Attachment-1

Brief note on Project Development Proposal

Name of Project Road- *Rehabilitation and Up-gradation of Sealdoh to Pawnar National Highway (NH-353 I) from [Design Km. 39+200 to Km. 88+620] to two/four lane with paved Shoulders configuration in the State of Maharashtra on Engineering, Procurement & Construction (EPC) Basis Contract (Package-II),*

General

Ministry of Road Transport and Highways Government of India, MoRT&H through the Governor of State of Maharashtra acting through the Chief Engineer National Highways (P.W.) Konkan Bhavan Navi Mumbai it is decided to undertake "Consultancy Services for Project Management including preparation of Detailed Project Report of selected stretches/corridors of National Highways for up gradation to Two/Four lane with paved shoulder configuration-Package III-8 : Stretch starting from Gondkhairi – Sangam – Wanadongri – Hingna – Mihan – Gumgaon – Salaidhaba – Butibori – MIDC – Takalghat – Asola – Seldoh – Sindi Rly – Hamdapur – Sewagram – Wardha NH 361, Length-110 km in Nagpur and Wardha District in the State of Maharashtra on BOT as well as EPCContractMode, on behalf of MORT&H Govt. of India as per guidelines issued by MORT&H New Delhi.

During preparation of DPR, the froject road is further bifurcated in TWO construction Packages/ section which are :-

Section I : km 0+000 to km 39+200 – Wadi to Asola Junction (Including Strengthening by Bituminous Overlay length of 6.8 km from km 17+200 to km 24+000 of Nagpur Mumbai Expressway) Length = 39.200 km

Section II : km 39+200 to km 88+620 – Seldoh to Pavnar, Length = 48.620 km (Excluding Sindhi Railway, ROB Approach)

This report deals Section II : km 39+200 to 88+620 to km of NH-353 I (Strengthening by Bituminous Overlay length of 0.800 km from km 46+000 to km 46+800, Length = 48.620 km.

Site Appraisal

The concept of development improvement & construction of the project highway to 2 Lane Carriageway with paved shoulder is for reduction in transport cost, enhanced safety & Level of Service for road users, with superior operation & maintenance enabling enhanced operation efficiency, minimal adverse impact on the local population, minimal adverse impact on environment, minimal land acquisition by appropriate engineering solutions.

Project road stretch starts at km. 39+200 [Asola T Junction with NH-361] and ends at km. 88+620 Pawnar (Wardha) with total of Length 48.620 km. Project Road passes through Wardha District of Maharashtra State.

The main carriageway is of BT surface with single, two, intermediate & four lane configuration. The pavement condition of main carriageway varies from good to poor. There are 41 No. of junctions & 22 No. of Bus shelters. The ROW observed on the Project road varies from 15.0 m to 27.0 m.

The present carriageway of the project highway is of Single lane about 34.40 km. Intermediate lane about 16.10 km. The type of the existing pavement is flexible and partly WBM road.

Benefits of the Project

The proposed National Highway (NH 353 I) connects two National Highways i.e. NH 53 Hawarah – Raipur - Nagpur to Mumbai / Gujrat & NH 361 Nagpur –Tuljapur National Highway. This NH is a link for connectivity of developments around Nagpur town as it connects Hingna & Butibori MIDC. Further proposed NH situated adjacent to MIHAN (Multi Model Cargo Hub) at Nagpur. There are existing Reliance & Mondha Power Plants nearby the project road. The project road also connects Education Hub at Issasani as Medical & Engineering colleges are within the vicinity of the project road.

The NH carries significant commercial traffic. The present average traffic is 3564 PCU. The proposed alignment is a key route for the commercial vehicles plying between NH 53 & NH 361. Therefore, proposed alignment will be important shorter route for the commercial vehicles connecting industrial zones. The traffic is also expected to be induced by a significant number and it will be attracted towards this road after completion of this project. Therefore, up gradation of existing road to two lane road with paved shoulders National Highway Standard is very much beneficial. The project will have multiple benefits as it will provide all weather high speed National Highway. The road is a key artery connecting with shortest and fastest distance for commuters traveling between southern Maharashtra to Western Maharashtra & Madhya Pradesh.

a) Employment & business opportunities will be available to the locals during construction phase.

b) Ensure more efficient road asset development and management, and higher quality of construction and maintenance, resulting in decreased recurrent costs over the medium and long term.

c) Improvement in Road Safety: The proposed project will help in reduction of accidents. The road geometry is being adjusted to improve deficient curves.

More specifically, the project will:-

Enhance the road condition and user safety.

Increase travel speeds, and reduce travel time, accidents, and vehicle emissions.

Ensure more efficient road asset development and management, and higher quality of construction and maintenance, resulting in decreased recurrent costs over the medium and long term.

Accelerate the social and economic development in the state through improves access to socioeconomic services, increase employment opportunities, and improve transport services.

Better approach to Medical & Educational services and quick transportation of perishable goods like fruits, vegetables and dairy products.

Improvement Proposal

The improvement proposal consists of improvement to existing carriageway by raising, reconstruction/new construction/ widening to two lane with 1.50 m pave shoulder on both sides with granular shoulders. The improvement proposal includes improvement to geometrically deficient curves and grades to meet the geometrical standards, Realignments. The existing minor and major bridges proposed for strengthening / reconstruction / widening / new construction as per standards of MoRT&H. It is also proposed reconstruction / widening / new construction of Hume Pipe Culverts / Slab drains to meet the National Highway standards.

Scope of Work

Table 1: Physical Scope

Sr. No.	Silent Features	Scope for Proposed Improvement	
1)	Total Length	48.620 (Excl. Sindhi Rly Approach Stretch of 0.800 K.m.) & Strengthening by Bituminous overlay only in existing alignment, from Km. 46.000 to Km. 46.800, Length= 0.800 Km. (Two Lane carriageway with 2 X 1.5m paved Shoulder with drain and Footpath in built-up sections)	
2)	4 Lane Road	---Nil---	
3)	2 Lane Road	48.620 Km	
4)	Strengthening by Bituminous overlay	0.800 Km	
5)	Service/Slip Road	1.000 (Km. 84.480 to 85.480)	
6)	Bypass	NIL	
7)	Realignment	5.830 Km	
8)	Drainage	**10.62 Km (Linear) for 1.15 m wide drain PSC drain with Footpath.**	
9)	Reconstruction	40.910 Kms.	
10)	New Construction	5.830 Kms.	
11)	Geometric Improvement	1.880 Kms.	
12)	Crust Design	Main Carriageway PQC 270 mm DLC 150 mm GSB 200 mm **Total 620 mm**	Slip Road BC 40 mm DBM 60 mm WMM 250 mm GSB 200 mm **Total 550 mm**
			Flexible Pavement from Km. 46.000 to km. 46.800 BC 40 mm DBM 85 mm **Total 125 mm**

13)	Structure -		
i)	Major Bridges	New Construction - Reconstruction- Widening - Retained/Repair -	04 Nos. NIL NIL NIL
ii)	Minor Bridges	New Construction– Reconstruction- Retained/Repair - Widening	02 Nos. 11 Nos. 02 Nos 01 Nos.
iii)	Box Culverts	New Construction – Reconstruction- Retained/Repair - Widening -	00 Nos. 05 Nos. 00 Nos. 00 Nos.
iv)	H.P. Culvert	New Construction – Reconstruction- Retained/Repair – Widening –	60 Nos. 66 Nos. 03 Nos. 04 Nos.
v)	Grade Separators	New Construction -	NIL
vi)	VUP	New Construction -	NIL.
vii)	PUP	New Construction -	NIL
viii)	ROB / RUB	New Construction -	1
14)	Toll Plaza		NIL
15)	Truck Lay bay		NIL
16)	Bus Bay/ Bus Shelter		22 No's. - Bus shelter
17)	Utility Service Pipe		65 No's. (Utility pipe in C.C. Pipe – 900mm @ 500.00m c/c for rural & @ 200.00m c/c for urban length of project road across road width)
18)	Over Head Portal		04 No's. (Overhead Sign gantry-2 Lane) 04 No's. (Cantilever Sign gantry)
19)	Metal Beam Crash Barrier		3.273 Km
22)	Road Furniture		48.62 Km.
23)	Traffic signage for road safety		48.62 Km.
24)	Shifting of Electric/Telephone Poles, Water Pipeline		As per requirement

25)	Horticulture	Work related to the greening of National Highway (1 % of Civil cost)
26)	Street Lighting	Street Lighting at Four lane & Underpass section and High mast light at Major Junction Locations
27)	Additional Land Acquisition	29.064 Hect.

Date

Executive Engineer

National Highway Division

Place: -

Nagpur, Maharashtra

Executive Engineer
National Highway Division
NAGPUR

Signature & Seal

K P J PROJECTS PRIVATE LIMITED