



**NATIONAL HIGHWAYS AUTHORITY OF INDIA**  
(Ministry of Road Transport and Highways)

## **DETAILED NOTE ON THE PROJECT**

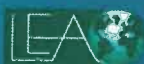
### **HARDA – BETUL PACKAGE 2**

*Consultancy Services for Preparation of Detailed Project Report for Development of Economic Corridors, Inter Corridors, Feeder Routes and Coastal Roads to improve Efficiency of Freight Movement in India (Lot-1/Madhya Pradesh/Package-1)*



### **ECONOMIC CORRIDOR**

March 2019



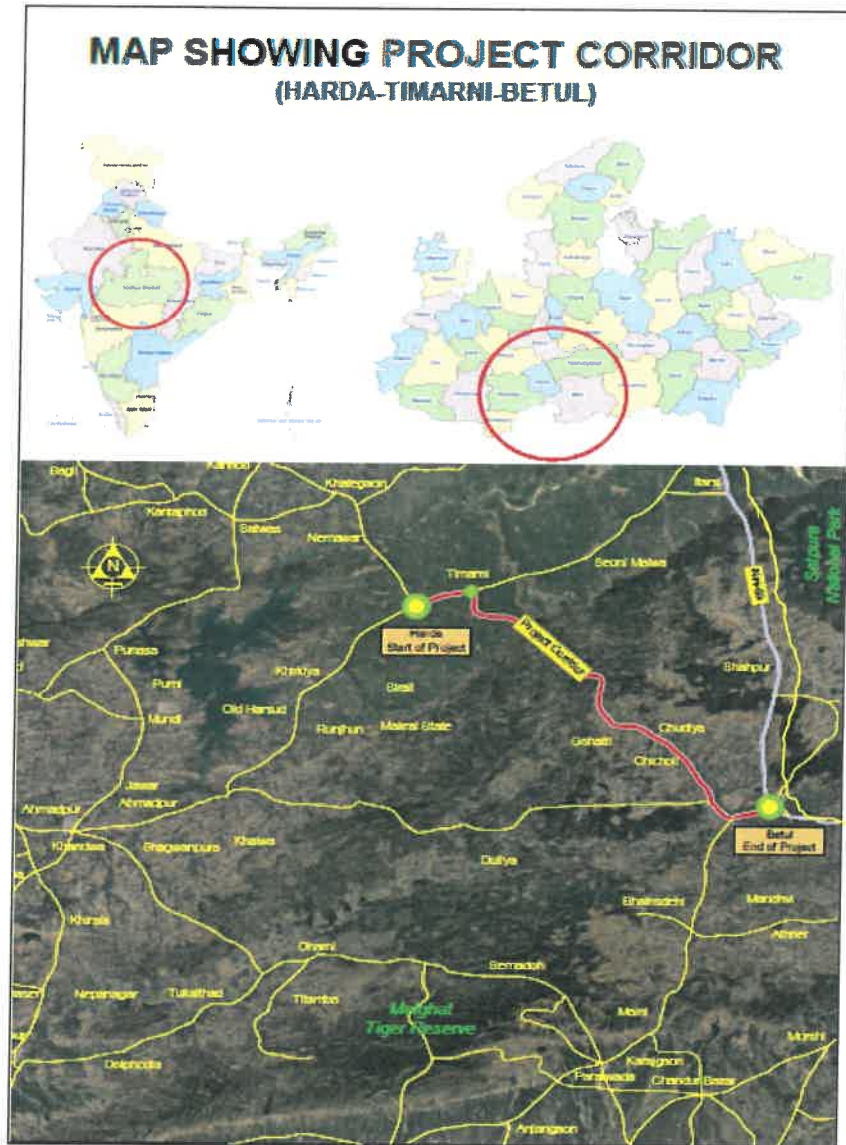
**LEA ASSOCIATES SOUTH ASIA PVT. LTD.,**  
New Delhi.

B-1/E-27, Mohan Co-operative Industrial Estate,  
Mathura Road, New Delhi-110044

## DETAILED NOTE ON THE PROJECT

National Highways Authority of India (NHAI) under the Ministry of Road Transport & Highways (MoRT&H), Government of India has been entrusted with the Development of Economic Corridors, Inter-Corridors, Feeder Routes and Coastal Road primarily to improve the freight movement in the Country. In pursuance of the above, LEA Associates South Asia Private Limited have been appointed as Consultants by NHAI to carry out the "Preparation of Detailed Project Report for Development of Economic Corridors, Inter-Corridors, Feeder Routes and Coastal Road primarily to improve the freight movement in the Country (Lot-1/Madhya Pradesh/Package-1).

The project roads are shown in the following figure



Harda-Betul section of NH-47

### A. Harda-Timurni- Betul Section

The Proposed project road is a part of NH-47, traverses through the two districts of Madhya Pradesh, north to south direction, namely Harda and Betul. It starts from the Km.140+000 of NH-47 at Harda urban area. After travelling almost 121.248km project ends at the interchange for Bhopal & Nagpur which is very near to Betul. The starting and ending chainage with GPS co-ordinate and locations are presented in a tabular form below.

  
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NHAI PIU-Harda (M.P.)

| Start Chainage(Km)                             | End Chainage (Km)   | GPS Co-Ordinate (UTM)               |                                    |
|--|---|-------------------------------------|------------------------------------|
|  |   | Start Point                         | End Point                          |
| Ex 142+000(Design Ch 0+000) of NH-47 at Harda. | Ex 275+000 (Design Ch 121+248) of NH-47 at the Interchange for Bhopal & Nagpur, just before Betul | 43 Q, 712493.00 m E, 2477208.00 m N | 43Q, 797498.00 m E, 2422829.00 m N |

The proposed Harda-Betul section is a part of Indore – Nagpur Economic corridor whereas Betul-Khandwa section is a feeder route to this Indore-Nagpur Economic corridor. It has been planned to prepare Detail Project Report of the above mentioned two stretches under Bharatmala Scheme as LOT-1/ Madhya Pradesh/Package-I.

The identification of the route alignment of this economic corridor including feeder route was initially taken up in the early 2015 by the Ministry of Road Transport & Highways (MoRT&H) under Logistics Efficiency Enhancement Programme (LEEP) scheme. The alignment was Identified and submitted by M/s AT Kearney in his LEEP Final Report. Based on this alignment M/s NHAI has launched a scheme under Bharatmal to prepare detailed project report for development of Economic Corridors, Feeder routes, inter corridors throughout India to enhance the efficiency freight transportation.

In the current consultancy assignment, the Consultant was asked to identify the most techno economically feasible alignment to connect the already identified corridor. It was however stipulated that the consultant might review the alignment based on existing conditions at site and possibility of develop the existing route as access controlled corridor if it passes through problematic area and propose alternate solutions wherever it is necessary.


### **Harda-Betul Road:**

Package 1(km 0.000 to km 30.000) -Length=30.000km(Harda To Temagav)

Package 2(km 30.000 to km 81.000)- -Length=51.000km(Temagav To Chicholi)

Package 3(km 81.000 to km 121.248) -Length=40.248km (Chicholi to Betul)

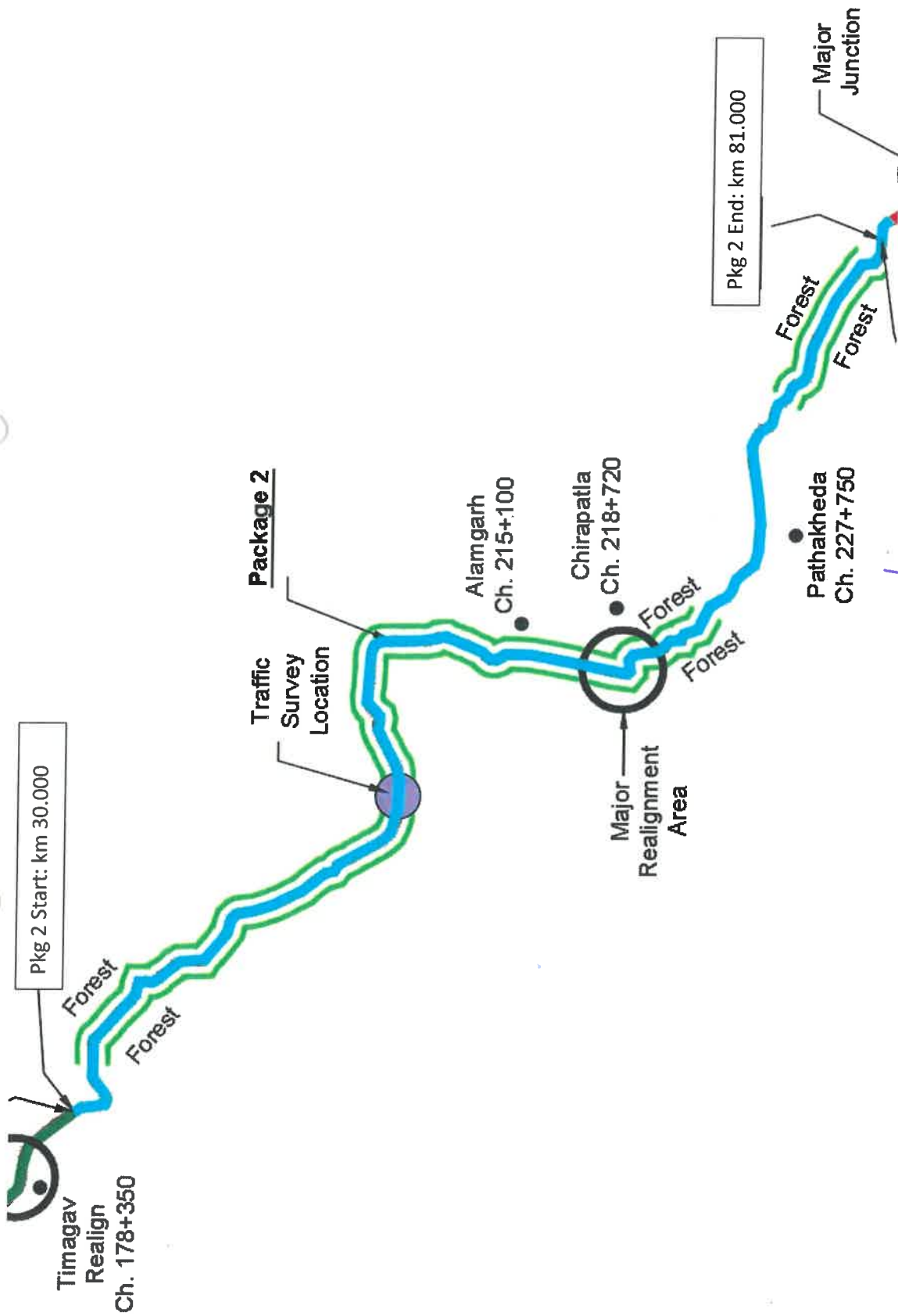
**Here in the above mentioned package 2 stretch of the harda betul road, is alignment is passing through the forest stretch for which the forest proposals has been uploaded on the MoEF & CC portal.**

  
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**Package 2(km 30.000 to km 81.000) - -Length=51.000km(Temagav To Chicholi)**





*[Signature]*  
**Project Director**  
NHAI, PIU-Harda (M.P.)

### **Harda-Betul Road: Package 2 (km 30.000 to km 81.000)**

Ex. Length: km 180.000 to km 235.800-Length=55.800 km

Design Length: km 30.000 to km 81.000-Length=51.000 km

Minimum Horizontal Radius:100m

Minimum Vertical curve length: 60m

Minimum K value(Sag): 45

Minimum k Value(Hog): 135

Max. Super Elevation: 7%

### **Structure Details**


| Project Road        |                       |
|---------------------|-----------------------|
| Project road length | 51.000 km             |
| Connectivity        | Harda-betul Package 2 |
| On national Highway | NH-47                 |
| Proposed Features   | Proposed              |
| Major Bridges       | 1 at Ganjal River     |
| Minor bridges       | 22                    |
| ROB                 | 0                     |
| Culverts            | 94                    |
| VUP/VOP/PUP         | 2                     |
| Flyover             | 0                     |

### **Design Speed details**

| Harda-Betul Road |                    |            |            |                       |
|------------------|--------------------|------------|------------|-----------------------|
| Sl.No            | Design Speed(Kmph) | Length(km) | Percentage | Remarks               |
| 1                | 100                | 31.5       | 61.81%     | Plain terrain         |
| 2                | 80                 | 7.46       | 14.64%     | Rolling-Hilly Terrain |
| 3                | 60                 | 9.8        | 19.23%     | Hilly Terrain         |
| 4                | 50                 | 2.2        | 4.32%      | Hilly Terrain         |

### **Forest Details:**

| Sl.No | Overall Project Chainage | Forest Length(km) | Percentage |
|-------|--------------------------|-------------------|------------|
| 1     | 30.000 to 81.000=51km    | 31.200            | 61.22%     |

  
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**List Of Villages:**

| Name of villages | Chainage |       |
|------------------|----------|-------|
|                  | From     | To    |
| Temagaon         | 31       | 31.5  |
| Uskali           | 31.5     | 33.1  |
| Ajai             | 61.25    | 62.1  |
| Alamgarh         | 62.6     | 65.2  |
| Chirapatla       | 65.2     | 69.3  |
| Bela             | 69.3     | 71.4  |
| Padthkheda       | 71.4     | 75.7  |
| Dhaniyajam       | 75.7     | 77.95 |
| Chunagosai       | 77.95    | 78    |
| Alampur          | 78       | 81.1  |
| Godhana          | 81.5     | 82.1  |
| Sita Dongri      | 82.16    | 83    |

  
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