



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय)

National Highways Authority of India

(Ministry of Road Transport & Highways)

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भारतमाला

प्रगति के पथ पर अग्रसर

BHARATMALA

ROAD TO PROSPERITY

06.11.2018

Project Name: Four laning of Tumkur - Shimoga Section of NH-206 from Km. 12+310 to Km. 217+000 on HAM under Bharatmala Pariyojana - reg.

PROPOSAL: For diversion of 41.2081 Ha of forest land falling under Tumkur, Hassan, Chikkamagaluru and Bhadravati Forest Divisions which is being diverted for widening of existing National Highway to four lane - Section I (from Km. 12+310 to Km 217+000) of NH 206.

JUSTIFICATION FOR LOCATING THE PROJECT IN FOREST AREA

1. BACKGROUND:

In view of National Highways Interconnectivity Improvement Project strategy, the Ministry of Road Transport and Highways (MoRTH) had selected 33 National Highways to upgrade from single lane / intermediate lane National Highways to at least 2 lane with paved shoulder standards / 4 lane. Out of these, some National Highways were proposed to be taken up through the assistance from World Bank. Although, this project stretch was initially under scope of World Bank fund, got transferred back to MoRTH – NHDP – IV due to segregation of 4-lane and 2-lane with paved shoulder development project. Thereafter the project stretch had been proposed and implemented on DBFOT (Hybrid Annuity) PPP mode under MoRTH-Delhi through ownership of NH-PWD (Karnataka). In July 2016 the project has again been transferred from MoRTH-Delhi to National Highways Authority of India (NHAI), Delhi because of policy matter and eventually scope of services had been defined for an up-gradation on including strengthening and widening to 4-lane/2- lane / 2- lane with paved shoulder standards to facilitate the corridors in accordance with highway geometrics, safety measures, social and environmental perspective.

2. INTRODUCTION:

The Project Road NH 206 was previously the part of state highway 68, which was subsequently up-graded to National Highway No 206. NH 206 extends from Tumkur (km 0+000) to Honnavara (km 370+000) has a total length 370 km. From implementation point of view NH 206 has been divided into two sections. Section I starts from Tumkur and ends at Shimoga and Section II starts from Shimoga and ends at Honnavara. Section I of the project road is being widened for four lanes as per the traffic projections.

3. LOCATION OF THE PROJECT ROAD:

Section I alignment pass through 4 districts i.e. Tumkur, Hassan, Chikmagalur and Shimoga. Location map and summarised existing features are shown below in Figure and Table. Section I from Tumkur (km 0+000) to Shimoga town (km 216+500) is further split in to 4 Contract Packages as under.

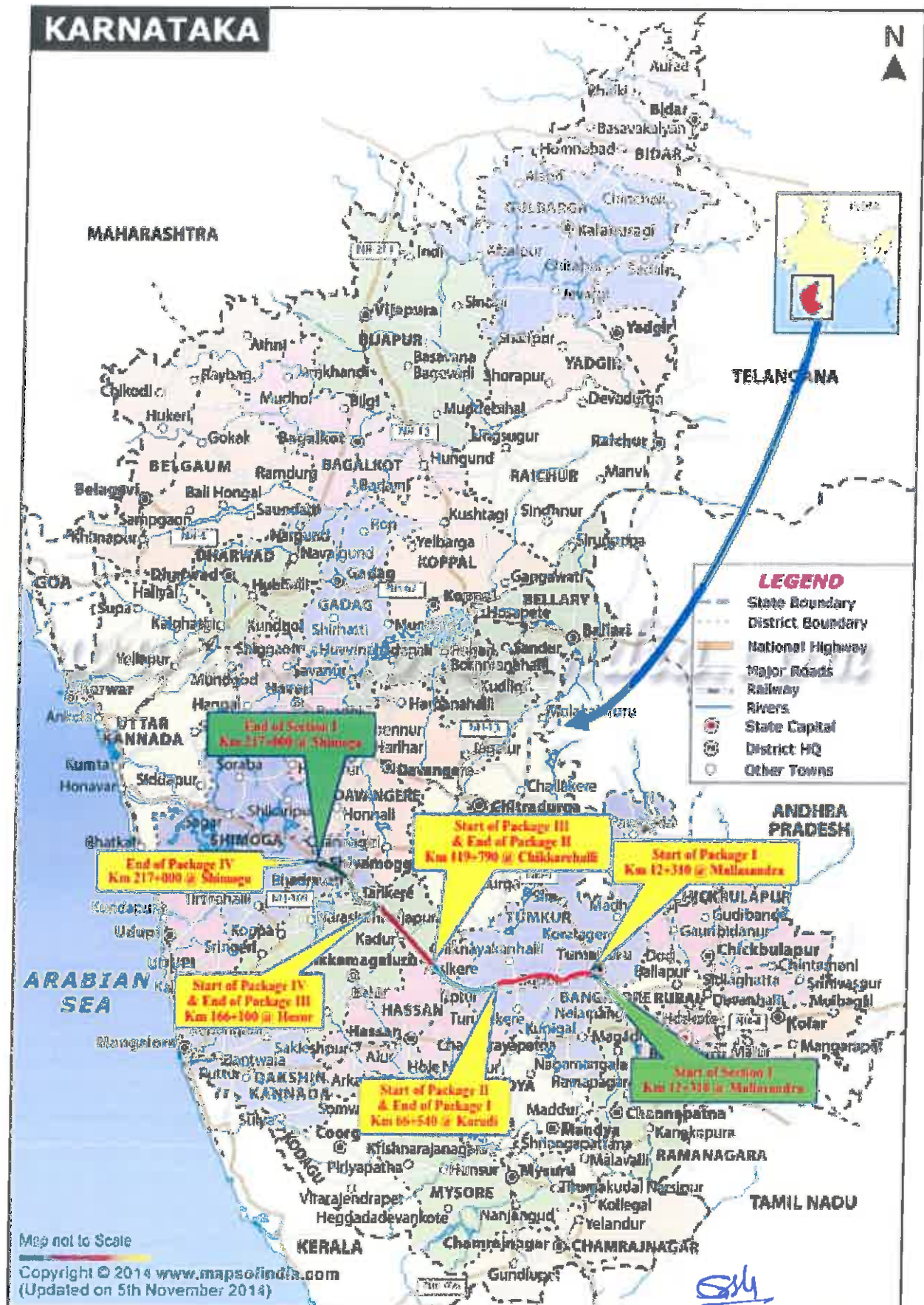
1. Package I: (Km 12+310- to Km 66+540) – Mallasandra Village to Karadi Village
2. Package II: (Km 66+540 to Km 119+790) – Karadi Village to Chikkarehalli Village
3. Package III: (Km 119+790 to Km 166+100) – Chikkarehalli Village to Hosur Village
4. Package IV: (Km 166+100 to Km 217+000) – Hosur Village to Shimoga

The **location map** indicating the Section I and four packages of project road is presented in Figure below.


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Figure: Location map indicating Section I and package wise details



4. EXITING FEATURES OF PROJECT ROAD:

Existing National Highway 206 is of two lanes with or without paved shoulders varying from 5.0 to 7.5 m carriageway. Over the recent years, there has been an increase in traffic volume along the existing highway. Hence the highway needs to be widened to 4 lanes accommodating the increased traffic volume. Project features are given in the Table below.

Table: Salient features of proposed Section I project road

| SL. No. | Particulars | Project Features | Remarks |
|---------|--------------------------------|----------------------------------|---|
| 1 | Start Km | Existing: Km 12+310 | Mallasandra |
| | | Design: Km 12+310 | |
| 2 | End Km | Existing: 216+500 | End of Shimoga Bypass |
| | | Design: Km 226+750 | |
| 3 | Total Length (km) | Existing: 216.000 | |
| | | Proposed: 229.620 | |
| 4 | Districts | 4 Nos. | Tumkur, Hassan, Chikkamagalur and Shimoga |
| 5 | Terrain | Plain and Rolling | |
| 6 | Right of Way (RoW) | Existing: 20 to 40 m | |
| | | Proposed: 60 m | |
| 7 | Existing Carriage way (length) | 2 lanes without paved shoulders, | 156.300 km |
| | | 2 lane with paved shoulders and | 25.200 km |
| | | 4 lane divided carriageway | 22.600 km |
| 8 | Major Bridges | 6 Nos. | |
| 9 | Minor Bridges | 104 Nos. | |
| 10 | Vehicular Overpasses | 8 Nos | |
| 11 | Vehicular Underpasses | 31 Nos. | |
| 12 | Foot Over Bridge | 6 Nos. | |
| 13 | ROBs | 4 Nos. | |
| 14 | Railway Level Crossings | 2 Nos. | |
| 15 | Culverts | 546 Nos. | |
| 16 | Flyover | 1 No. | |
| 17 | Major Junctions | 38 Nos. | |
| 18 | Minor Junctions | 103 Nos. | |
| 19 | Hairpin Curves | Nil | |
| 20 | Agriculture lands | 117.000 Km | |
| 21 | Industrial / commercial areas | 20.000 km | |
| 22 | Built up Areas | 50.584 Km | |
| 23 | Forest stretch | 18.700 Km (both LHS & RHS) | |
| 24 | Villages/Towns | 36/9 | |


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5. IMPROVEMENT PROPOSALS AND DESIGN

Study mandates the improvement of the project road to 4-lane standards for the Section I project stretch. Improvement proposals are based on the "Manual of Specifications and Standards for 4-laning of highways", which has published as IRC: SP: 74 – 2014.

Considering the importance of the project, careful planning has been made to provide various components of the highway and associated utilities, which affect the safety and operation of the highway. The proposed improvements are aimed at easing traffic congestion; reducing the accident, improving physical characteristics of the road, which includes geometry, pavement strength, drainage; and enhancing the aesthetic. Hence, the following optimum level of improvements is proposed:

- Widening of the project road as per the traffic warrants;
- Strengthening/reconstruction of the existing pavement for the entire length;
- Provision of footpath cum built-up drain at Built up and industrial locations;
- Improve / redesign sharp curves;
- Widening/ reconstruction of existing culverts and provision of additional culverts depending on the drainage condition;
- Junction improvements;
- Provision for Pedestrian crossing facilities;
- Provision of traffic signs and road furniture;
- Provision of bus shelters;
- Shifting of utilities;
- Land acquisition, R&R and other social impacts.

6. FOREST STRETCHES ALONG THE PROJECT ROAD:

Section I of proposed project highway starts at Mallasandra (at chainage Km 12+310) of Tumkur district and ends after Shimoga bypass (at chainage Km 217+000) having a length of 226.750 km.

The proposed Section I alignment passes adjacent to some of the reserved forests shown in the following table. The total forest land to be diverted is **41.2081 Hectares**.

| Sl. No. | Forest Sy No. | Village/Hobli/Taluk | Chainage (km) | | LHS /RHS | Forest Area (Ha) |
|---------|---------------|--|---------------|---------|----------|------------------|
| | | | From | To | | |
| 1 | 6 | Babiganahalli/Nittur/Gubbi | 33+870 | 35+120 | RHS | 1.1603 |
| 2 | 20 | Ankapura/Nittur/Gubbi | 35+120 | 35+580 | RHS | 0.3539 |
| 3 | 27 | Sopanahalli/Nittur/Gubbi | 37+820 | 38+300 | LHS | 0.3809 |
| 4 | 1 | Bidarahallada Kaval/Nittur/Gubbi | 35+170 | 41+380 | LHS | 1.9797 |
| 5 | 36 | Yellapura/Nittur/Gubbi | 39+620 | 40+080 | RHS | 0.8155 |
| 6 | 35 | | 40+080 | 40+500 | RHS | 1.0005 |
| 7 | 34 | | 40+500 | 40+760 | RHS | 0.4987 |
| 8 | 30 | Kanchiganahalli/Nittur/Gubbi | 40+980 | 41+710 | RHS | 0.8439 |
| 9 | 7 | Kanchiganahalli/Nittur/Gubbi | 42+340 | 42+600 | LHS | 0.2483 |
| 10 | 1 | Bennihallada kaval/Nittur/Gubbi | 46+760 | 48+000 | RHS | 2.7183 |
| 11 | 2 | | 46+480 | 48+010 | LHS | 1.9202 |
| 12 | 95 | Rajathadripura/Kibbana halli/Tiptur | 49+640 | 49+910 | RHS | 0.2189 |
| 13 | 11 | Chavadlapurakaval/Kibbana halli/Tiptur | 60+940 | 64+460 | RHS | 4.8085 |
| 14 | 12 | | 60+960 | 64+460 | LHS | 0.7712 |
| 15 | 36 | Kallanayakanahalli/Kasaba/Arasikere | 108+200 | 108+420 | RHS | 0.7000 |
| 16 | 148 | Bendekere/ Banavara/ Arasikere | 108+420 | 108+680 | RHS | 0.6762 |
| 17 | 69 | Linglapura/Shingatagere/Kadur | 123+730 | 124+120 | RHS | 0.3640 |
| 18 | 51 | | 123+080 | 123+400 | RHS | 0.7066 |

| Sl. No. | Forest Sy No. | Village/Hobli/Taluk | Chainage (km) | | LHS /RHS | Forest Area (Ha) |
|---------|---------------|---|---------------|---------|----------|------------------|
| | | | From | To | | |
| 19 | 50 | | 123+260 | 123+265 | RHS | 0.0034 |
| 20 | 66 | Anche Chomanahalli/ Shingatagere/Kadur | 126+640 | 126+980 | RHS | 0.6798 |
| 21 | 31 | Kuppalu/kasaba/Kadur | 127+040 | 127+320 | RHS | 0.4138 |
| 22 | 32 | | 127+020 | 127+400 | LHS | 0.2897 |
| 23 | 33 | Kuppalu/kasaba/Kadur | 127+400 | 127+710 | LHS | 0.4276 |
| 24 | 2 | | 128+040 | 128+200 | RHS | 0.2373 |
| 25 | 230 | Mathighatta/kasaba/Kadur | 130+520 | 130+700 | LHS | 0.4246 |
| 26 | 14 | Gedlehalli/kasaba/Kadur | 133+850 | 134+360 | LHS | 0.6415 |
| 27 | 293 | Tangali/ kasaba/Kadur | 136+460 | 136+520 | LHS | 0.0851 |
| 28 | 153 | Jodi Thimmapura/Birurur/Kadur | 151+570 | 152+290 | LHS | 0.3063 |
| 29 | 67 | H.Rangapura/Kasaba/Tarikere | 177+590 | 177+710 | RHS | 0.5767 |
| 30 | 9 | | 177+900 | 178+080 | RHS | 1.2465 |
| 31 | 122 | | 178+600 | 178+660 | RHS | 0.1096 |
| 32 | 123 | | 178+660 | 178+760 | RHS | 0.2301 |
| 33 | 124 | | 178+760 | 178+860 | RHS | 0.1894 |
| 34 | 11 | | 178+840 | 179+470 | RHS | 1.1725 |
| 35 | 12 | | 179+460 | 181+460 | RHS | 4.0710 |
| 36 | 4 | | 178+580 | 178+620 | RHS | 3.2226 |
| | | | 178+680 | 179+600 | RHS | |
| | 43 | Malali Chennenahalli/ Kasaba/Tarikere | 178+620 | 178+740 | LHS | 0.6062 |
| | 17 | | 179+600 | 179+700 | LHS | 0.1387 |
| | 16 | | 179+700 | 179+760 | LHS | 0.0521 |
| | 15 | | 179+760 | 180+020 | LHS | 0.1244 |
| | 442 | | 180+040 | 180+460 | LHS | 0.6065 |
| | 441 | | 180+460 | 180+920 | LHS | 0.2378 |
| | 22 | | 181+460 | 181+560 | RHS | 0.3394 |
| | 38/1&38/2 | Karehalli / Kasaba/ Bhadravati | 181+560 | 181+660 | RHS | 0.1852 |
| | 37 | | 181+660 | 181+760 | RHS | 0.0824 |
| | 34/1 | | 181+760 | 181+840 | RHS | 0.0224 |
| | 14 | Anekoppa / Kasaba/ Bhadravati | 186+820 | 188+170 | LHS/RHS | 3.6071 |
| | 58 | Ujjanipura / Kasaba/ Bhadravati | 188+140 | 188+480 | LHS/RHS | 0.4493 |
| | 5 | | 189+020 | 189+100 | LHS/RHS | 0.2635 |
| | | Total | | | | 41.2081 |

7. JUSTIFICATION:

The existing highway is a two lane road with or without paved shoulders varying in width from 7.0 m to 15.0 m carriage way. There has been an increase in the traffic volume in the recent past necessitating the widening of existing road from Tumkur to Shimoga to 4 lanes. The width of the highway is being increased up to 60 m incorporating median along the centre line. The existing road is geometrically poor with respect to alignment and has concerns over safety of road users.

The existing alignment is followed during design but where the alignment is geometrically poor with respect to alignment and a threat to safety of road users, geometrical improvements such as smoothening of sharp curves has been recommended as per Indian Road Congress (IRC) specifications. While doing so, curved alignments at forest stretches adjacent to highway have been smoothened keeping the designed vehicle speed and the safety of the road users.



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Technical, economical and environmental attributes have been considered during finalising the alignment and all possible efforts have been made to avoid the forest land. It is further stated that the area of forest land involved in the proposed alignment for improvement of **Section I** stretch of NH 206 is bare minimum. The attempt has also been made for alternative alignments to avoid forest land and there are no feasible alternatives found.



(Shirish Gangadhar)

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