

PUBLIC PRIVATE PARTNERSHIP IN NATIONAL HIGHWAYS



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PLANNING MUST

15

CONFERENCE ON

SEP 12, 2011 VIGYAN BHAWN, NEW DELHI

IMPACT OF POOR MAINTENANCE

<p>Loss of Assets</p> <ul style="list-style-type: none"> ● Current replacement value: ₹ 9,00,000CR 	<ul style="list-style-type: none"> ▶ PPP - the saviour
<ul style="list-style-type: none"> ● Annual loss due to poor condition (5% of 7,00,000) ₹ 35,000CR 	<ul style="list-style-type: none"> ▶ Increased vehicle operating cost (say ₹ 20,000CR per year)
<ul style="list-style-type: none"> ● Erosion of network (annual) 	<ul style="list-style-type: none"> ▶ Reduced life of vehicles
<ul style="list-style-type: none"> ● ₹ 40,000 KM rural roads ● ₹ 10,000 KM secondary roads 	<ul style="list-style-type: none"> ▶ Economic and social benefits of creating assets are lost
	<ul style="list-style-type: none"> ▶ Loss of image: Highway agency, state, nation

'Poor roads cost ₹35,000cr a year'

Report Blasts 'Build, Neglect, Rebuild' Policy, Pegs Replacement Value At ₹9,00,000cr

Sanjay Dutta | TNN

New Delhi: Poor maintenance of roads costs the country about Rs 35,000 crore annually and erodes some 40,000 km of rural roads and 10,000 km of secondary roads, a report prepared for the national transport development policy committee headed by former RBI deputy governor Rakesh Mohan says.

The report, prepared by committee member D P Gupta, puts the current replacement value at a massive Rs 900,000 crore. Describing the road policy as a vicious cycle of "build, neglect and rebuild", the report says bad roads increase vehicle operating costs, aggregating approximately Rs 20,000 crore annually.

Indeed, poor roads reduce life of vehicles, increase travel or freight time, push up consumption of fuel and raise maintenance costs of automobiles. This robs the country of "social benefits of creating assets" and causes "loss of image for highway agency, states and the nation", the report says.

Indicting the policy approach towards roads, the report points out that "routine maintenance is virtually absent". Even attention to periodic maintenance varies from

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● **Current replacement value:**
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● **Erosion of network (annual)**
40,000 KM rural roads
10,000 KM secondary roads

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▶ **Increased vehicle operating cost**
(Say ₹20,000CR per year)

▶ Reduced life of vehicles

▶ Economic and social benefits of creating assets are lost

▶ **Loss of image:**
Highway agency, state, nation

ROCKY DRIVE HITS EXCHEQUER



CURRENT SCENARIO

● **Inadequate funds**
Availability 40-50% of requirements, finance commission has come to rescue, some states have created road funds

● **Financial requirements**
may not be more than 30% of what we are using

● **Routine maintenance**
virtually absent

● **Periodic maintenance**
attention varies from state to state. Satisfaction level around 50%

state to state, with satisfaction level of barely 50%. Weak planning, scheduling and monitoring of maintenance operations only add to the problem.

Another major problem pointed out by the report is lack of a proper governance environment. There is practically no accountability of the maintenance work. And overloading, both by vehicles carrying passengers and freight, is a norm rather than exception since there is no enforcement of rules.

The report warns that neglecting initial damages in the early stages of a road's life are not immediately visible. But once deterioration spreads - such as a small pothole becoming a big hole across the road - "it is too late to avoid more expensive corrective measures" such as relaying the road.

The report recommends several remedial measures. The first is to evaluate capacity of the road network and growth in traffic. From there on, proper design can be drawn

up which will help in timely intervention and agencies can draw up annual maintenance plans. It also suggests that maintenance contracts be standardised based on performance. The effectiveness of present standards and practices should also be examined by technical experts. The report suggests community contracting for rural roads to get around the problem of contractors cutting corners, which affect the quality of maintenance or construction of roads.

PLANNING OF THE SUBJECT

1.1 INDIA WITH DIFFERENT TYPES OF CULTURE:

India has many religions, castes, colours, creeds, good & bad Character infrastructure (presently with more minus points than plus points) with different types of cultures and huge population of 1210 M; second in the World after China and 257th from zero population countries; the result being that literacy varies from 30.97 % of female of Alirajpur (Madhya Pradesh) district to 99.24 % of male, Serchip (Mezoram) district. The most important is strengthening the Circulation system; especially road network not only by connecting all important large settlements; but to take care of others too. Different types of settlements are: Mega cities, Emerging mega cities, Metro cities, Class I cities, Class II, III, IV, V and VI towns in urban areas. In rural areas where about 70% (700M) population lives in 6.41 lakhs settlements, which should be divided into i) Growth centers ii) Growth points and iii) Basic villages.

1.2 MAPPING OF ALL THE SETTLEMENTS:

Mapping of Mega cities; Emerging mega cities; Metro cities; Class I cities & Growth centers in rural areas on a map of India should be done. Their numbers based on 2011 & 2001 census are as given:

1. 3 Mega Cities with Population of more than 10M each.
 2. 6 Emerging Mega Cities: Population between 5.0- 9.99M each.
 3. 39 Metro Cities: Population between 1-4.99 Meach.
 4. 64,100 Growth Centres with primary, secondary & tertiary activities.
 5. 441 Class I Cities: Population between 0.1M-1M each
 6. 496 Class II Towns: Population between 50,000-99,999 each
 7. 1,388 Class III Towns: Population between 20,000 – 49,999 each
 8. 1,563 Class IV Towns: Population between 10,000-19,999 each
 9. 1,041 Class V Towns: Population between 5,000-9,999 each
 10. 232 Class VI Towns: Population less than 5,000 each
- Total 69,309**

Foot Notes

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Ashmore and Cartier Islands, Akrotiri, Antartica, Navassa Island, Basses da India, Bouvet Island, Coral Sea Islands, Dhekelia, Europa Island, French Southern and Antarctic Lands, Glorioso Islands, Heard Island and McDonald Islands, British Indian Ocean Territory, Clipperton Island, Jan Mayen, Juan de Nova Island, Paracel Islands, Spartly Islands, Georgia and the South Sandwich Islands, Tromelin Island, Wake Island” Population 0

70% population of the Country live in villages, which are about 6 lakhs in numbers. Divide them in to following 3 categories:

- i) *Growth Centres: with Primary, Secondary and Tertiary activities. In this category only 10% i.e. 60,000 villages will be there.*
- ii) *Growth Points: with Primary & Secondary activities. In this category about 20% i.e. 120,000 villages*
- iii) *Basic Villages: only with Primary activities. About 70% i.e. 4,20,000.*

1.3 MAXIMUM TAKE CARE OF DISTRICTS, WHICH ARE EMPTY, BACKWARD / DEPRESSED:

1. **Madhya Pradesh** –(i) Alirajpur, (ii) Jhabus, (iii) Barwani, (iv) Sheopur,
2. **Chhattisgarh** –(i) Bijapur, (ii) DakshinBastarDantewada, (iii) Narayanpur, (iv) Bastar,
3. **Orissa** –(i) Nabarangapur, (ii) Malkangiri, (iii) Koraput, (iv) Rayagada, (v) Gajapati, (vi) Nuapada
4. **Uttar Pradesh** –(i) Shrawasti, (ii) Bahraich, (iii) Balrampur, (iv) Budaun, (v) Rampur, (vi) Moradabad,
5. **Jharkhand** – (i) Pakur, (ii) Sahibganj, (iii) Godda, (iv) PashchimiSinghbhum
6. **Arunachal Pradesh** –(i) KurungKumey, (ii) Tirap, (iii) Anjaw, (iv) Upper Siang
7. **Karnataka** – (i) Yadgir,
8. **Bihar** – (i) Purnia, (ii) Sitamarhi, (iii) Katihar, (iv) Madhepura, (v) Saharsa, (vi) Araria, (vii) Sheohar, (viii) Kishanganj, (ix) PashchimChamparan, (x) PurbaChamparan, (xi) Darbhanga, (xii) Supaul
9. **Rajasthan** –(i) Jalor, (ii) Sirohi, (iii) Pratapgarh, (iv) Banswara, (v) Barmer, (vi) Jaissalmer,
10. **Andhra Pradesh** – (i) Mahbubnagar, (ii) Vizianagaram
11. **Haryana** – (i) Mewat,
12. **Jammu & Kashmir** –(i) Ramban, (ii) Bandipore, (iii) Badgam, (iv) Kishtwar, (v) Reasi, (vi) Ganderbal
13. **Nagaland** – (i) Mon
14. **Assam** – (i) Dhubri

1.4 CREATION OF ADEQUATE NUMBER OF SEZ (SPECIFIC ECONOMIC ZONES):

- | | |
|--------------------------------|---------------------------------------|
| (1) Jammu & Kashmir (12.5M); | (18) Assam (31.2M); |
| (2) Himachal Pradesh (6.9M); | (19) West Bengal (91.3M); |
| (3) Punjab (27.7M); | (20) Jharkhand (33.0M); |
| (4) Chandigarh (1.1M); | (21) Orissa (41.9M); |
| (5) Uttrakhand(10.1M); | (22) Chhattisgarh (25.5M); |
| (6) Haryana (25.3M); | (23) Madhya Pradesh (72.6M); |
| (7) NCT of Delhi (16.7M); | (24) Gujarat (60.4M); |
| (8) Rajasthan (68.6M); | (25) Dam & Diu (0.24M); |
| (9) Uttar Pradesh (199.6M); | (26) Dadra & Nagar Haeli(0.34M); |
| (10) Bihar (103.8M); | (27) Maharashtra (112.2M); |
| (11) Sikkim (0.61M); | (28) Andhra Pradesh (84.7M); |
| (12) Arunachal Pradesh (1.4M); | (29) Karnataka (61.1M); |
| (13) Nagaland (2.0M); | (30) Goa (1.4M); |
| (14) Manipur (2.7M); | (31) Lakshadweep (0.06M); |
| (15) Mizoram (1.1M); | (32) Kerala (33.3M); |
| (16) Tripura(3.7M); | (33) Tamil Nadu (72.1M); |
| (17) Meghalaya (3.0M); | (34) Pududheery(1.2M); |
| | (35) Andman& Nicobar Islands (0.37M). |

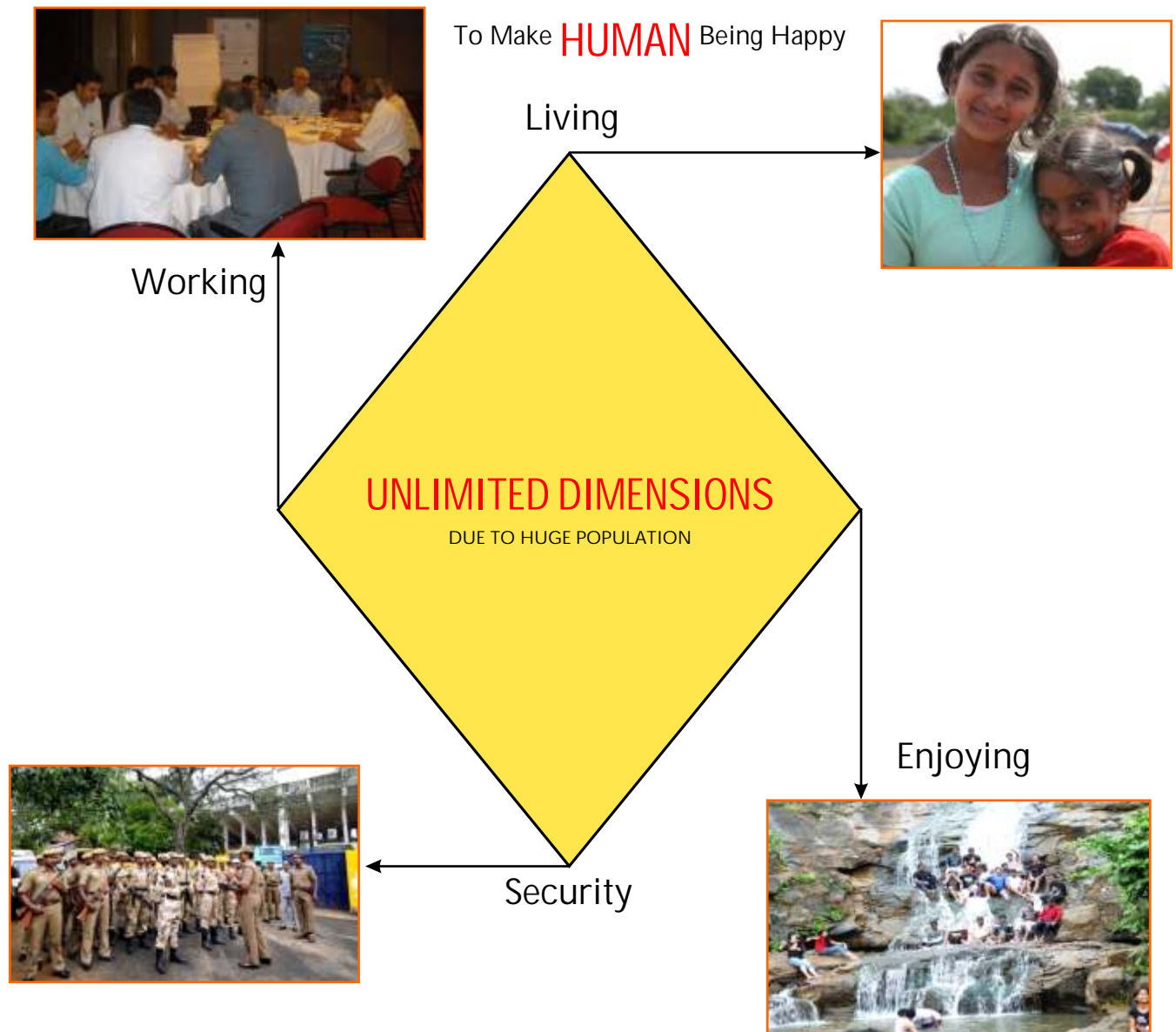
1.5 MAIN HUMAN ACTIVITIES & ESSENTIAL INFRASTRUCTURE.

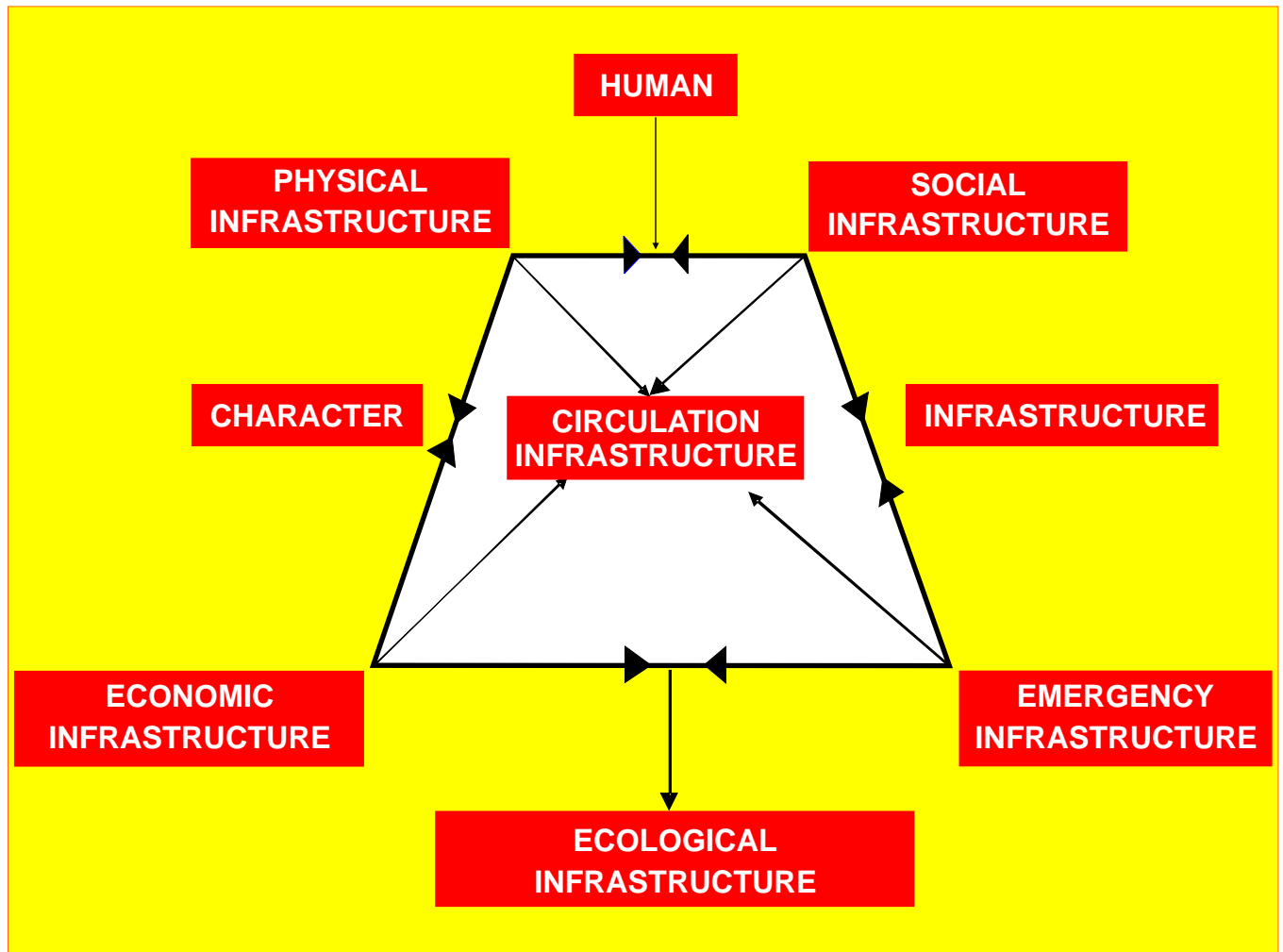
Human being has 4 main activities (i) Living, (ii) Working, (iii) Enjoying, and (iv) Security. All these activities can be performed only with the help of different types of Infrastructure; i) Physical; ii) Social; iii) Character; iv) Economic; v) Emergency; & vi) Ecological and at the top, Circulation / transportation system, specially roads of 45M & above and MRTS.

Present rate of Mobility is not less than 1.0 PPT; one person per trip per day. By 2021 AD rate of mobility may increase to 1.2 likewise by 2031 AD by 1.5. Population of Delhi by 2021 AD is 23M and by 2031 AD 30M total trips will be $23M \times 1.2 = 27.6M$ passenger trips per day and likewise 2031 AD 45M trips per day.

This is a huge requirement and likewise the problems of Transportation will arise in all the settlements with population of 1.0 M and above within the urban areas as well as in rural areas.

This paper does not deal the problems of circulation or different types infrastructure as shown in the two diagrams. Within the urban area the problems of T&T is presumed to be solved with the help of MRTS, Mono Rail, roads of 30M and above and parking areas for various land uses at different places. This paper deals with only problems outside the urban limits of each settlement specially connecting them.





CIRCULATION INFRASTRUCTURE IS THE MUST ESSENTIAL ONE

1.6 LINKING OF THESE SETTLEMENTS OF COURSE FROM THEIR OUTER PERIPHERY:

Some of these 60 settlements(4 Mega, 6 Emerging mega and 50 Metro cites by 2021 AD) at present do not have connections with highways (either golden quadrilateral; north south & east west corridor); but should have been there. All of them have to be linked by major roads with a) the national highways/express ways; b) with the capitals of the states; c) between them selves with proper connections at different levels.

Ultimately the entire system of settlements given above should have separate roads for trucks for different goods traffic and where ever they meet with other vehicular roads should be at different level, without disturbing them.

Parking is the biggest problem not only for the goods & and other vehicles but for passenger vehicles too. For this create adequate parking sites in each settlement with other facilities namely: i) motels, ii) hotels, iii) shops of eatables, iv) adequate number of public conveniences which is a biggest drawback in the country. These facilities should be located at a distance of 2 to 3kms. Approximate urban limits of 2021 of each settlements should be marked with roads of 45 m and above ROW, with ROB & RUB and also existing express ways & highways. Preserve 200 Mt. green belt from the outer alignment of roads on outer sides.

I suggest that this plan be discussed with central and states governments and demarcated on the sites by stones and permanent bench marks. This plan should be uploaded on the web site/sites for one month to get suggestions.

1.7 TRANSPORTATION PROBLEMS WITHIN SETTLEMENTS.

1. Problem associated with Integrated Multi-Modal Transport System
2. Constitution of Metropolitan Transport Authority
3. Dealing with Roads (i) National Highways, (ii) Arterial Roads, (iii) Sub Arterial Roads, (iv) Local Streets (v) Urban Relief Roads (vi) Underground Roads (vii) Grade Separators (viii) Freeways;
4. Mass Rapid Transit System (MRTS);
5. Synergy between Transport and Land Use;
6. Bus;
7. Bicycle / Cycle-Rickshaw;
8. Transportation for Special Areas;
9. Rail ways;
9. Modal Split;
10. Intercity Passenger Movement by (i) Rail (ii) Bus (iii) and Air.
10.1 Goods Movemen. by Rail ways 10.2; by Roads
11. Integrated Freight Complexes
12. Fuel Stations;
13. Different kinds of Parkingsystems
 - i) Park and Ride;
 - ii) Public Parking;
 - iii) Parking facilities in DTC Depots;
 - iv) Underground Parking;
 - v) Parking in Residential Areas;
 - v) Parking Standards;
 - vi) Multi Level Parking;

1.8 FINALISATION OF THE PLAN

- I) Policy plan to be formulated (Physical, Financial and Time) by NHAI in consultation with the Planning Commission, Ministry of roads & High ways, Ministry of Railways, Ministry of Water resources.
- II) Comments to be invited from different i) water & Sewerage boards; ii) Irrigation and flood department and iii) Power (generation, transmission and distribution) departments. Modify the plans if required and then finalize it.
- III) PLANNING INSTRUMENTS TO BE USED
 - a) Re-planning , Re-development, Re-construction and Re-management of existing High ways and Express ways.
 - b) Always Public and Private Partner ship.
 - c) Use TDR ratio.
 - d) All the issues should be transparent.
 - e) Roads can be at one or more than one levels.
- IV) Put on the web site/sites for inviting suggestions from the Public at large only for a month and then modify the plan /plans if required.
- V) Process this Plan for inviting tenders etc.

1.9 ACQUISITION OF LAND

1. This acquisition process is compulsory and time consuming cannot be avoided because it is for (i) National Highways, (ii) Express Highways, (iii) Road-over-Bridge, (iv) Road-under-Bridge, (v) Cloverleaf's, (vi) Foot over bridge, (vii) Under bridge, (viii) Road parallel to water channels, (ix) Essential parking areas, (x) Important street furniture, (xi) Other important connecting roads to (a) Mega cities, (b) Emerging Mega cities, (c) Metro cities, (d) Capital towns, (e) Growth Centres;
2. Put Section 4 into operation i.e. (Publication of preliminary notification & powers of officers thereupon); Sec.5A (hearing of objections); sec.6 (declaration that land is required for a public purpose); & sec. 17 (special power in case of emergency); of **Land Acquisition Act Together:**

1.10 E-GOVERNANCE

E-Governance ranges from “the use of IT to free movement of information by “the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners, employees and other parts of Govt.

1.11 M-GOVERNANCE

Mobile phones, can reach areas where the infrastructure necessary for Internet services or wired phones services is difficult to setup and lack of electricity hampers fast communication of in Emergency & other time-critical public information to citizens so it become necessary to transmit information via mobile phones.

1.12 ESTIMATION OF THE COST

Suppose cost of a project in its planning, development, construction, management for 5 years and maintenance for 5 years is Rs. X, then it may be divided into following format:

1. 40% from Central Government
2. 10% from State Government
3. 10% from gainful land uses i.e. commercial and HIG housing
4. 40% from Private Sector

The entire amount of X has to be generated / collected by the help of Toll Tax in the first 10 years. Please think that cost of maintenance is also covered under this total cost. Other advantages of in terms of the following present policies:

100% FDI (Foreign Direct Investment) under the automatic route is permitted for all road Development Projects.

Incentives

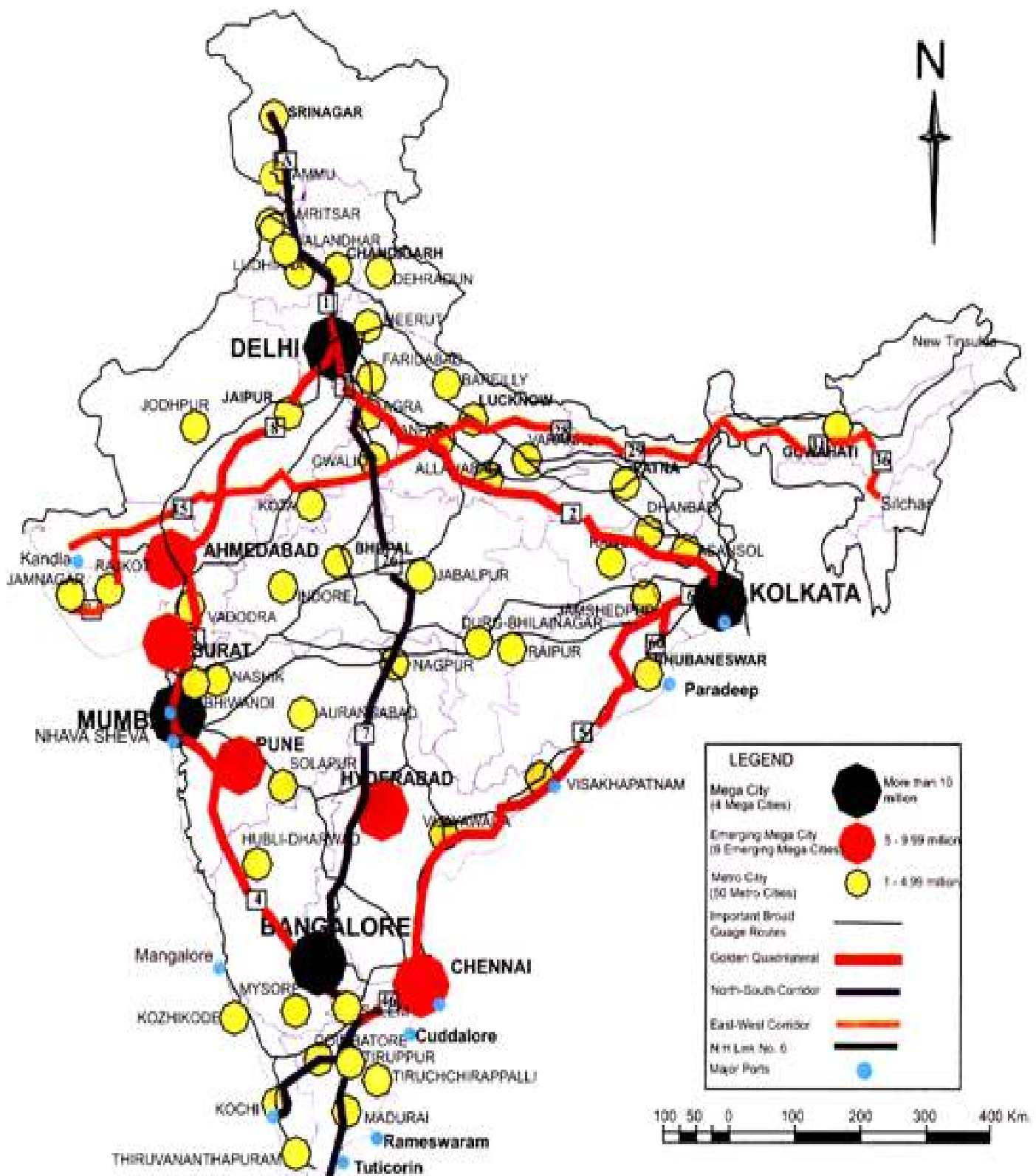
100% Income Tax Exemption for a period of 10 years.

NHAI agreeable to provide grants / viability gap funding for marginal projects.

Models concession agreement formulated

IIFCL (India International Finance Company Limited) to provide funding up to 20% of project cost.

INDIA



PART – II

AVAILABLE SYSTEMS

- 1.1 STRUCTURE OF NHAI.**
- 1.2 SIZE OF THE PROBLEM IS ENVISAGED BY NHAI**
- 1.3 INITIATIVES ON THE SUBJECT BY NHAI**
 - 1.3.1 HIGHWAYS INITIATIVE :
 - 1.3.2 INSTITUTIONAL INITIATIVE :
- 1.4 NAMES OF 60 SETTLEMENTS EACH WITH MORE THAN 1 M. POP. BY 2021.**
- 1.5 DESCRIPTION OF EXISTING NETWORK OF MAJOR INDIAN ROADS.**

1.1 STRUCTURE OF NHAI.

1. National highways authority of India (NHAI) is the apex government body for implementing the national highway development program (NHDP). All contracts whether for construction or BOT or otherwise are awarded through competitive bidding.
2. Private sector participation is increasing, and is through:
 - Construction contracts
 - BOT for some stretches – based on either the lowest annuity or the lowest lump sum payment from the government.
 - BOT contracts permit tolling on those stretches of the NHDP.

1.2 SIZE OF THE PROBLEM AS ENVISAGED BY NHAI

1. India has in existence road network of 3.3 million kms – the second largest in the world.
2. Roads carry about 61% of the freight and 85% of the passenger traffic.
3. Highways / Expressways constitute about 66,590 kms (2% of all roads) and carry 40% of the road traffics
4. The ambitious national highway development projects (NHDP) of the government are at an advanced stage of implementation. key sub-projects under the NHDP Include:
 - The Golden Quadrilateral (GQ-5846 Kms Of 4 Lane Highways)
 - North-South & East West Corridors
 - Four-Laning Of 12, 109 Km Under NHDP-III.
5. Program for 6-laning of 6,500 km of national highways under NHDP-V

1.3 INITIATIVES ON THE SUBJECT BY NHAI:

1.3.1. *Highways Initiative:*

- The national highways with a total length of 66,590 km. serve as the arterial network across the country. The ongoing programme of four-laning the 5846 km. long golden quadrilateral (GQ) connecting Delhi, Mumbai, Chennai and Kolkata is complete. The ongoing four-laning of the 7,142 km. north-south east-west (NSEW) corridor is also nearing completion.
- An ambitious national highway development programme (NHDP), involving a total investment of Rs. 2,20,000 crore up to 2012, has been established. The main elements of the programme are as follows:
 - Four-laning of the golden quadrilateral and NS-EW corridors (NHDP I & II)
 - Four-laning of 7,166 km. under NHDP-1 and 2,440 km. under NHDP-II has been completed up to December, 2008. The contracts for projects forming part of NS-EW corridors are being awarded rapidly for completion by December, 2009.
 - Four-laning of 12,109 kms. (NHDP-III)
 - Connecting state capitals with the NHDP phases I and II network.
 - Two laning of 20,000 km. (NHDP-IV)
 - Providing balanced and equitable distribution of the improved/widened highways network throughout the country.

- Six-laning of 6,500 kms. (NHDP-V)
- Six-laning of the four-lane highways comprising the golden quadrilateral and certain other high density stretches, through PPPS on BOT basis.
- Development of 1000 km. of expressways (NHDP-VI)
- Other highway projects (NHDP-VII)
- Accelerated road development programme for the north east region
- Golden quadrilateral = 5,846 kms. (NHDP-I)
- North-south & east west corridor = 7,142 km. (NHDP-II)
- NHDP-I +II= 5,846 + 7,142 = 12,988 km
- NHDP-III– 12,109 + NHDP– IV– 20,000 + NHDP-V– 6,500 + NHDP-VI– 1000 = 39,609 kms.
- Total = 52,597 kms. out of 66,590 km.

1.3.2. Institutional Initiative:

Steps have been taken for restructuring and strengthening of National Highways Authority of India (NHAI), which is the implementing agency for the National Highways programme. Institutional mechanisms have been established to address bottlenecks arising from delays in environmental clearance, land acquisition etc.

In order to specify the policy and regulatory framework on a fair and transparent basis, a Model Concession Agreement (MCA) for PPPs in national highways has been mandated. It is expected that this common framework, based on international best practices, will significantly increase the pace of project award as well as ensure an optimal balance of risk and reward among all project participants.

1.4 NAME OF 60 SETTLEMENTS EACH WITH MORE THAN 1 M. POP. BY 2021.

1 M.ANTICIPATED population BY 2021 AD.

MEGA CITIES.

1. Greater Mumbai(27.97M) ; 2. Delhi(30.13M);
3. Kolkatta(18.97M) ; 4. Bangalore(10.86M);

EMERGING MEGA CITIES.

5. Chennai(9.61M); 6. Hyderabad(10.07M);
7. Ahemdabad(8.47M); 8. Pune(8.55M);
9. Surat(9.63); 10. Jaipur(5.43M);

METRO CITIES

11. Kanpur(4.87M); 12. Lucknow(4.08M);
13. Nagpur(3.49M); 14. Patna (4.05M);
15. Indore(2.85M); 16. Bhopal(2.74M);

17. Vadodara(2.61M); 18. Coimbatore(2.58M);
19. Agra(2.63M); 20. Ludhiana(2.52M);
21. Nasik(2.91M); 22. Faridabad(3.09M);
23. Visakhapatnam(2.19M); 24. Jammu(4.50M);
25. Kochi(1.93M); 26. Meerut(2.17M);
27. Asansol(2.10M); 28. Srinagar(2.49M);
29. Rajkot(2.34M); 30. Jamshedpur(1.96M);
31. Amritsar(2.01M); 32. Varanasi(1.63M);
33. Jabalpur(1.68M); 34. Dhanbad(1.83M);
35. Tiruchchirappali(1.29M);36. Aurangabad(2.02M);
37. Madurai(1.47M); 38. Allahabad(1.58M);
39. Chandigarh(2.03M); 40. Solapur(1.71M);
41. Vijaywada(1.45M);42. Durg-BhilaiNagar(1.70M);
43. Ranchi(1.70M);44. Guwahati(1.48M);
45. Jodhpur(1.43M); 46. Raipur(1.60M);
47.Gwalior(1.27M); 48. Bhubaneshwar(1.69M);
49. Kozhikode(1.06M); 50. Salem(1.26M);
51. Jalandhar(1.39M); 52. Thiruvananthapuram(1.03M);
53. Bhiwandi(1.55); 54. Tiruppur(1.78M);
55. Mysore(1.20M); 56. Hubli-Dharwad(1.16M);
57. Kota(1.20M); 58. Bareilly(1.18M);
59. Jamnagar(1.41M); 60. Dehradun(1.09).

1.5 DESCRIPTION OF EXISTING NETWORK OF MAJOR INDIAN ROADS.

Golden Quadrilateral:

1. Delhi (NH8),
2. Jaipur (NH8),
3. Ahmedabad (NH8),
4. Surat (NH8),
5. Mumbai (NH8),
6. Pune (NH8),
7. Bangalore (NH4),
8. Salem (NH46),
9. Chennai (NH46),
10. Vijaywada (NH46);
11. Visakhapatnam (NH5),
12. Bhubaneshwar (NH60),
13. Kolkatta (NH6),
14. Delhi (NH8)

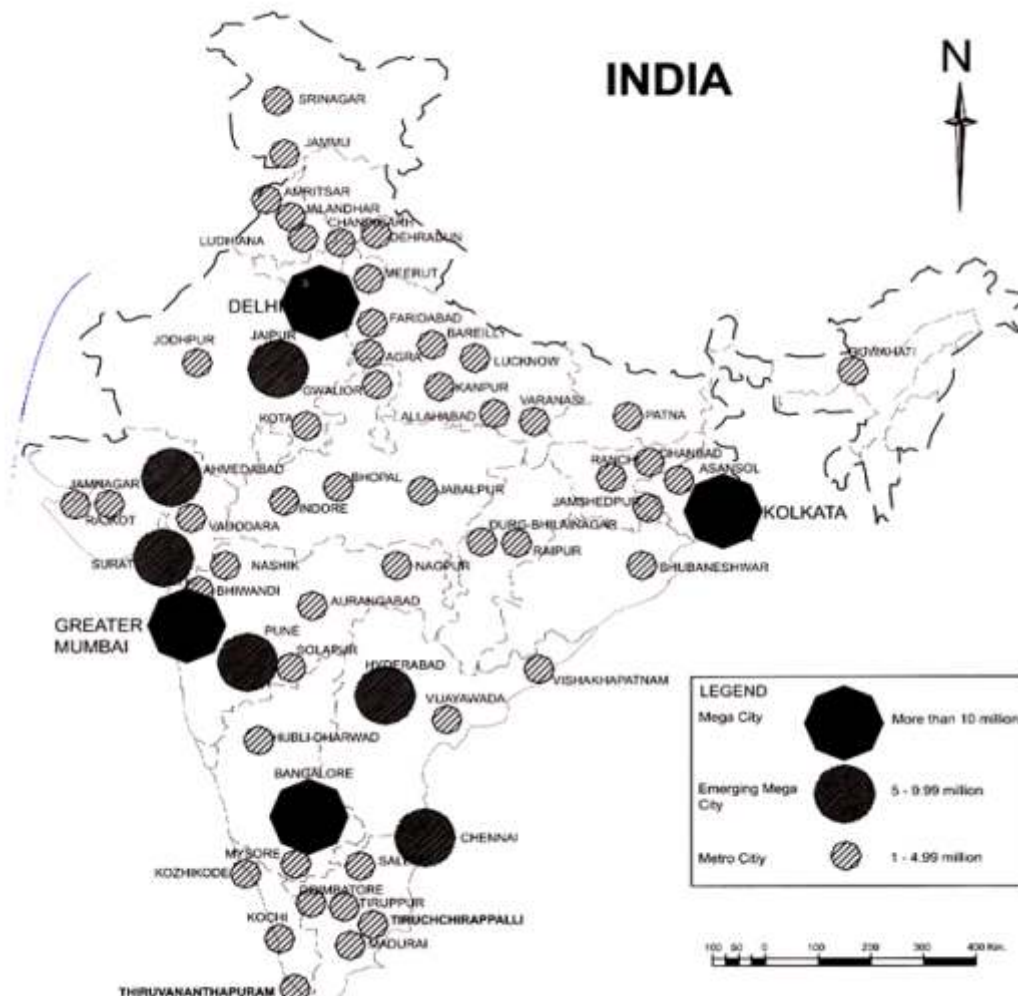
North South Corridor:

1. Srinagar (NH1A),
2. Jammu (NH1A),
3. Amritsar (NH1A),
4. Jalandar (NH1A),
5. Ludhiana (NH1A),
6. Chandigarh (NH1),
7. Delhi (NH1)
8. Gwalior (NH2),
9. Bhopal (NH26),
10. Nagpur (NH26),
11. Aurangabad (NH7),
12. Hyderabad (NH7),
13. Bangalore (NH7),
14. Coimbatore (NH7),
15. Kochi (NH7),
16. Madurai (NH7),
17. Tuticorin (NH7)

East West Corridor:

1. Kandla (NH15),
2. Rajkot (NH15),
3. Kota (NH15),
4. Gwalior (NH15),
5. Lucknow (NH15),
6. Varanasi (NH28),
7. Gwahati (NH31),
8. Silchar (NH36)

MEGA, EMERGING MEGA & METRO CITIES OF INDIA



NATIONAL HIGHWAYS IN INDIA BY NUMBERS

NH NO	ROUTE	TOTAL LENGTH
1	Delhi - Ambala - Ludhiana - Jalandhar - Amritsar - Indo-Pak Border	456
1A	Jalandhar - Madhopur - Jammu - Udhampur - Banihal - Srinagar - Baramulla - Uri	663
1B	Batote - Doda - Kistwar - Symthan pass - Khanbal	274
1C	Domel - Katra	8
1D	Srinagar - Kargil - Leh	422
2	Delhi - Mathura - Agra - Kanpur - Allahabad - Varanasi - Mohania - Barhi - Palsit - Dankuni	1,465
2A	Sikandra - Bhognipur	25
2B	Bardhaman - Bolpur	52
3	Agra - Gwalior - Shivpuri - Indore - Dhule - Nasik - Thane - Mumbai	1,161
4	Junction with NH 3 near Thane - Pune - Belgaum - Hubli - Davangere - Bangalore - Kolar - Chittoor - Ranipet - Chennai	1,235
4A	Belgaum - Anmod - Ponda - Panaji	153
4B	Nhava Sheva - Kalamboli - Palaspe	27
5	Junction with NH 6 near Baharagora - - Chennai	1,533
5A	Junction with NH 5 near Haridaspur - ParadipPort	77
6	Hazira - Surat - - Kolkata	1,949
7	Varanasi - Mangawan - Rewa - Jabalpur - - Kanyakumari	2,369
7A	Palayamkottai - TuticorinPort	51
8	Delhi - Jaipur - Ajmer - Udaipur - Ahmedabad - Vadodara - Surat - Mumbai	1,428

8A	Ahmedabad - Limbdi - Morvi - Kandla - Mandvi	473
8B	Bamanbore - Rajkot - Porbunder	206
8C	Chiloda - Gandhinagar - Sarkhej	46
8D	Jetpur - Somnath	127
8E	Somnath - Bhavnagar	220
NEI	Ahmedabad - Vadodara Expressway	93
9	Pune - Solapur - Hyderabad - Vijayawada - Machillipatnam	841
10	Delhi - Fazilka - Indo-Pak Border	403
11	Agra - Jaipur - Bikaner	582
11A	Manoharpur - Dausa - Lalsot - Kothum	145
11B	Lalsot - Karauli - Dholpur	180
12	Jabalpur - Bhopal - Khilchipur - Aklera - Jhalawar - Kota - Bundi - Devli - Tonk - Jaipur	890
12A	Jabalpur - Mandla - Chilpi - Simga near Raipur - Jhansi	333
13	Solapur - Chitradurga - Shimoga - Mangalore	691
14	Beawar - Sirohi - Radhanpur	450
15	Pathankot - Amritsar - Bhatinda - Ganganagar - Bikaner - Jaisalmer - Barmer - Samakhiali	1,526
16	Nizamabad - Mancherial - Bhopalpatnam - Jagdalpur	460
17	Panvel - - Chavakkad - North Paravur Junction with NH 47 near Edapally at Cochin	1,269
17A	Junction with NH 17 near Cortalim - Murmugao	19
17B	Ponda - Verna - Vasco	40
18	Junction with NH 7 near Kurnool - Nandyal - Cuddapah - Junction with NH 4 near Chittoor	369
18A	Puthalapattu - Tirupati	50
19	Ghazipur - Balia - Patna	240

20	<u>Pathankot - Mandi</u>	220
21	Junction with <u>NH 22</u> near <u>Chandigarh - Ropar - Bilaspur - Mandi - Kullu - Manali</u>	323
21A	<u>Pinjore - Nalagarh - Swarghat</u>	65
22	Ambala - Kalka - Shimla - Narkanda - Rampur - Indo China Border near Shipkila	459
23	<u>Chas - Bokaro - Ranchi - Rourkela - Talcher - Junction with NH 42</u>	459
24	<u>Delhi - Moradabad - Bareilly - Lucknow</u>	438
24A	<u>Bakshi Ka Talab - Chenhat (NH 28)</u>	17
25	<u>Lucknow - Kanpur - Jhansi - Shivpuri</u>	352
25A	- 19 (NH 25) - <u>Bakshi Ka Talab</u>	31
26	<u>Jhansi - Lakhnadon</u>	396
27	<u>Allahabad - Mangawan</u>	93
28	Junction with <u>NH 31</u> Near <u>Barauni - Muzaffarpur - - Lucknow</u>	570
28A	Junction with <u>NH 28</u> near <u>Pipra - Kothi - Sagauli - Raxaul - Indo-Nepal Border</u>	68
28B	<u>Chhapra - Bettiah - Lauriya - Bagaha - Junction with 28A at Chapwa</u>	121
28C	<u>Barabanki - Bahraich - Nanpara - Indo-Nepal Border</u>	184
29	<u>Gorakhpur - Ghazipur - Varanasi</u>	196
30	Junction with <u>NH 2</u> near <u>Mohania - Patna - Bakhtiarpur</u>	230
30A	<u>Fatuha - Chandi - Harnaut - Barh</u>	65
31	Junction with <u>NH 2</u> near <u>Barhi - - Amingaon Junction with NH 37</u>	1,125
31A	<u>Sevok - Gangtok</u>	92
31B	<u>North Salmara - Junction with NH 37 near Jogighopa</u>	19
31C	Near <u>Galgalia - Bagdogra - Chalsa - - Sidili - Junction with NH 31 near Bijni</u>	235
32	Junction with <u>NH 2</u> near <u>Gobindpur - Dhanbad - Chas - Jamshedpur</u>	179

33	Junction with NH 2 near Barhi - Ranchi - Jamshedpur Junction with NH 6 near Baharagora	352
34	Junction with NH 31 near Dalkhola - Baharampur - Barasat - Dum Dum	443
35	Barasat - Bangaon - Petrapole on India–Bangladesh border	61
36	Nowgong - Dimapur (Manipur Road)	170
37	Junction with NH 31B near Goalpara - Guwahati - Jorabat - Kamargaon - Makum - Saikhoaghat	680
37A	Kuarital - Junction with NH 52 near Tezpur	23
38	Makum - Ledo - Lekhapani	54
39	Numaligarh - Imphal - Palel - Indo Burma Border	436
40	Jorabat - Shillong - Indo Bangladesh Border near Dawki - Jowai	216
41	Junction with NH 6 near Kolaghat - Tamluk - Haldia Port	51
42	Junction with NH 6SambalpurAngul Junction with NH 5 near Cuttack	261
43	Raipur - Jagdalpur - Vizianagaram Junction with NH 5 near Natavalasa	551
44	Shillong - Passi - Badarpur - Agartala - Sabroom	630
44A	Aizawl - Manu	230
45	Chennai - - Theni	387
45A	Villupuram - Pondicherry - Chidambaram - Nagapattinam	190
45B	Trichy - Viralimalai - Melur - Madurai - Tuticorin	257
45C	The highway starting from its junction with NH 67 near Thanjavur - connecting Kumbakonam - Sethiyathope - Vadalur - Neyveli Township - Panruti and terminates near Vikravandi on NH-45	159
46	Krishnagiri - Ranipet	132
47	Salem - Bhavani - Coimbatore - Palghat - Trichur - Cochin - Quilon - Trivandrum - Nagercoil - Kanyakumari	640
47A	Junction with NH 47 at Kundanoor - Willington Island in Cochin	6
47C	Junction with NH 47 at Kalamassery - Vallarpadom ICTT in Cochin	17
48	Bangalore - Hassan - Mangalore	328

49	<u>Cochin - Madurai - Dhanushkodi</u>	440
50	<u>Nasik - Junction with NH 4 near Pune</u>	192
51	<u>Paikan - Tura - Dalu</u>	149
52	<u>Baihata - Charali - Tezpur - Banderdewa – North Lakhimpur - Pasighat - Tezu - Sitapani Junction with NH 37 near Saikhoaghat</u>	850
52A	<u>Banderdewa - Itanagar - Gohpur</u>	57
52B	<u>Kulajan - Dibrugarh</u>	31
53	<u>Junction with NH 44 near Badarpur - Jirighat - Silchar - Imphal</u>	320
54	<u>Dabaka - Lumding - Silchar - Aizwal - Tuipang</u>	850
54A	<u>Theriat - Lunglei</u>	9
54B	<u>Venus Saddle - Saiha</u>	27
55	<u>Siliguri - Darjeeling</u>	77
56	<u>Lucknow - Varanasi</u>	285
56A	<u>Chenhat(NH 28) - 16(NH 56)</u>	13
56B	<u>15(NH 56) - 6(NH 25)</u>	19
57	<u>Muzaffarpur - Darbhanga - Forbesganj - Purnea</u>	310
57A	<u>Junction of NH 57 near Forbesganj - Jogbani</u>	15
58	<u>Delhi - Ghaziabad - Meerut - Haridwar - Badrinath - Mana Pass</u>	538
59	<u>Ahmedabad - Godhra - Dhar - Indore</u>	350
59A	<u>Indore - Betul</u>	264
60	<u>Balasore - Kharagpur — Raniganj - Siuri - Moregram (junction at NH 34)</u>	446
61	<u>Kohima - Wokha - Mokokchung - Jhanji</u>	240
62	<u>Damra - Baghmara - Dalu</u>	195
63	<u>Ankola - Hubli - Hospet - Gooty</u>	432

<u>64</u>	Chandigarh - Rajpura - Patiala - Sangrur - Bhatinda - Dabwali	256
<u>65</u>	Ambala - Kaithal - Hissar - Fatehpur - Jodhpur - Pali	690
<u>66</u>	Pondy - Tindivanam - Gingee - Thiruvannamalai - Krishnagiri	214
<u>67</u>	Nagapattinam - Tiruchirapalli - Karur - Coimbatore - Mettupalayam - coonoor - Ooty - Gundlupet	555
<u>68</u>	Ulundurpet - Chinnasalem - Kallakkurichchi - Attur - vazhapadi - Salem	134
<u>69</u>	Nagpur - Obedullaganj	350
<u>70</u>	Jalandhar - Hoshiarpur - Hamirpur - Dharmapur - Mandi	170
<u>71</u>	Jalandhar - Moga - Sangrur -Jind- Rohtak - Rewari - Bawal	307
<u>71A</u>	Rohtak - Panipat	72
<u>71B</u>	Rewari - Dharuhera - Taoru - Sohna - Palwal	74
<u>72</u>	Ambala - Nahan - Paonta Sahib - Dehradun - Haridwar	200
<u>72A</u>	Chhutmalpur - Biharigarh - Dehradun	45
<u>73</u>	Roorkee - Saharanpur - Yamuna Nagar - Saha - Panchkula	188
<u>74</u>	Haridwar - Nagina - Kashipur - Kichha - Pilibhit - Bareilly	300
<u>75</u>	Gwalior - Jhansi - Chhatarpur - Rewa - Renukut - Garhwa - Daltonganj - Ranchi	955
<u>76</u>	Pindwara - Udaipur - Mangalwar - Kota - Shivpuri - Jhansi - Banda - Allahabad	1,007
<u>77</u>	Hajipur - Sitamarhi - Sonbarsa	142
<u>78</u>	Katni - Shahdol - Ambikapur - Jashpurnagar - Gumla	559
<u>79</u>	Ajmer - Nasirabad - Neemuch - Mandsaur - Indore	500
<u>79A</u>	Kishangarh(NH 8) - Nasirabad(NH 79)	35
<u>80</u>	Mokameh - Rajmahal - Farrakka	310
<u>81</u>	Kora - Katihar - Malda	100
<u>82</u>	Gaya - Bihar Sharif - Mokameh	130

83	Patna - Jahanabad - Gaya - Bodhgaya - Dhoobi	130
84	Arrah - Buxar	60
85	Chhapra - Siwan - Gopalganj	95
86	Kanpur - Chhatarpur - Sagar - Bhopal - Dewas	674
87	Rampur - Pantnagar - Haldwani - Nainital	83
88	Shimla - Bilaspur - Hamirpur - Bhawan - NH 20	115
90	Baran - Aklera	100
91	Ghaziabad - Aligarh - Eta - Kannauj - Kanpur	405
92	Bhongaon - Etawah - Gwalior	171
93	Agra - Aligarh - Babrala - Chandausi - Moradabad	220
94	Hrishikesh - Ampata - Tehri - Dharasu - Kuthanur - Yamunotri	160
95	Kharar(Chandigarh) - Ludhiana - Jagraon - Ferozepur	225
96	Faizabad - Sultanpur - Pratapgarh - Allahabad	160
97	Ghazipur - Zamania - Saiyedraja	45
98	Patna - Aurangabad - Rajhara	207
99	Dobhi - Chatra - Chandwa	110
100	Chatra - Hazaribagh - Bagodar	118
101	Chhapra - Baniapur - Mohammadpur	60
102	Chhapra - Rewaghat - Muzaffarpur	80
103	Hajipur - Mushrigharari	55
104	Chakia - Sitamarhi - Jaynagar - Narahia	160
105	Darbhanga - Aunsi - Jaynagar	66
106	Birpur - Madhepura - Bihpur	130

107	Maheshkhunt - Sonbarsa Raj - Simri-Bakhtiarapur - Bariahi - Saharsa - Madhepura - Purnea	145
108	Dharasu - Uttarkashi - Yamunotri - Gangotri Dham	127
109	Rudraprayag - Guptkashi - Kedarnath Dham	76
110	Junction with NH 98 - Arwal - Jehanabad - Bandhuganj - Kako - Ekangarsarai Bihar Sharif - Junction with NH 31	89
111	Bilaspur - Katghora - Ambikapur on NH 78	200
112	Bar Jaitaran - Bilara - Kaparda - Jodhpur - Kalyanpur - Pachpadra - Balootra - Tilwara - Bagundi - Dhudhwa - Madhasar - Barmer	343
113	Nimbahera - Bari - Pratapgarh - Zalod - Dahod	240
114	Jodhpur - Balesar - Dachhu - Pokaran	180
116	Tonk - Uniara - Sawai Madhopur	80
117	Haora - Bakkhali	119
119	Pauri - Najibabad - Meerut	260
121	Kashipur - Bubakhal	252
123	Barkot - Vikasnagar	95
150	Aizwal - Churachandpur - Imphal - Ukhrul - Jessami - Kohima	700
151	Karimganj - Indo-Bangladeshborder	14
152	Patacharkuchi - Indo-BhutanBorder	40
153	Ledo - Lekhapani - Indo-Myanmar - Border	60
154	Dhaleswar - Bairabi - Kanpui	180
155	Tuensang - Shamator - Meluri - Kiphire - Pfutsero	342
200	Raipur - Bilaspur - Raigarh - Kanaktora - Jharsuguda - Kochinda - Deoghar - Talcher - Chandikhole	740
201	Borigumma - Bolangir - Bargarh	310
202	Hyderabad – Warangal - Venkatapuram - Bhopalpatnam	280
203	Bhubaneswar - Puri	59

204	Ratnagiri - Kolhapur	126
205	Anantpur - Renigunta - Chennai	442
206	Tumkur - Shimoga - Honnavar	363
207	Hosur - Sarjapur - Devanhalli - Nelamangala	155
208	Kollam - kundara - kottarakkara - Punalur - Thenmala -Aryankavu - Sengottai - Tenkasi - Rajapalayam - Thirumangalam(Madurai)	206
209	Dindigul - Pollachi - Palani - Coimbatore - Annur - Kollegal - Bangalore	456
210	Trichy - Pudukottai - Devakottai - Ramanathapuram	160
211	Solapur - Osmanabad - Aurangabad - Dhule	400
212	Kozhikode - Mysore - Kollegal	250
213	Palghat - Kozhikode	130
214	Kathipudi - Kakinada - Pamaru	270
214A	Digamarru - Narsapur - Machilipatnam - Challapalle - Avanigadda - Repalle - Bapatla - Chirala - Ongole	255
215	Panikoili - Keonjhar - Rajamunda	348
216	Raigarh - Sarangarh - Saraipali	80
217	Raipur - Gopalpur	508
218	Bijapur - Hubli	176
219	Madanapalle - Kuppam - Krishnagiri	150
220	Kollam - Kottarakkara - Adoor - Kottayam - Pampady - Ponkunnam - Kanjirappalli - Mundakayam - Peermade - Vandiperiyar - Kumily - Theni	265
221	Vijaywada - Bhadrachalam - Jagdalpur	329
222	Kalyan - Ahmednagar - - Nanded - Nirmal	610
223	Port Blair - Baratang - Mayabunder	300
224	Khordha - Nayagarh - Sonapur - Balangir	298
226	Perambalur - Manamadurai	144

<u>227</u>	Trichy - Chidambaram	136
<u>228</u>	Sabarmati Ashram - Nadiad - Anand - Surat - Navsari -Dandi	374
<u>229</u>	Tawang - Pasighat	1,090
<u>230</u>	Madurai - Thondi	82
<u>231</u>	Raibareli - Jaunpur	169
<u>232</u>	Ambedkarnagar (Tanda) - Banda	305
<u>232A</u>	Unnao - Lalganj (Junction of NH-232)	68
<u>233</u>	India-Nepal border - Varanasi	292
<u>234</u>	Mangalore - Belthangady - Belur - Thiruvannaamalai - Villuppuram ^[1]	780
<u>235</u>	Meerut - Hapur - Gulaothi - Bulandshahr	66

WHERE'S MY NH?

RENUMBERED NATIONAL HIGHWAY MAP OF INDIA

