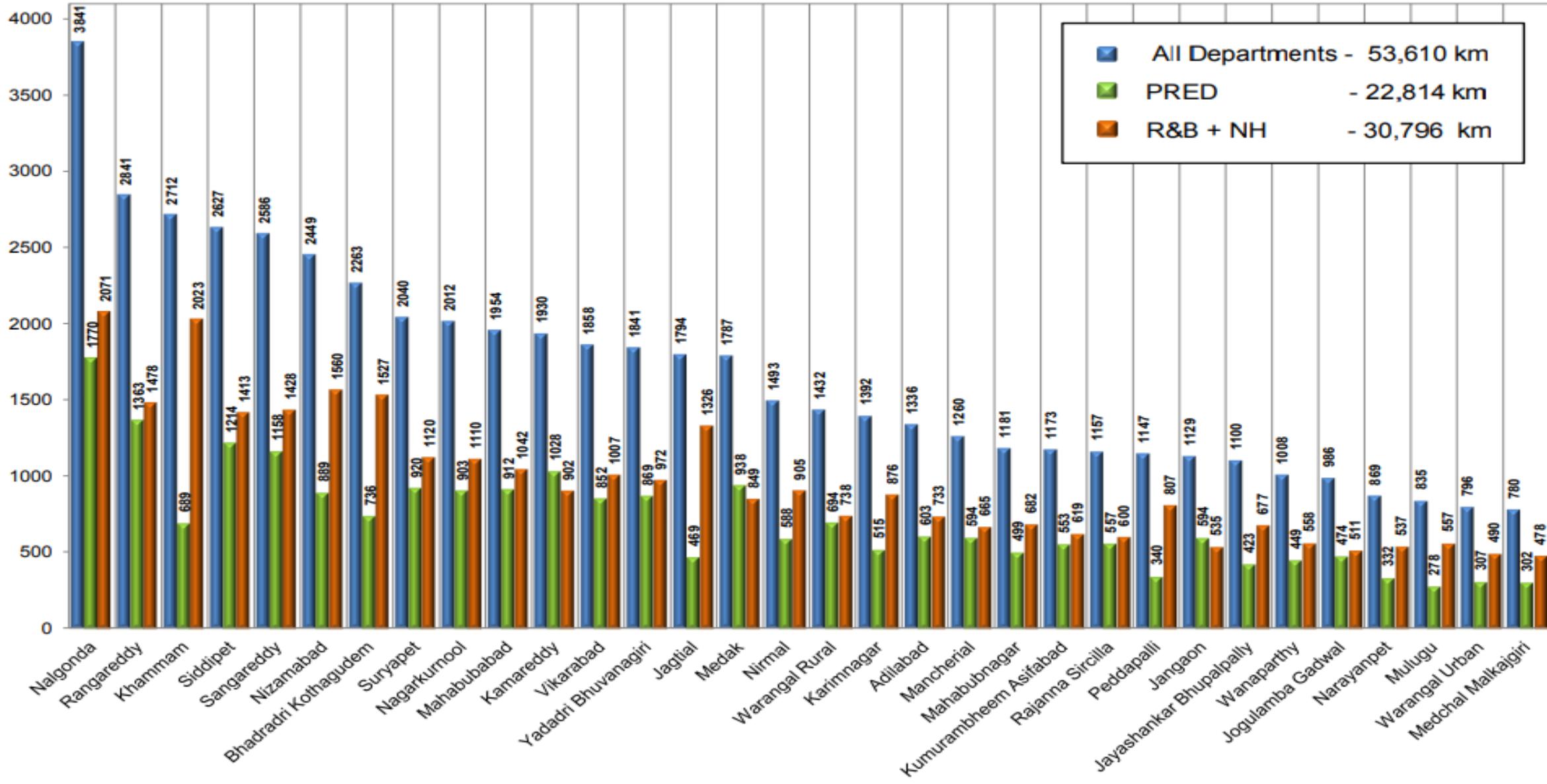


TELANGANA RURAL ROAD DENSITY



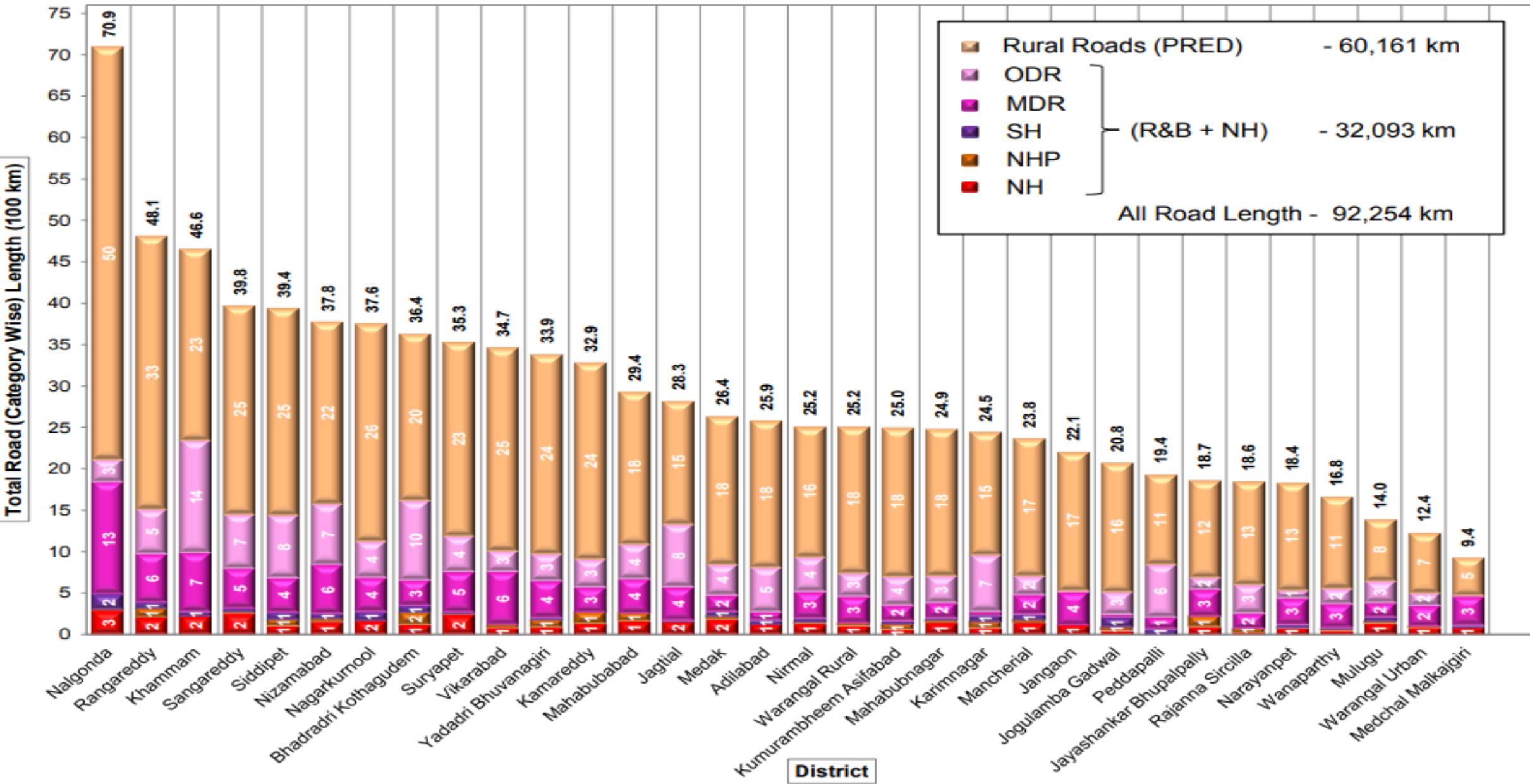
ROAD DENSITY ANALYSIS

Department wise Pucca (NH,SH,BT/CC) Road Length



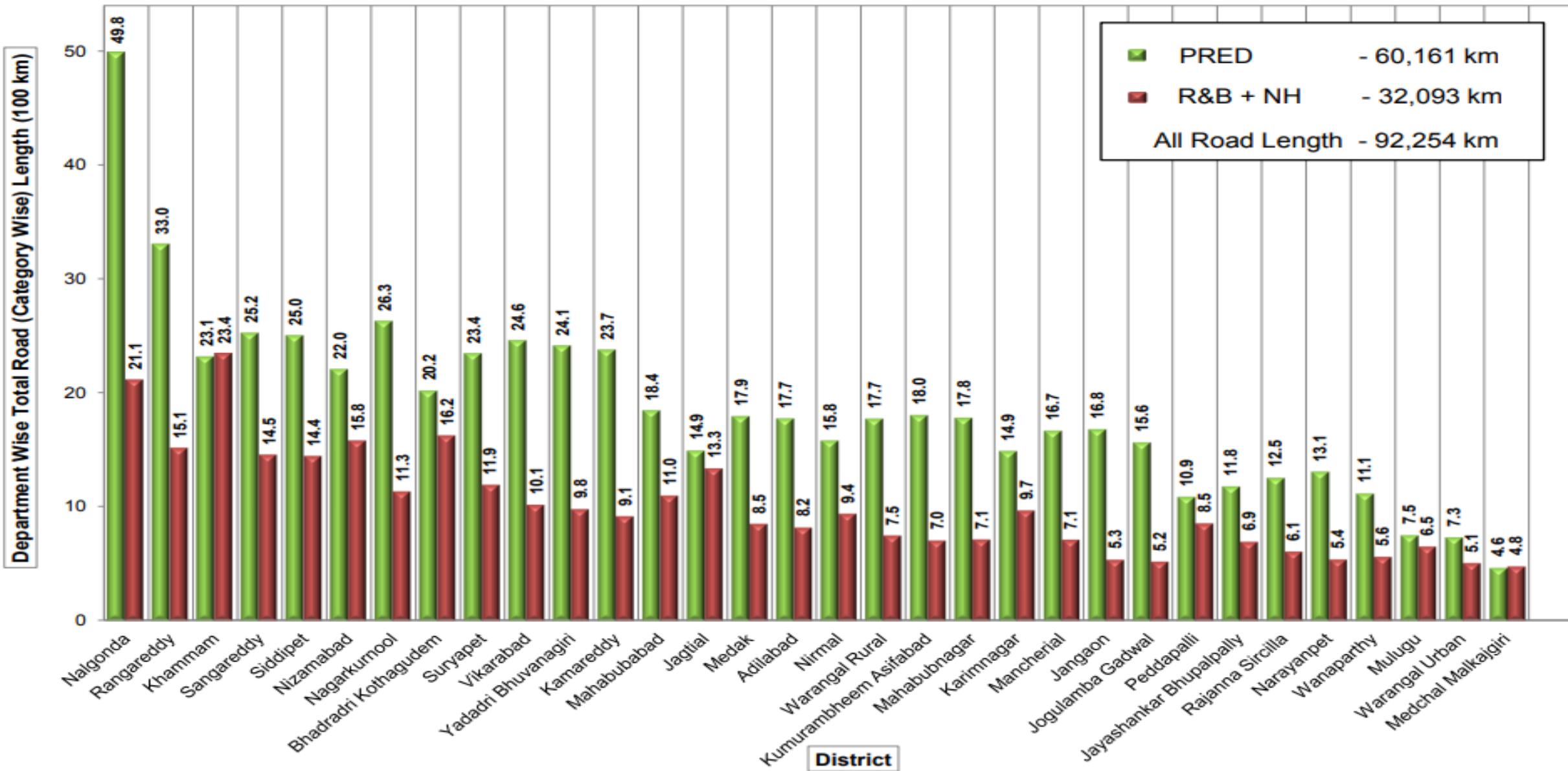
ROAD (CATEGORY WISE) NETWORK ANALYSIS

All Road (Category Wise) Length



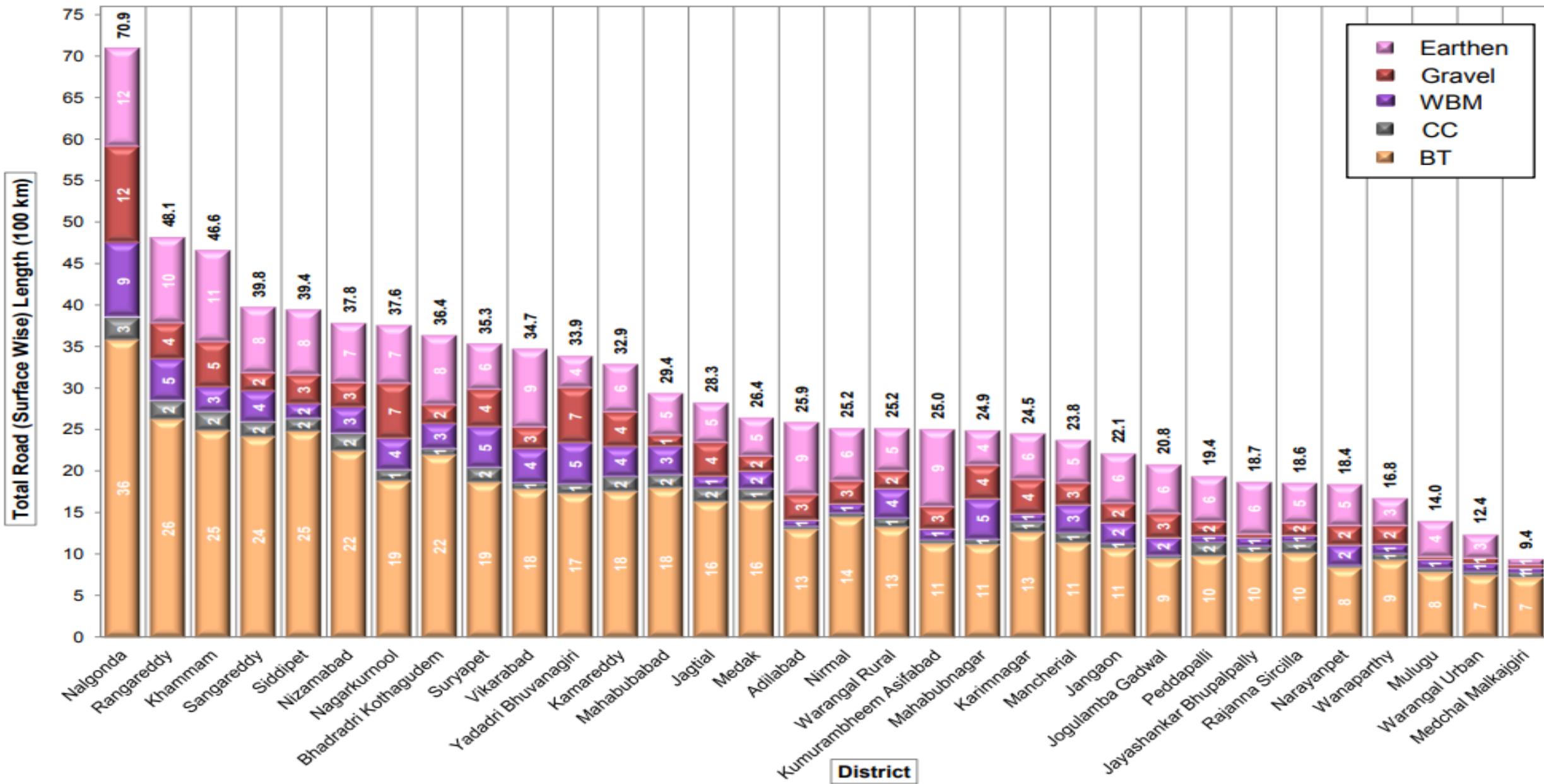
ROAD (CATEGORY WISE) NETWORK ANALYSIS

Road (Category Wise) Length - Department Wise



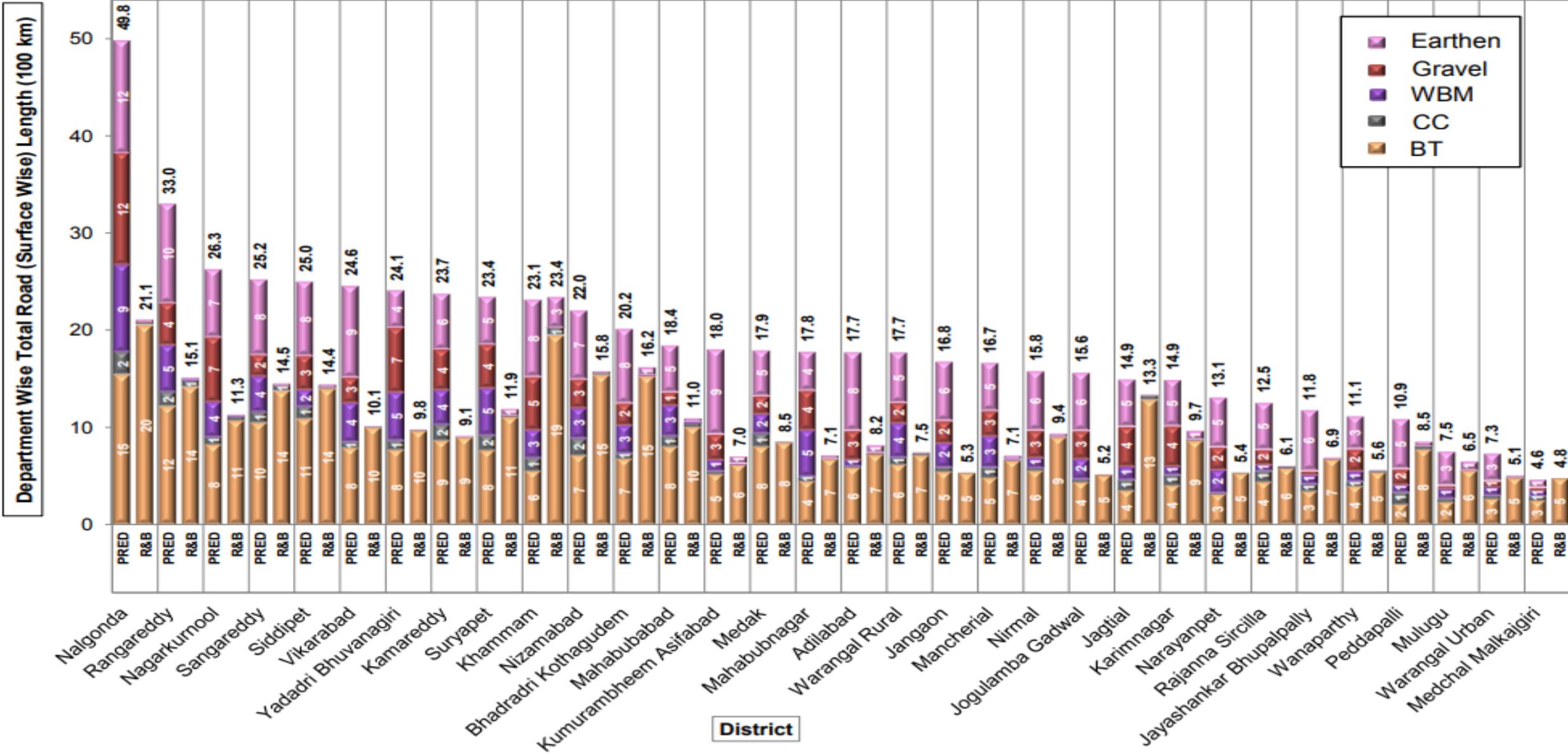
ROAD (SURFACE WISE) NETWORK ANALYSIS

All Road (Surface Wise) Length

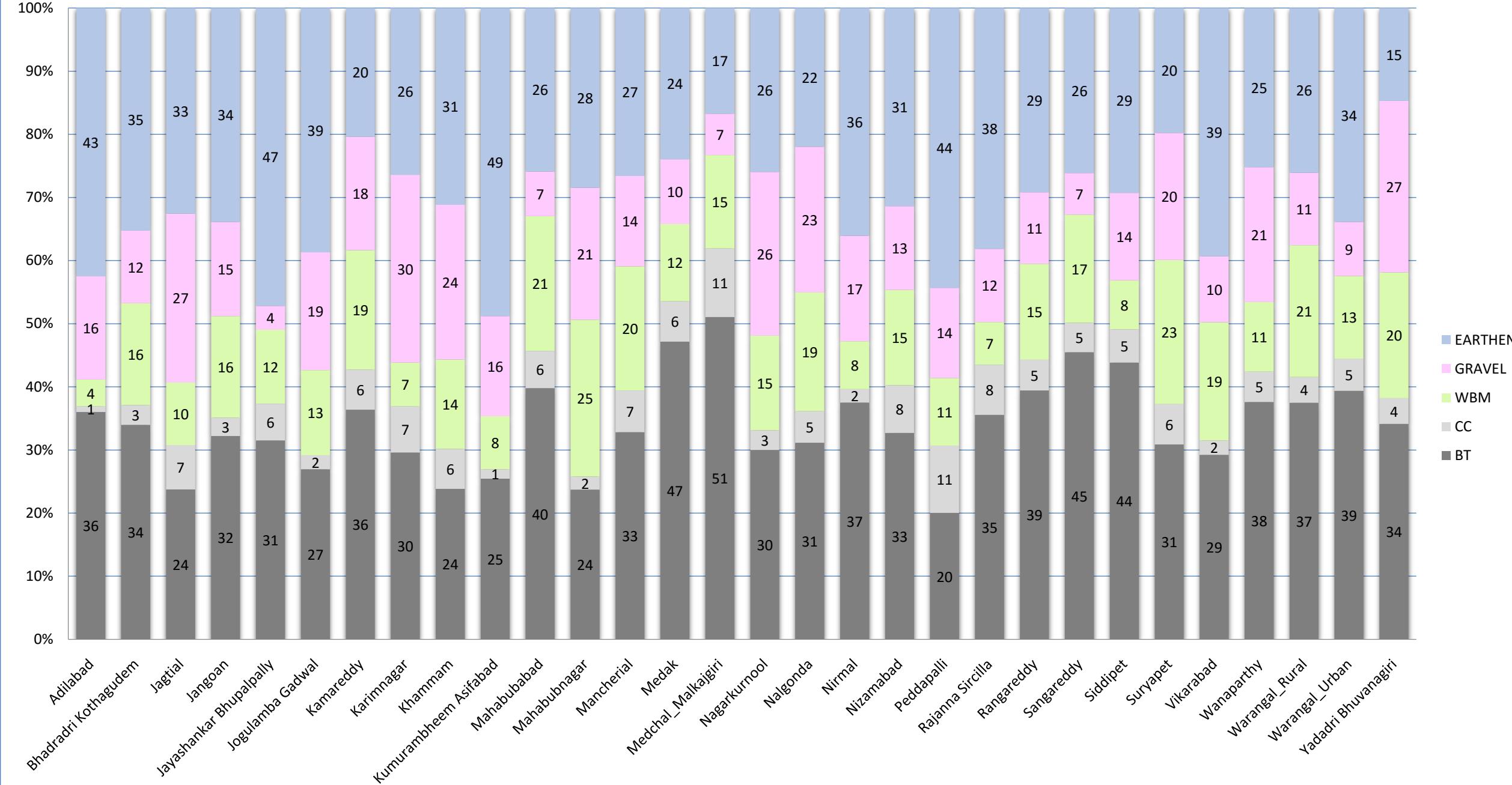


ROAD (SURFACE WISE) NETWORK ANALYSIS

Road (Surface Wise) Length – Department Wise



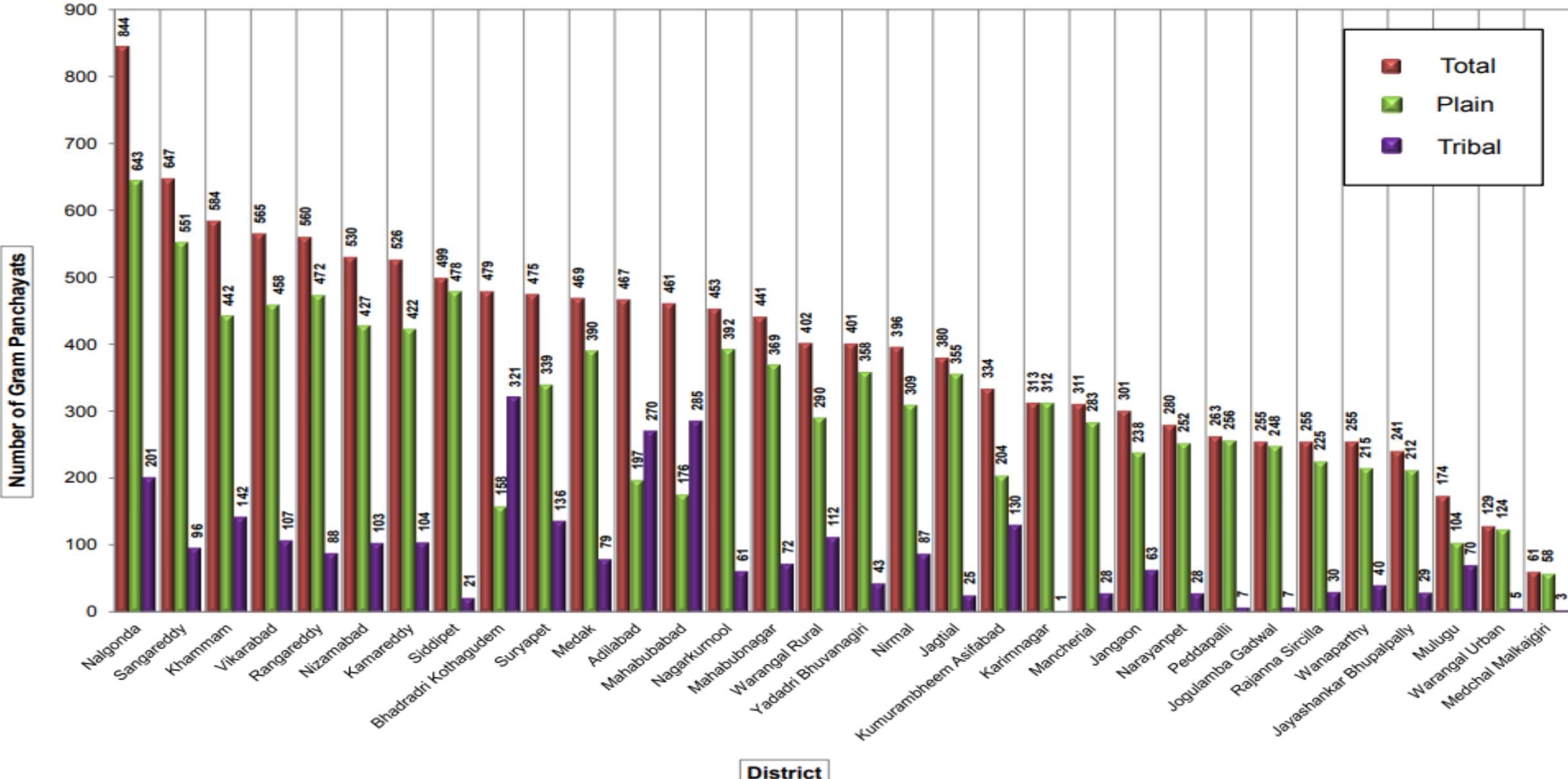
DISTRICT WISE PERCENTAGE OF ROAD SURFACE TYPE- GEOSPATIAL DATA



Existing Road Connectivity			
From	To	Category	Surface
District HQ. (31)	State HQ.	National Highway (NH) / State Highway (SH) Road	Bituminous (BT) / Cement Concrete (CC)
Mandal HQ. (589)	District HQ.	249: National Highway (NH) / State Highway (SH) Road	Bituminous (BT) / Cement Concrete (CC)
		286: Major District Road (MDR) / Other District Road (ODR)	Bituminous (BT) / Cement Concrete (CC)
		44: Rural Road	Bituminous (BT) / Cement Concrete (CC)
Gram Panchayat HQ. (12,751)	Mandal HQ.	1,106: National Highway (NH) / State Highway (SH) Road	Bituminous (BT) / Cement Concrete (CC)
		5,123: Major District Road (MDR) / Other District Road (ODR)	Bituminous (BT) / Cement Concrete (CC)
		8: Other District Road (ODR)	Water Bound Macadam (WBM)/ Gravel / Earthen
		4966: Rural Road	Bituminous (BT) / Cement Concrete (CC)
		694: Rural Road	Water Bound Macadam (WBM)
		847: Rural Road	Gravel / Earthen

GRAM PANCHAYAT ANALYSIS

Gram Panchayat Category

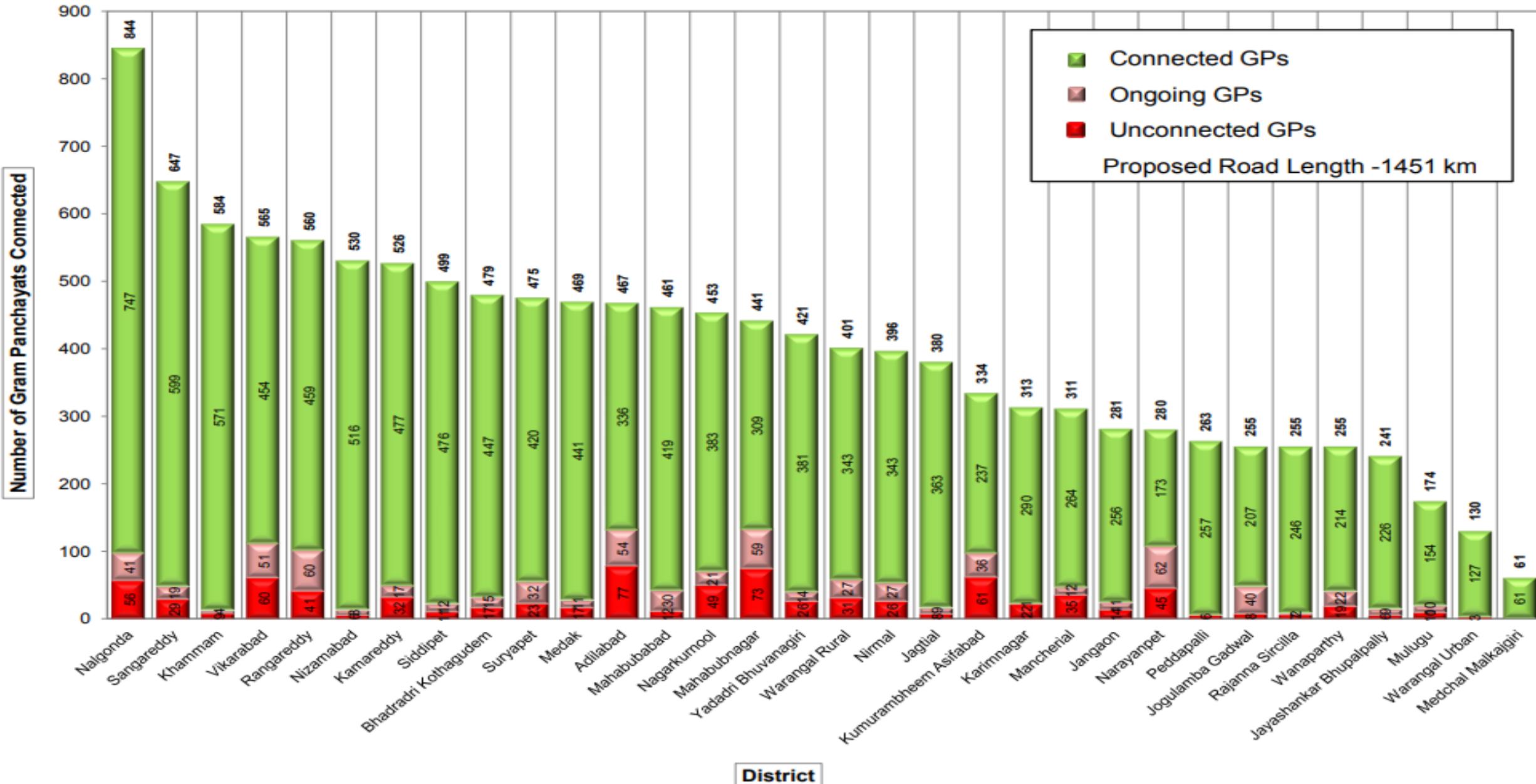


District Wise – GP Road Connectivity Status

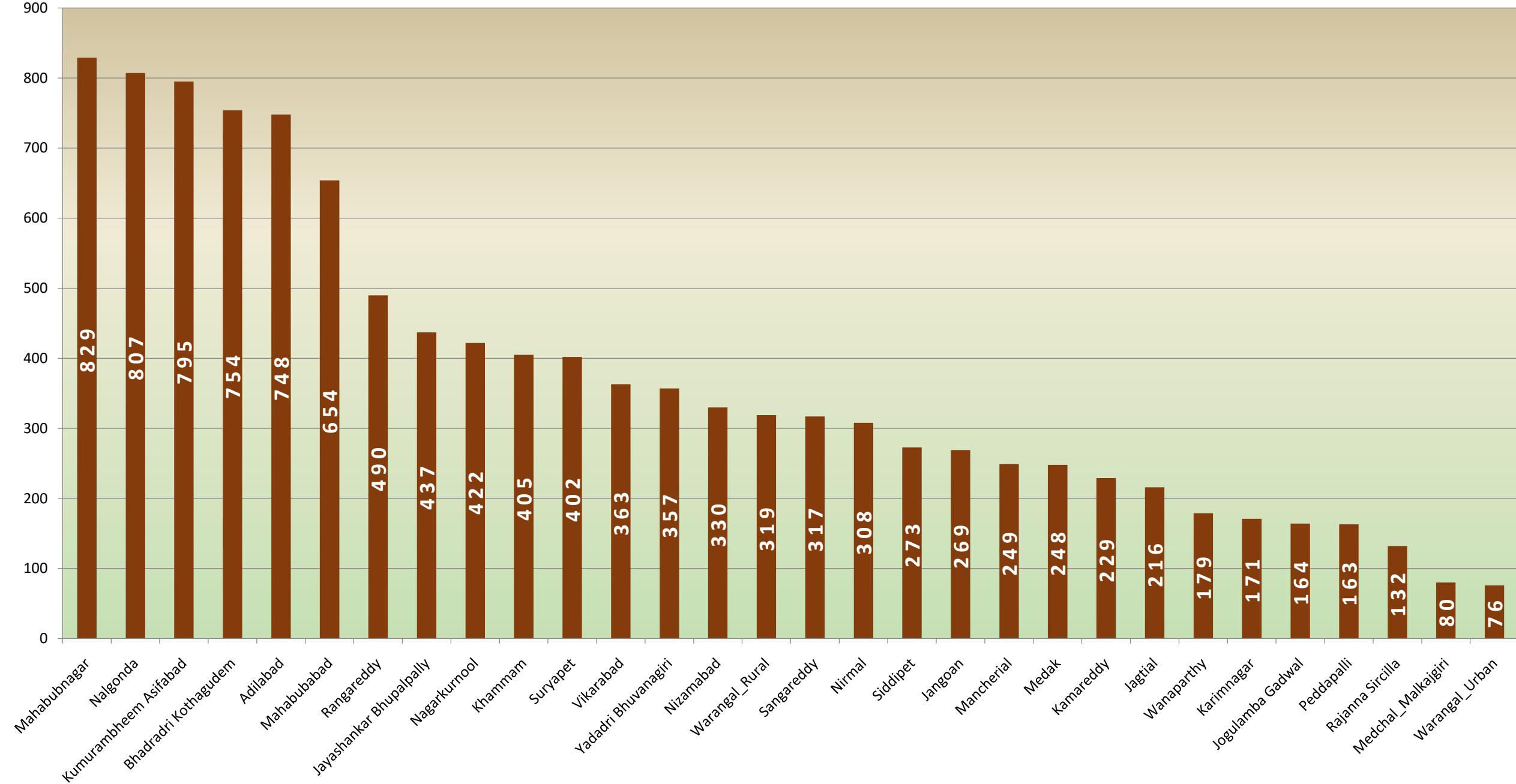
S.No.	District	Connected GPs	Unconnected GPs	Ongoing GPs	Total GPs
1	Adilabad	335	77	55	467
2	Mahabubnagar	309	73	59	441
3	Kumurambheem Asifabad	237	61	36	334
4	Vikarabad	454	60	51	565
5	Nalgonda	750	53	41	844
6	Nagarkurnool	383	49	21	453
7	Narayanpet	173	45	62	280
8	Rangareddy	459	41	60	560
9	Mancherial	264	35	12	311
10	Kamareddy	477	32	17	526
11	Warangal_Rural	343	31	27	401
12	Sangareddy	599	29	19	647
13	Nirmal	343	26	27	396
14	Yadadri Bhuvanagiri	381	26	14	421
15	Suryapet	420	23	32	475
16	Karimnagar	291	21	1	313
17	Wanaparthy	214	19	22	255
18	Bhadradri Kothagudem	447	17	15	479
19	Medak	441	17	11	469
20	Jangaon	256	14	11	281
21	Mahabubabad	419	12	30	461
22	Mulugu	154	10	10	174
23	Khammam	571	9	4	584
24	Jagtial	363	8	9	380
25	Jogulamba Gadwal	207	8	40	255
26	Siddipet	479	8	12	499
27	Rajanna Sircilla	246	7	2	255
28	Jayashankar Bhupalpally	226	6	9	241
29	Nizamabad	516	6	8	530
30	Peddapalli	257	6	0	263
31	Warangal_Urban	127	3	0	130
32	Medchal_Malkajgiri	61	0	0	61
Grand Total		11,202	832	717	12,751

GRAM PANCHAYAT ANALYSIS

Gram Panchayat Connectivity



DISTRICT WISE NO OF HABITATIONS WITHOUT BT/CC ROADS





Scientific Approach for Allocation of Funds

Cost Benefit Analysis

Proposals from	No of GPs Proposed for Connectivity	Proposed Road Length (km)	Proposed Amount (Lakhs)
Field Analysis	862	1,861.02	1,43,117
Geospatial Analysis	832	1,450.87	1,11,575
Cost Benefit Analysis	30	410.15	31,542

Telangana Road Information System



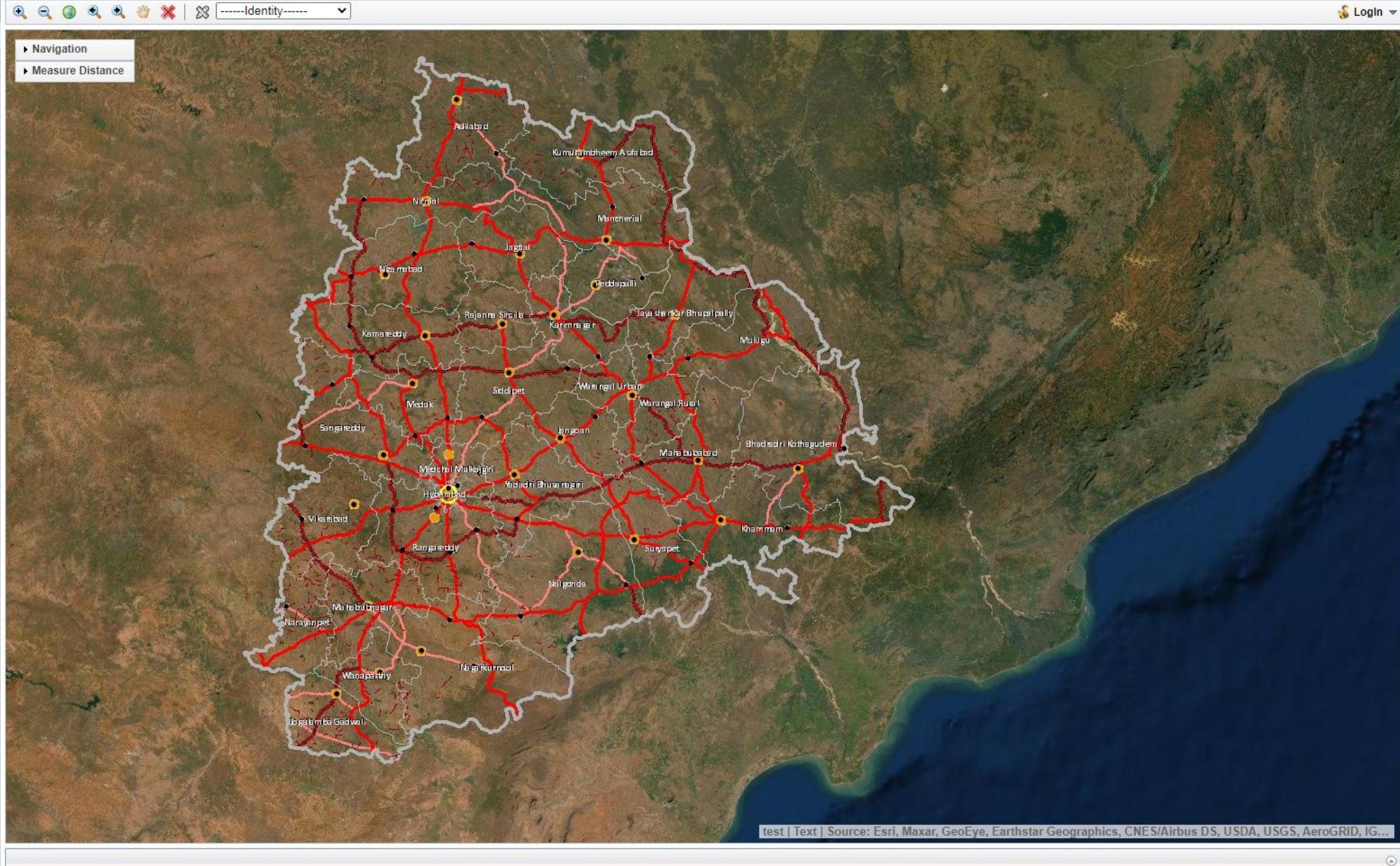
Login

GIS Layers / Analytics / Query

Layers Analytics Query Edit Road Details

 Satellite Imagery
 Gram Panchayaths PR Road Layers R&B Roads R&B Roads RIS Symbology Ongoing_Road State Level View • Revenue Head Quarters • District Head Quarters State Head Quarter State Boundary Parliament Constituency Boundary Assembly Constituency Boundary District Boundary Existing R & B Roads National Highway (Proposed) National Highway (NH) State Highway (SH) District Level View Gram Panchayats Connectivity Connected Grampanchayat Unconnected - Ongoing Gram Panc ★ Unconnected - Proposed Gram Panc Gram Panchayat Head Quarters Locat Mandal Head Quarters Revenue Head Quarters District Head Quarters State Boundary Parliament Constituency Boundary Assembly Constituency Boundary District Boundary Revenue Division Boundary Mandal Boundary Gram Panchayat Head Quarters Locat Existing R & B Roads National Highway (Proposed) National Highway (NH) State Highway (SH) District Major Road (DMR)

DMR - BT / CC



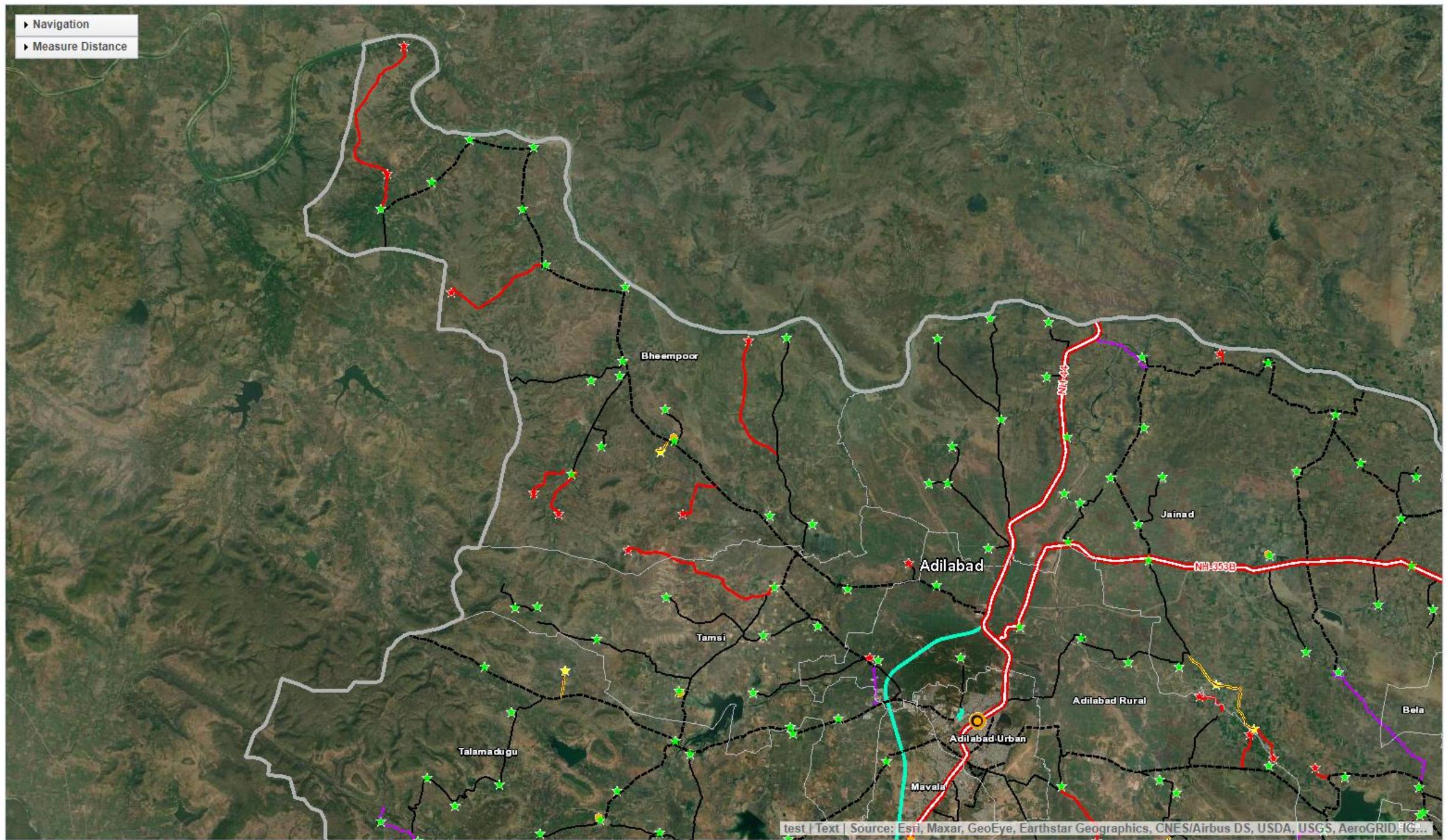


All Roads

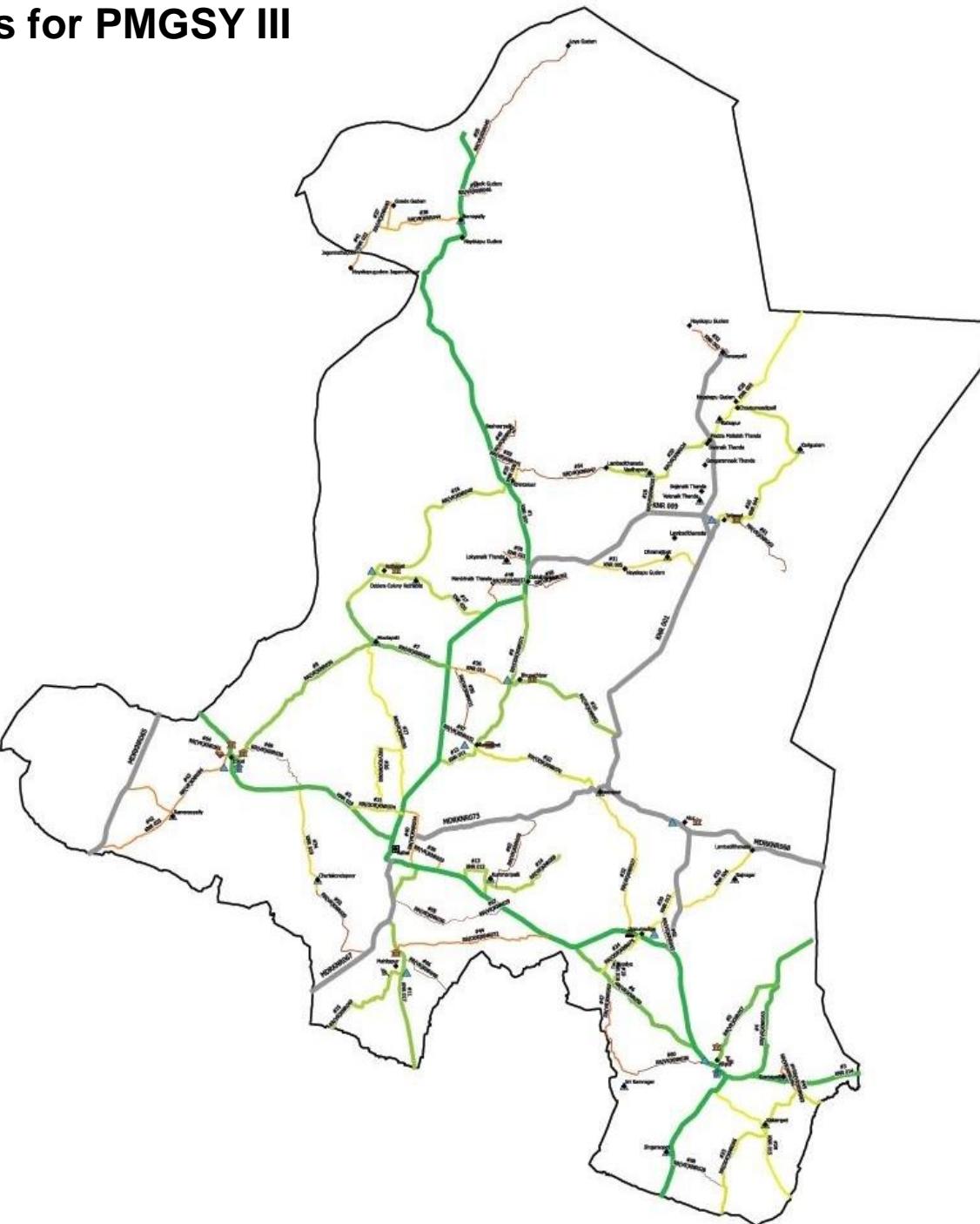
Login ▾

▶ Navigation

▶ Measure Distance



Trace Map - Prioritized Roads for PMGSY III



Road No.	Road Name	Trace Map Score	length(km)
1	EKR 407	27052.4	36.4
2	EKR 408	27052.4	4.2
3	EKR 514	25083.3	3.7
4	EKR 509/2005	25042.7	3.5
5	EKR 509/2005	25042.7	3.5
6	EKR 509/2005	47032.6	2.6
7	EKR 509/2005	46056.4	3.5
8	EKR 509/2005	46056.4	4.1
9	EKR 509/2005	46056.4	3.6
10	EKR 512	26272.9	4.6
11	EKR 512	26272.9	4.6
12	EKR 512	26080.3	3.2
13	EKR 512	26080.3	3.2
14	EKR 512	26080.3	3.7

Instructions:

1. Trace Map to be used for identifying Through Roads & MPL in the Block
2. A path from each habitation is traced to its nearest school, market, while avoiding through roads.
3. Importance of road is based on the position that uses the road to access other facilities.
4. Rank of a road can be identified from the rank number mentioned above the road
5. The rank number is based on the length of the road (in km) and the trace map score.
6. Multiple roads can be combined to make single MPL/PR. Roads with high rank can be combined to make single MPL/PR.
7. The Block & tier Cluster roads may be recorded as per local knowledge but not included in the Trace Map.
8. While individual and exact ranks may not be accurate, PWD should try to identify the rank of the road.
9. The PWD may classify low ranking roads as MPL/PR based on their local knowledge.
10. The PWD is advised to take part changes of as required and consider the local knowledge while classifying the roads as MPL/PR or PR.
11. PWD need not worry about eligibility of PC of roads being selected Candidate Roads.
12. PWD and Design LIne eligibility to be checked during COCP preparation.

Note: Trace Map Scores is in Utility value.
Through Roads & MPLs are the roads which are not traced.

Date Generated: 30-11-2016

Habitations and Roads - PMGSY II
Raikal Mandal, Jagtial District

N



Legend

● Habitations

■ Mandal Boundary

Road Type

——— Panchayat Raj Engineering Roads

——— R & B Roads



0

1.75

3.5

7

Kilometers

3:38 PM ...0.1KB/s 4G 3G

PR-Roads 

User District
01015001 Adilabad

Mandal Date
Bheempoor 14-6-2019

Select the Activity:
Select from here

Select Road 


Telangana State Remote Sensing Applications Centre

11:53 AM ... 0.00KB/s 4G 3G

Select from here

- Progress Monitoring
- Infrastructure
- Culverts
- Cross Drainage Attribute
- Pipe Culvert Attribute
- Level Crossing Point
- Construction Material Sites Point
- Waste Material Sites Point
- ...

PR Roads 

CD Work Id No. * DDMMRRRTNNNN

CD Work Type * Select WorkType

Estt Cost (Rs. In Lakhs) RS. in Lakhs

Grant Select Grant

Reach in m (Road Chinage)*

Type Of Stream River

Name of Stream

Chainage in m* 5

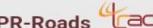
Surface Type Earthern Condition Bad




Latitude: 17.4079844
Longitude: 78.4599588

SAVE VIEW RECORDS

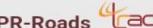
3:29 AM ... 0.00KB/s 4G 3G

PR-Roads 

Chainage in m* 5

Surface Type Earthern Condition Bad

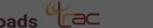
3:39 PM ... 0.00KB/s 4G 3G

PR-Roads 

Chainage in m* 5

Surface Type Earthern Condition Bad

3:42 PM ... 50.4KB/s 4G 3G

PR-Roads 

2	14-6-2019	level_cross	17.407989
3	14-6-2019	const_material	17.407989

Alert Sent Successfully!!! OK

send Delete

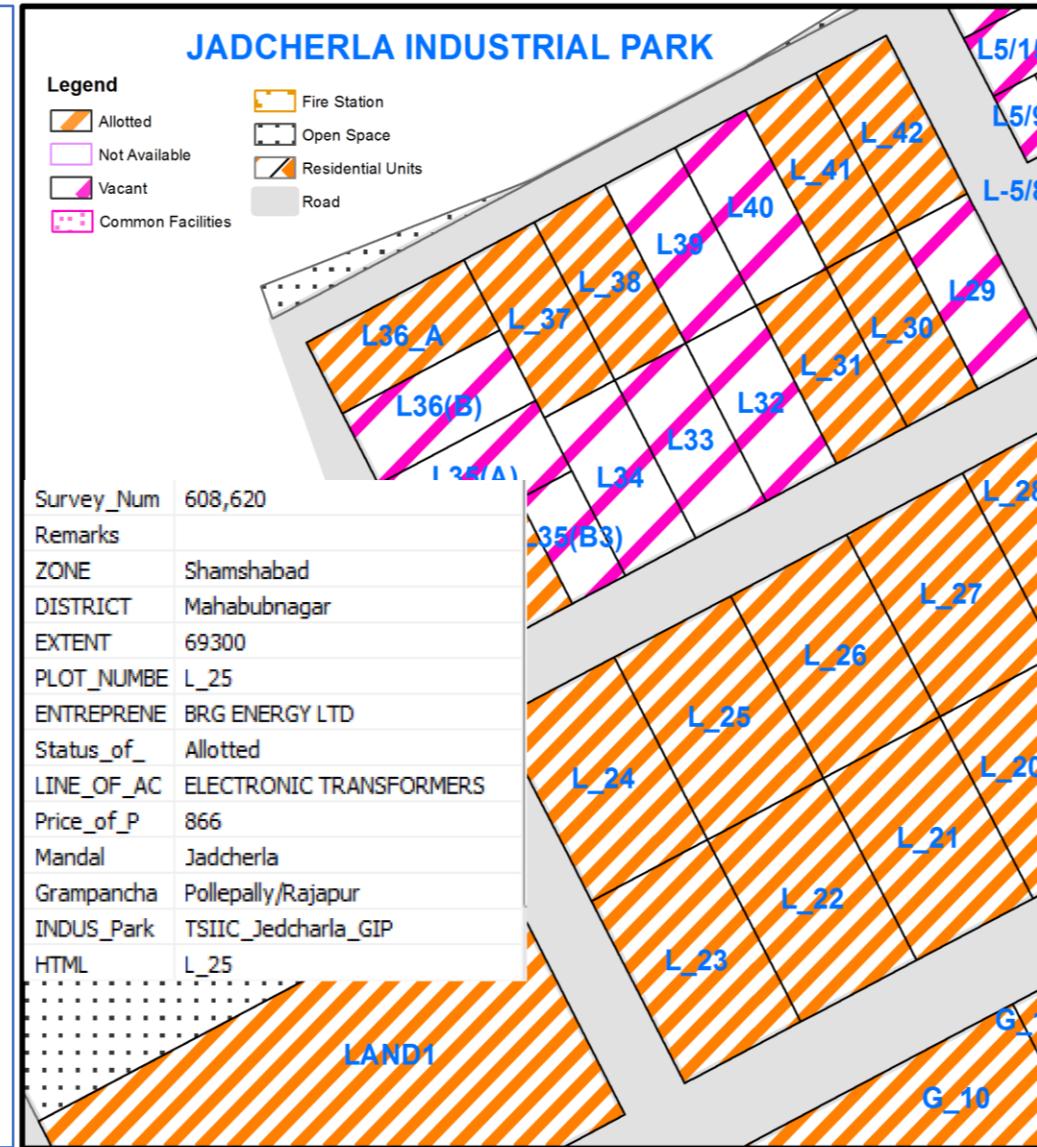
Telangana State Remote Sensing Applications Centre



Telangana State Industrial Infrastructure Corporation (TSIIC)

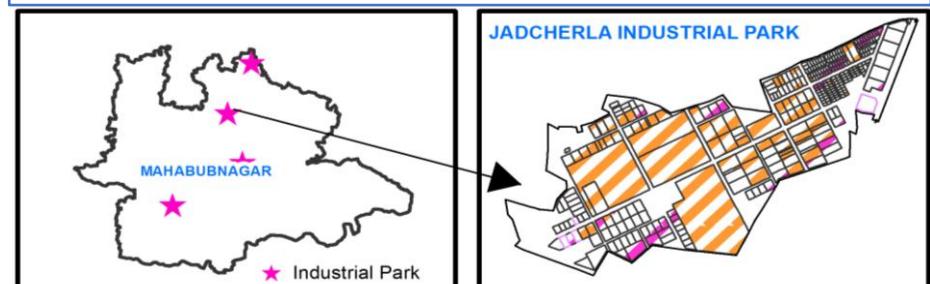
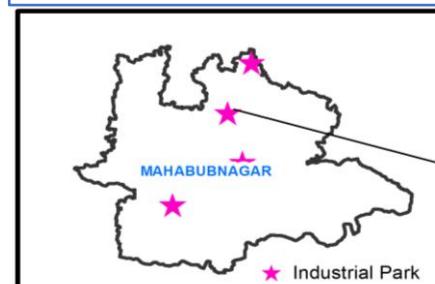
GIS Application for Ease of Doing Business

TRAC facilitates the prestigious program of Telangana State on Ease of doing Business to the Prospective Entrepreneurs in collaboration with TSIIC



A GIS web application for 107 Industrial parks, with detailed Spatial information on vacant plots and Infrastructure is developed.

All the amenities are visible for prospective entrepreneur to select the plot & apply and pay online.



Patencheru Industrial Park Layout Over High Resolution Satellite Data

Layers / Summary

Layers **Summary**

Fields	Values
Zone	Patencheru
District	Medak
Mandal	Patencheru
Gram Panchayat	Pashamylaram
Industrial Park	Textile_Park
Type of Industrial Park	Textile
Pollution Category of Industrial Park	Green
Allowed Industrial Categories	White and Green
Total Extent (in Sq. Mt.)	150009
Total No. of Plots	64
Average Size of Plots	2344
Plots Already Allocated	41
Total No. of Vacant Plots	23
Vacant Plots Extent (in Sq. Mt.)	25485
Distance from Airport (Km)	50
Road Connectivity	5kms from NH-9
Sub Station (Name with Distance)	Pashamylaram Sub Station 1 KM
Gas pipeline connection (Km)	No
Water Connection (Yes/No)	Yes
Classification	Textile Park
Total No. of Plants	0

+ -
Vacant Plots

+ -
Vacant Plots

+ Maximize / Minimize

- Query by Admin Boundary
- Query by District
- Query by Industrial Park

--- Industrial Park ---

Query Plots

Details of 72 Plot Number

Fields	Values
Survey Number	125 TO 139,119,120,127,128 TO 140
Plot No.	72
Enteprenur	
Extent (Sq. Mt.)	2251
Price of Plot (in Lakhs)	63.8
Status of Plot	Vacant
Line of Activity	
Industrial Park	Textile_Park

[Apply](#)

Login

DigitalGlobe

Tribal Habitation – Darmajipet



TRIBAL WELFARE INFORMATION SYSTEM

Habitation – Darmajipet

Population – 118

Households – 30

School Name – Darmajipet MPPS

Building Ownership – Government

Building Age – 8 Yrs

No of Rooms - 1

Classes upto – 5th Class

Medium of Teaching – Telugu

Total Students – 22

Total Boys – 13

Total Girls – 9

Male Teachers – 2

Female Teachers – 0

Non Teaching Staff – 1

Toilet Facility – No

Furniture – No

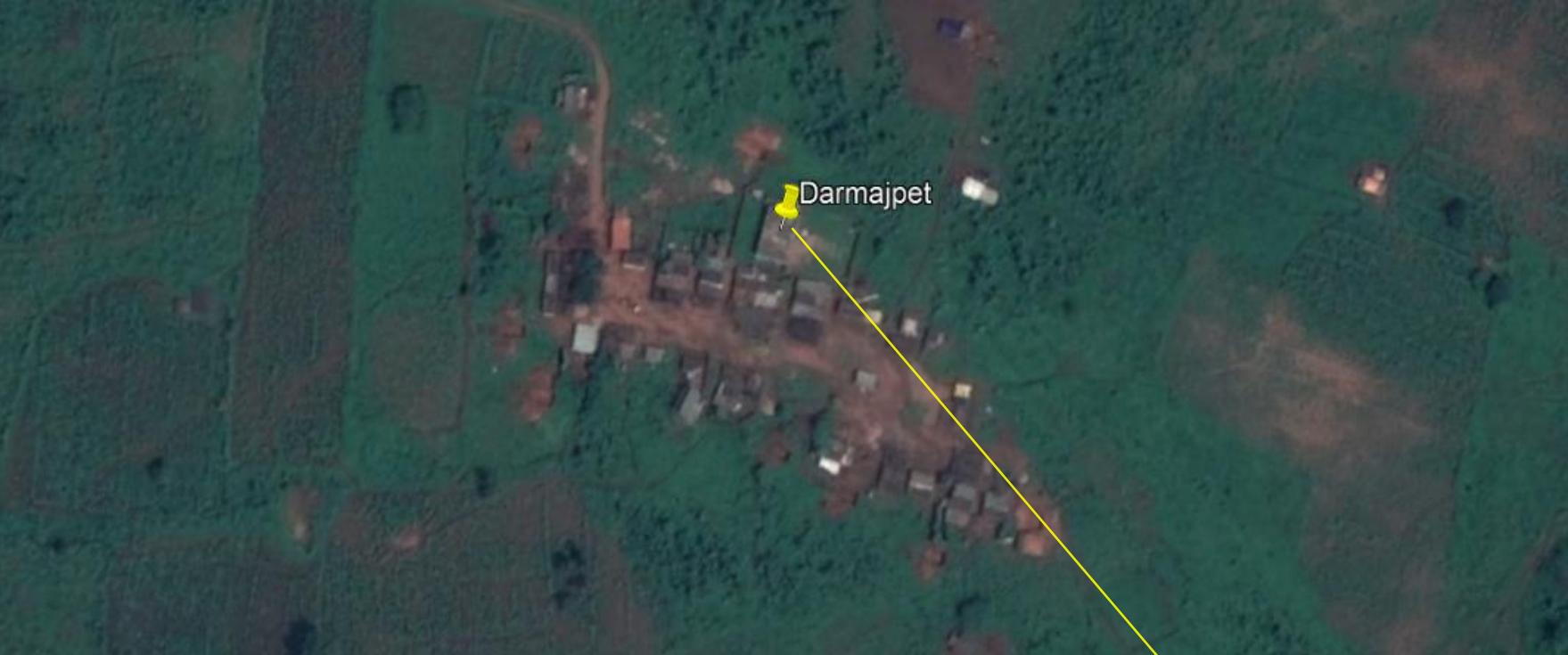
Drinking Water – Yes (Hand Pump)

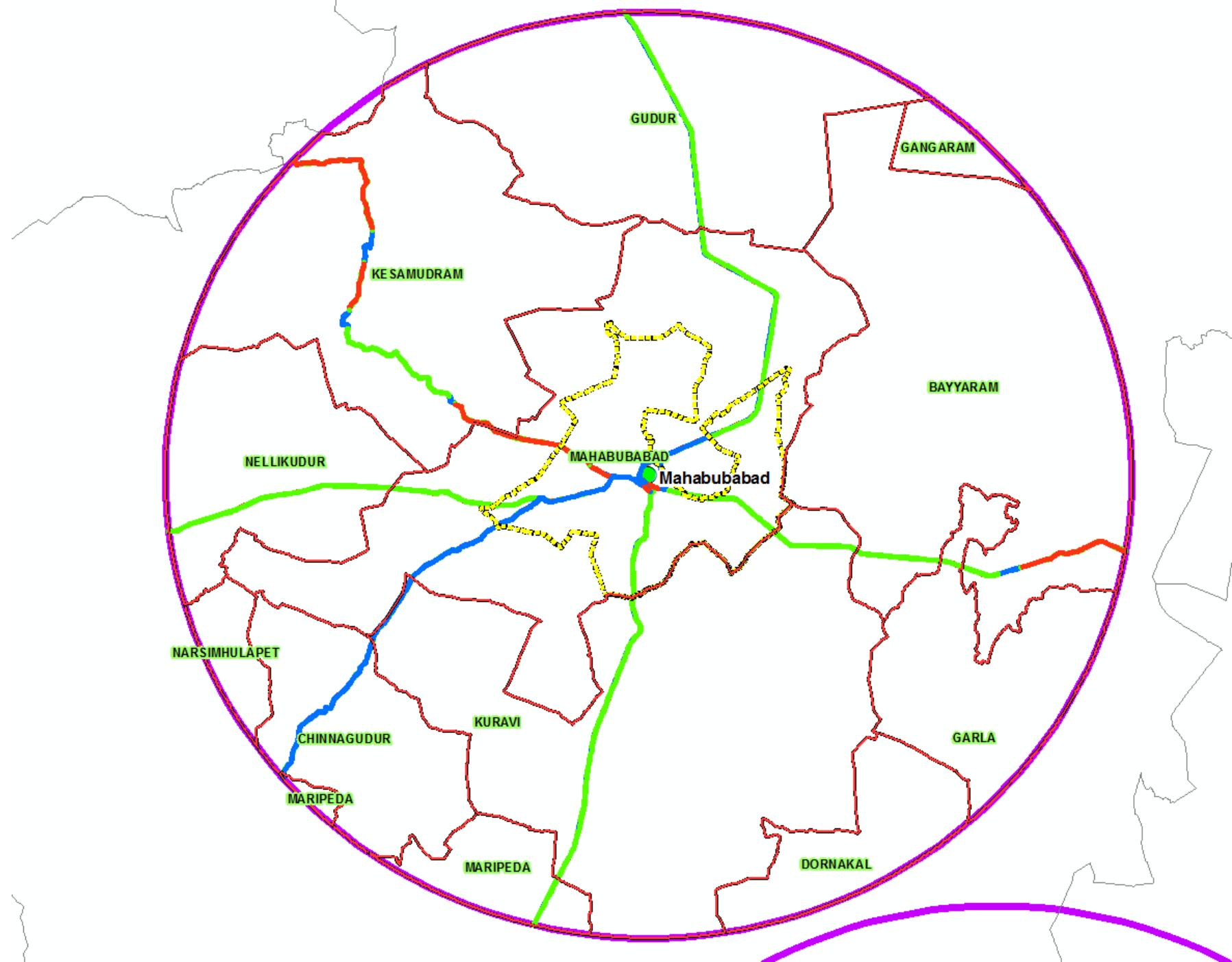
Midday Meals – Yes

Electricity – Yes (Solar)

Telephone – No

Internet/Lab Facility – No







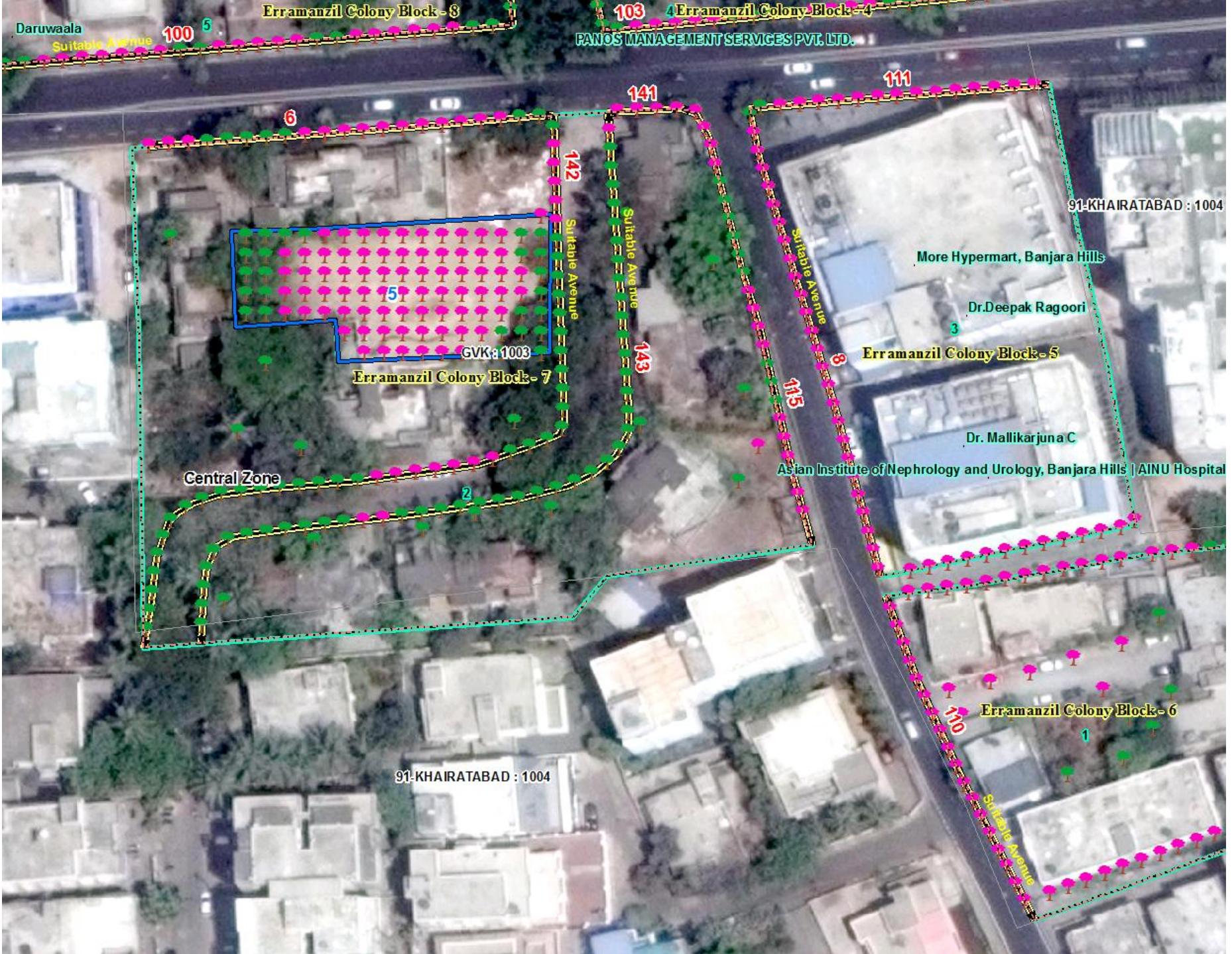
Centre Lane - Suitable Avenue

91 86

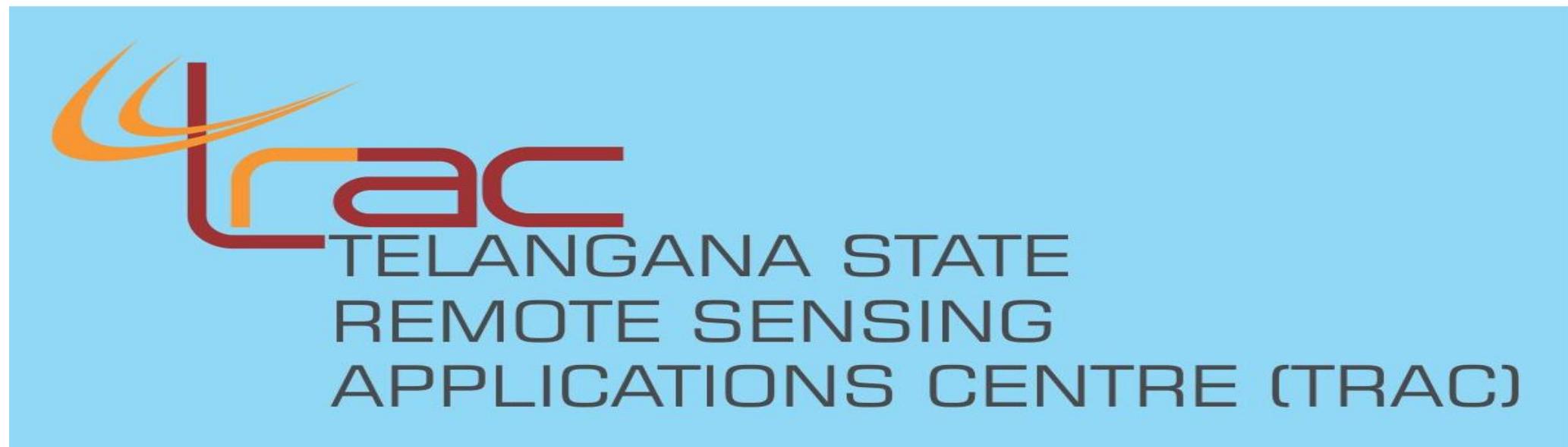
MAHABUBABAD

Left Lane 1 - Suitable Avenue
Right Lane 1 - Suitable Avenue

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Contact Address



**GANANKA BHAVAN (DE & S CAMPUS),
KHAIRTABAD, HYDERABAD – 500 004**

Website : <http://trac.telangana.gov.in>



Thank You