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**Title of the proposal: "Four Laning of Indore Harda Section of NH-59 A (New NH-47) from Design Km. 29.300/Existing Ch.29.555 to Design Km. 92.811/Existing Ch. 95.000" in the Madhya Pradesh State (Modified Forest Proposal).**

### COST-BENEFIT ANALYSIS

TABLE - A

S.NO.	Particulars	Applicability	Amount (Rs. Crores)
01	All category of proposals involving land less than 5 ha in plain and less than 20 ha in hills	Not Applicable	
02	Proposal for defence installation purposes and oil processing (Prospecting only)	Not Applicable	
03	Habitation, establishment of Industrial units tourist lodges/complex and other buildings constructions	Not Applicable	
04	All other proposals involving forest land more than 5 ha in plain and more than 20 ha in hills including roads, transmission lines, minor, medium, and major irrigation projects, hydel projects, mining activities, railway lines, locations specific installtions micro-wave stations, auto repeater controls, towers, etc.	Applicable (Roads)	Forest land diversion proposal for 40.053 ha forest land for Four Laning of Indore Harda Section of NH-59 A (New NH-47) from Design Km. 29.300/Existing Ch. 29.555 to Design Km. 92.811/Existing Ch. 95.000 in the state of Madhya Pradesh.
05	Total cost (Investment Incurred)		
(a)	Civil Construction Cost of Project		Approx. Rs 108.5 Cr in Forest Areas
(b)	Alternative Plantation/Environment Cost/ Substitute		Environmental Mitigation cost taken in DPR as 3.38 Cr
	N.P.V. cost of 40.053 ha. Amount to be disposed @ 9.20 lakh/Hectare		NPV cost 9.2 lacs/ha * 40.053 ha = 3.68 Crores.
06	Benefits (Construction of Four Lane Road)		Proposed 4 lane upgrdation of the project will result in smooth flow of traffic, reduction in fuel consumption, low vehicle maintenance cost, improved transport facilities, control of air and noise pollution, reduction in road accidents.
Date: 18-08-2022			
Place: Harda		Project Director-NHAI PIU - Harda	



*[Signature]*

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### COST-BENEFIT ANALYSIS

**TABLE - B**

SN	Parameters	Remarks
01	Ecosystem services losses due to proposed Forest Diversion	1. Diversion of Reserve Forest Land of 40.053 ha. 2. Economic value of loss of ecosystem services due to diversion of forests = NPV of the forest land being diverted as Rs 3.68 Crores. 3. Diversion of Revenue Forest Land Nil
02	Loss of Animals husbandry productivity including loss of fodder	NIL
03	Cost of human resettlement	NIL  There will be no displacement due to the project, so resettlement is not required.
04	Loss of public facilities and administrative infrastructure (Roads, Buildings, Schools, Dispensaries, Electric Lines, Railways etc.) on which would require forest land if these facilities were diverted due to the project.	No loss of public facilities and administrative interest occurs.
05	Possession value of forest land of Forest Land Diverted	Possession value of forest land will be 30 % of NPV as per circular issued by MOEFCC vide no 7-69/2011-FC (pt) dated 01/08/2017, Hence, it will be 30% of 3.68 Crores =0.11 Crores.
06	Suffering to Oustees	Nil
07	Habitant Pragamentation Cost	Nil
08	Compensatory Afforestation and soil & moisture conversion cost	The total area of reserved forest land along the project road required for the 4 lane up-gradation is 40.053 ha. The loss for density 1.0 is 126.74 lacs per ha. As per Forest Conservation Act for 50 years considering the density of the forest as 1.0, the total cost of environment losses per ha is 126.74 lacs for 50 years.  40.053*126.74= 5076.317 Lacs = say 50.76Cr



Place: Harda

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### COST-BENEFIT ANALYSIS

**Table - C**

SN	Parameters	Remarks
1.	Increase in productivity attributable to the specification project.	Due up-gradation of the existing highway to Four lane paved shoulder configuration; there will be overall development of the project area. There would be easy and fast movement of the traffic, so that it will save time, saving in fuel and maintenance cost of the vehicles. This will also result in reduction in accidents. Hence, widening of road will result in improved traffic condition; low maintenance cost of vehicles and saving in travel time will result in economic benefits.
2.	Benefits to economy	<p>The project usually contributes the growth of local economy by increased commercial and agricultural and tourism activities due to improved highway.</p> <p>The economic benefits due to project are given below:</p> <ol style="list-style-type: none"> <li>1. Reduce pollution level due to better surface quality and traffic speed will be increased 100 kmph.</li> <li>2. Fuel consumption is estimated to be reduced and saving travel time.</li> <li>3. Provision of safety measures, road furniture along the road and truck lay bye rest area and bus bays, necessary amenities provided and reduction in accidents.</li> <li>4. Vehicles operating cost will be reduced due to better transportation.</li> <li>5. Social economic growth will take place due to improved connectivity.</li> </ol>
3.	No. of population benefited.	The project stretch passing through Indore, Dewas and Harda Districts having total 5314586 population shall be benefited.
4.	Economic Benefites due to of direct and indirect employment due to project.	Due to Four Laning of Indore Harda Section of NH-59 A (New NH-47) from Design Km. 29.300/Existing Ch. 29.555 to Design Km. 92.811/Existing Ch. 95.000, about 400 labour will get direct employment for duration of 3 years and 5000 indirect employment will also be generated construction of the project road.
5.	Economic Benefits due to Compensatory Afforestation	The benefits of Compensatory Afforestation estimated as NPV.

**Total Project Cost: 108.5+3.38 +3.68+0.11+50.76.= 166.43 Cr**

Date: 18-08-2022

Place: Harda



Project Director-NHA/  
PIU - Harda