

**Diversion of 33.420 Ha. Forest Land for up- gradation to Two Lanes with paved shoulder / Four lane configurations of Nanded- Kinwat- Mahur -Arni road section of National Highway 161A 0.000 km. at Bhoker and end at Arni Fata via Sarsam- Himavatnagr – Kinwat – Mahur of Nanded District in the State of Maharashtra.**

**a) Parameters for Evaluation of Loss of Forests**

Sr. No.	Parameters	Description
1	Loss of value of timber, fuel wood and minor forest produce on an annual basis including loss of man hours per annum of people who derived livelihood and wages from the harvest of these commodities.	As per recent guidelines issued by MOEF to consider NPV as loss. Total estimate forest to be diverted works out to be 33.42 ha. Considering the propose value of NPV @ 6.62 lakh/ ha the ould be Rs. 221.2404 lakhs
2	Loss of animal husbandry productivity, including loss of fodder	No significant animal huysbanday base is observed through forest streth so as the fodder availability along road. However as per guidelines 10% of NPV is considered for monetoary loss which comes to around 22.417 lakhs
3	Cost of human resettlement	There is no displacement related to in the forest area proposed for diversion and no loss to human resettlement
4	Loss of public facilities and administration infrastructure (Roads, Building School, dispensaries , electric lines, railways etc) on forest land, or which require forest land if these facilities were diverted due to the project.	There are no public facilities and administrative infrastructure ( roads, buildings, schools, dispensaries, electric lines, railways, etc) on the forest land where diversion is proposed.
5	Possession value of forest land diverte balance)	As per recent guidelines issued by MOEF to consider 30% NPV as loss. Total estimate forest to be diverted works out to be 33.420 ha. Considering the propose value of NPV @ 6.62 lakh/ ha the ould be Rs. 66.427 lakhs
6	Suffering to oustees	The widening and strengthen of the project road is to be undertaken on the adjoining land of the existing road, so there are no suffering to oustees.
7	Habitat Fragmentation Cost	As per recent guidelines 50% of NPV is to be considered as habitat fragmentation loss Rs 110.62 lakhs
	Net losses	420.457

b) Parameters for Evaluation of Benefit, not with standing Loss of Forest

Sr. No.	Parameters	Description
1	Increase in productivity attributable to the specific project.	Implementation of entire project will ensure fast, smooth and safe road traffic movement, reducing travel time, fuel consumption & traffic load . Project also aims at creation of commercial nodes for multiple developments mainly in industrial, commercial, agricultural, tourism sector resulting in to employment generation, capacity building as well as reducing congestion which will resultantly reduce pollution also.
2	Benefits to the economy	Improved transport is going to add more commuter this increasing income in government exchequer
3	No. of population benefited	Due to the proposed project 40% travel time will be saved, Fuel and maintenance of vehicles will be reduced at about 35%. It will provide safe and faster transport link Nanded and Yavatmal District and area will be uplifted approximately 30%. Estimated saving in 50 years span considering present avg traffic is Rs. 6750 lacs
4	Employment Potential	Local people will be benefited during construction as well as operation phase of the proposed upgraation to 2/4 lanes . Estimated benefits in terms of employment in 50 years time is Rs. 2738 lacs
5	Cost of acquisition of facility on non-forest land wherever feasible.	project will provide monitory benefits of Rs 6 lakh per ha for compensatory afforestation for double degraded forest . Cost of CA will be Rs. 401.04 lacs
6	Loss of (a) agricultural & (b) animal husbandry production due to diversion of forest land.	Nil
7	Cost of rehabilitating the displaced person as different from compensatory amount given for displacement.	There is no displacement related to in the forest area proposed for diversion.
8	Cost of supply of free fuel wood to workers residing in or near forest area during the period of	No fuel wood will be supplied to the workers during the construction period. Contractor will supply LPG.

**COST BENEFIT RATIO CHART**Name of Project : Proposal for diversion of ~~33.42~~ 33.42 ha forest land

District :- Nanded

State :- Maharashtra

Sr. No.	Particular	Amount in Lakhs	Remarks
1	Total Cost ( Investment proposed)		
A)	Construction Cost of Project	54564	
B)	NPV Amount to be Deposited @ Rs 6.62 lakh/ha as on date	221.240	
C)	Compensatory afforestation on double degraded land to be deposited with Central Government		
D)	Compensatory afforestation seven year scheme on 66.84 Ha land ( double degraded forest land)	401.04	66.84
Total Cost of project =		55,186.28	
2	Benefit from Road ( taking Life of Road as 100 Years )		
A)	Economic Benefit – Saving in time, fuel cost, and other POL cost together ( interest on saving for 50 year) considering 13.5% IRR	372507	
C)	Benefit due to promotion of enhanced economic activities due to road development- Assuming 100 people get employment @ 300/- per day- for 300 days and for 50years period	2738	
D)	Total Benefit ( A + C ) =	375245	
	Net benefit= benefits minus losses	374824	
	Cost benefit ratio	6.792	
E)	Therefore construction of Road is Economically Viable and Socially Beneficial		

Authorized Representative

**Executive Engineer****National Highway Division,****NAND E.**