DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT,

Executive summary in English FOR

Development and four laning Pathalgaon – Kunkuri CG/JH Border Green field highway starting from village Tarua Ama near Pathalgaon and terminates near village Sai Tengor Toli at CG/JH boarder in the state of Chhattisgarh under Bharatmala Pariyojana (Lot-5/Package-7)

Total Length – 104 Km

PROJECT PROPONENT :

National Highways Authority of India (NHAI)



Environment Consultant:



P & M SOLUTION C-88, SECTOR-65, NOIDA-201-301,U.P A QCI NABET Accredited Organization

EXECUTIVE SUMMARY

INTRODUCTION

The Government of India has taken up development of Economic Corridors, Inter Corridors, Feeder Corridors and National Corridors to improve the efficiency of Freight Movements in India under Bharatmala Pariyojana.

National Highway Authority of India has been appointed as Nodal Agency for proposed development of Pathalgaon – Kunkuri CG/JH Border section of which is a part Bharatmala Pariyojana, (Lot-5/Package-7).

DESCRIPTION OF THE PROJECT

The proposed highway starts from village Turua Ama near Pathalgaon 22°33'42.96"N 83°33'52.61"E and ends at CG-JH border near Shankh river 22°56'24.10"N 84°23'52.45"E in Jashpur district in the state of Chhattisgarh.

Scope of present report is confined to the package 7 (Ch. 0+000 to Ch. 104+000)

This is a green field alignment, and is proposed for 4-Lane .The proposed length of Project Highway is about 104 kms. The road passes through approx. 100 villages of Jashpur district through important villages/towns like Pathalgaon, Kansabel, Kunkuri, Duldula, Jashpur e.t.c

S.no	Parameters/Issues	Description
1.	Length (km)	104
2.	Total land acquired (ha)	626
3.	Govt. land (ha)	65
4.	Pvt. Land (ha)	478
5.	Forest land (ha)*	83 ha.

Table 10.1: Salient features of the project:





6.	Area under protected/ important or	The alignment does not pass through any
	sensitive species of flora or	wild life sanctuary, protected area and its eco
	fauna/Wildlife Sanctuary	sensitive zone.
7.	No. of trees	18000
8.	Area under water bodies (ha)*	10
9.	No. of structure to be impacted due to proposed alignment	55
10.	No. of families	120
11.	i.Major Bridges (07)ii.Minor Bridges (24)iii.Vehicular underpass (03)iv.LVUP (12)v.SVUP (43)vi.Interchanges/Flyover (5)vii.Box Culverts (192)viii.01 cattle under pass	
12.	Total water requirement	3500 KL/day. Water will be extracted from surface sources. The ground water will be abstracted for camp site after obtaining the permission from competent authority.
13.	Toll Plaza	20 no.s
14.	Truck Bye lays	2 no.s
15.	RoW	60 m in non-Forest land and 36 to 65 m in forest as per the requirement keeping in view the fully access controlled Highway with 4-lane dual carriage way configuration.
16.	Construction material	Coarse aggregate Cement (MT) - 128960 Coarse Sand (cum) - 1248 Coarse Agg. (cum)- 707200, Fine Agg. (cum)- 1414400





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		Steel (ton)- 4160
		Bitumen (ton)- 15392000
		Bitumen Emulsion (ton)- 1331200
		Borrow Earth (cum)- 6656000
17.	Connectivity	The projected road will connect to Bilaspur & Korba by Bilaspur-urga-Pathalgaon Highway and Jharkhand border via Jashpur
18.	Project cost (cr.)	1546

DESCRIPTION OF THE ENVIRONMENT

The baseline data was generated during post-monsoon season of 2020 i.e. October to December, 2020. The baseline data has been provided in chapter 3 of this report which shows the values of almost all of the parameters are well within the prescribed limits.

Attribute	Baseline status	
Ambient Air Quality	Ambient Air Quality Monitoring reveals that the minimum & maximum	
	Concentrations of PM_{10} for all the 9 AAQ monitoring stations were found	
	to be 52.9 μ g/m3 (at AAQ6-CH 65+200) and 87.7 μ g/m3 (at AAQ1-CH	
	02+300) respectively	
	The result of PM2.5 reveals that the minimum concentration of 28.9	
	μ g/m3 (at AAQ1- CH 39+200) and maximum concentration of 44.9	
	µg/m3 (at AAQ6- CH 65+200).	
	The gaseous pollutants SO2 and NOx were within the prescribed CPCB	
	limit of 80 μ g/m ³ . For residential and rural areas at all stations. The	
	minimum & maximum concentrations of SO2 were found to be $8.6 \mu g/m3$	
	(AAQ4-Pharsakhan-39+200) and 19.5 µg/m3 (AAQ1- Chaura Ama-	
	02+300) respectively.	
	The minimum & maximum concentrations of NOx were found to be 52.9	
	μ g/m3 (at AAQ6-CH 65+200) to 87.7 μ g/m3 (at AAQ1- CH 02+300)	





	respectively.
Noise Levels	Noise monitoring were carried out at 9 locations. The results of the
	monitoring program indicated that both the daytime and night time levels
	of noise were well within the prescribed limits of NAAQS to marginal
	rise in PM levels some locations monitored due to increase in vehicle
	density
Water Quality	5 Groundwater samples were analyzed and concluded that:
	The ground water from all sources remains suitable for drinking purposes
	as all the constituents are within the limits prescribed by drinking water
	standards promulgated by Indian Standards IS: 10500.
Soil Quality	Samples collected from identified locations indicate the soil is sandy type
	and the pH value ranging from 7.21 to 7.46, which shows that the soil is
	neutral to alkaline in nature. In the collected soil samples the conductivity
	ranged from 50-186 µmhos/cm. Moisture content varied from 3.44 to 6.02
	%. Iron was highly dominant amongst all the heavy metals present and
	varied from <5.0 to 27 mg/Kg.
Ecology and	There are no ecologically sensitive areas present in the study area
Biodiversity	

ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES





- Slight change in the micro-climate of the area is expected due to Heat Island Effect.
- There will be a marginal rise in PM levels during the construction activities, which shall again be within prescribed limit after the construction activities are over.
- The area is likely to experience a marginal increase in noise level due to increase in vehicle density after construction of the road.
- Contamination to water bodies may result due to spilling of construction materials, oil, grease, fuel and paint etc. This will be more prominent in case of locations where the project road crosses rivers, canals, nallahs, etc. Mitigation measures have been planned to avoid contamination of these water bodies.
- Diversion of forest land has been envisaged for this project. Hence, Forest Clearance under the purview of Forest (Conservation) Act, 1980 is required. The application of forest clearance is under process. Adequate compensatory afforestation has been planned as a mitigation measure. The project road doesn't cross any Protected Area. Since the project road is a green field project, acquisition of land shall be required.
- During the construction of the proposed project, the topography may change marginally due to cuts & fills for project road and construction of project related structures etc.
- Provision of construction yard for material handling will also alter the existing topography.

ANALYSIS OF ALTERNATIVES (TECHNOLOGY & SITE)

Detailed analyses of the alternatives have been conducted taking into account both with and without project. Comparative analysis of all the alternatives has also been conducted. The proposed development of the road is likely to have a positive impact on the economic value of the region. However, there are certain environment and social issues that need to be mitigated for sustainable development.

Three alternatives were studies and the first one was found out to be most suitable.

ENVIRONMENTAL MONITORING PROGRAM

Regular monitoring of important and crucial environmental parameters is of immense importance to assess the status of environment during operation of the proposed project.





With the knowledge of baseline conditions, the monitoring program can serve as an indicator for any deterioration in environmental conditions due to operation of the project and suitable mitigating steps could be taken in time to safeguard the environment. Monitoring is as important as that of control of pollution since the efficacy of control measures can only be determined by monitoring.

ADDITIONAL STUDIES

The various additional studies have been undertaken for the project including Public Consultation, Risk assessment and Social Impact Assessment/ R&R Action Plans. Public consultation is a continuous process and has been carried out at all stages throughout the project road. To ascertain the views of the affected families to be recorded and has been included in the Social Impact Assessment report.

BENEFITS OF THE PROJECT

The benefits of the Project are multi-fold. It will substantially reduce the travel time between Pathalgaon-Kunkuri in Jhaspur District and the other remote areas falling on the alignment. In addition to the improved connectivity, it will also provide a boost to the economic status of the villages / towns falling in the dedicated Project area.

The proposed route between Pathalgaon-Kunkuri-Jashpur measures about 104 km which shall be reduced the time travel to about 2.5 hrs. as compared to the existing route NH 43.

ENVIRONMENT MANAGEMENT PLAN

Project specific environmental management plan have been prepared for ensuring the implementation of the proposed measures during construction phase of the project, implementation and supervision responsibilities. The cost for environmental management during construction has been indicated in EMP. The project impacts and management plan suggested thereof are summarized in the chapter.

The Environmental Management Plan (EMP) has been designed within the framework of various regulatory requirements on environmental and Socio-economic aspects aiming at the following:





- Minimize disturbance to native flora and fauna, if any.
- Prevent and to attenuate air, water, soil and noise pollution, if any.
- Encourage the socio-economic development.

The environmental management plan (EMP) would, therefore, consists of following main components:

- To integrate potential impacts (positive or negative), environmental mitigation measures, implementation schedule, and monitoring plans.
- To describe the potential environmental impacts and proposed management associated with each stage of the project development.
- To control environmental impacts to levels within acceptable standards, and to minimize possible impact on the community and the workforce of foreseeable risks during the construction and subsequent operational phases of the project.

CONCLUSION

Based on the EIA study and surveys conducted for the Project, it can be safely concluded that associated potential adverse environmental impacts can be mitigated to an acceptable level by adequate implementation of the measures as stated in the EIA Report. Adequate provisions shall be made in the Project to cover the environmental mitigation and monitoring requirements, and their associated costs as suggested in environmental budget. The proposed project shall improve Road efficiency and bring economic growth. In terms of air and noise quality, the project shall bring considerable improvement to possible exposure levels to population.



