

F.No.10-42/2016-IA-III

Government of India
Ministry of Environment, Forest and Climate Change
(IA.III Section)

Indira Paryavaran Bhawan
Jor Bagh Road, New Delhi - 110048

Dated: 17th August, 2016

To

The Executive Engineer,
Maharashtra State Road Development Corporation Ltd,
Bandra Worli Sea Link Project Office,
Opp. Bandra Reclamation Bus Depot,
Near Lilavati Hospital, K.C. Marg,
Bandra (West) - 50 (Maharashtra)

Sub: Development of Access controlled Nagpur-Mumbai Expressway from Kopargaon to Igatpuri in Nasik Division (Maharashtra) by Maharashtra State Road Development Corporation Ltd - Terms of Reference - reg.

Sir,

This has reference to your application No.MSRDC/TOR/EAC dated 27.04.2016 submitting the above mentioned proposal to this Ministry for seeking Terms of Reference (ToR) in terms of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act 1986.

2. The proposal for *development of Access controlled Nagpur-Mumbai Expressway from Kopargaon to Igatpuri in Nasik Division (Maharashtra) promoted by Maharashtra State Road Development Corporation Ltd*, was considered by the Expert Appraisal Committee (EAC) in the Ministry for Infrastructure Development, Coastal Regulation Zone, Building/ Construction and Miscellaneous projects, in its 159th meeting held on 30-31 May, 2016.

3. The details of the project, as per the documents submitted by the project proponent, and also as informed during the above said EAC meeting, are reported to be as under:-

(i) The project involves development of access controlled Nagpur-Mumbai Expressway from Kopargaon (Nashik District border (km 00.00) to Igatpuri (Nashik District border km 126.700) in Nasik Division (Maharashtra) promoted by Maharashtra State Road Development Corporation.

(ii) The proposal is the package-IV of Nagpur-Mumbai Expressway (750 km long) starting from Kopargaon Taluka in District Ahmednagar to Igatpuri Taluka in Nashik District (chainage km 501.930 to km 628.555 i.e.126.625 km).

(iii) Total length of the project road is 126.625 km (approx).

(iv) The nearest protected area from the project boundary is Kalsubai Wildlife Sanctuary at a distance of 8.4 km, and as such due to applicability of general conditions, the proposal is covered under Category A in terms of the EIA Notification, 2006.

(v) The Government of India is planning to start working on 10 world class express highways in order to boost the road infrastructure for faster connectivity between different cities. Amongst these 10 proposed expressways, Nagpur-Mumbai Super Communication Expressway (NMSCE) is one proposed express

highways which intends to divert and redistribute the heavy traffic on existing corridors. The proposed expressway (NMSCE) will pass through 12 districts from Vidarbha through Marathwada to Konkan regions. The major settlements which are set to be part of this plan are Nagpur District, Wardha District, Amravati District, Yavatmal District, Washim District, Buldana District, Jalna District, Aurangabad District, Ahmadnagar District, Nasik District, Thane District and Mumbai. Besides, a number of villages would also be part of the proposed NMSCE.

(vi) The NMSCE will be developed as a high-density corridor establishing high-speed connectivity between Nagpur and Mumbai. As a first step in this direction the Government of Maharashtra has decided to develop and strengthen the linkages and connectivity of major cities of state with Mumbai, the state capital. Exploring the viability of one such connectivity between Nagpur Mumbai, which includes links with and through Butibori – Wardha– Karanja – Aurangabad – Sinnar – Ghoti – Vadape along with link from Karanja – Loni - Nagzari corridor. The entire length of the proposed expressway is about 699.7 km and is divided into five packages as follows:

S.No.	Name of Project work	Approximate Length (in kms)	Estimated Cost (Rs. in Crs.)	Cost per km/Rs
1	Package-I: Jamtha-Butibori MIDC-Wardha-Pulgaon (in Nagpur Division)	89	6430.00	50.23
2	Package-II: Pulgaon-Karanja-Sindhakhedraja (in Amravati Division).	251	12810.00	50.04
3	Package-III: Jalna District Border-Aurangabad-Kopargaon (in Marathwada Division).	153	8250.00	50.00
4	Package-IV: Kopargaon-Sinnar, Sinnar-Igatpuri (in Nashik Division)	126.7	5780.00	50.26
5	Package-V: Igatpuri to Bhiwandi (in Mumbai Division)	80	4000.00	50.00
Total		699.7	37270.00	50.09

(vii) **Investment/Cost:** The estimated cost for the entire stretch of the project is Rs. 37270.00 Crores.

(viii) Some parts of the proposed expressway pass through the forest land and ghat section. Wherever the forest land is involved, the clearance will be required from the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India.

(ix) The project will have Interchange at Ghoti with NH – 3, Sinnar with NH – 50, Mangaon with NH – 50, Kopargaon with NH-222. The project intends to connect NH – 3 at Ghoti, NH – 50 at Sinnar. The project will have connectivity with AH-47 i.e. Great Asian Expressway at Sinnar which further improve connectivity to AH-43 in (Gwalior) Madhya Pradesh and AH-45 in Bangalore (Karnataka). The project will also increase transportation connectivity to NH-4 (Mumbai Pune Expressway) which is at distance of about 100 km.

(x) The project involves 9.4 ha of forest land and thus requires its prior diversion for non-forestry use for implementation of the project.

(xi) The project falls under Protected Areas notified under the Wild Life (Protection) Act, 1972, Notified Eco-sensitive areas, within 10 km from the boundary of proposed project alignment. A small portion of forest land i.e. 0.62% (9.5 Ha) in the entire stretch of 126.7 km is likely to be required for the construction of the expressway. The clearance for the forest land will be obtained

from the Ministry of Environment, Forest and Climate Change Government of India (MoEF&CC). The project involves Kalsubai Wildlife Sanctuary within 10 km of the project road.

(xii) **Water:** 90 LPCD will be required for onsite workers, while water for expressway construction and sprinkling for dust suppression will also be needed. Approximately 720 kld of water would be required for daily use in labor camps. The water shall be obtained from nearby surface/ ground water with prior consent.

(xiii) Waste material generation during the course of an excavation, quarrying, dredging operation and construction is expected for which proper disposal measures shall be ensured. Wastes generated during construction and operation would be of food items, paints, cement, grit, bitumen, tar, cement, concrete, oil & grease etc. Which would be segregated and collected in separate bins and disposed of according to MoEF & CC regulations.

(xiv) The proposal would also affect 80 nos of residential/commercial buildings and thus requires their resettlement.

(xv) During construction and operation hazardous waste maybe generated which will be managed as per Hazardous Waste Management Rules 2008.

(xvi) Sewage sludge will be generated from labor camps, construction sites. Septic tanks will be provided. During operation phase proper sewerage system and wastewater treatment plant will be provided.

(xvii) **Employment potential:** The proposed project will have township, industrial & commercial sectors and hence has a potential to develop employment opportunities.

(xviii) **Benefits of the project:** (a) Development and improvement in transportation infrastructure facility will connect villages with the nearby cities (b) Better approach to Medical & Educational services and quick transportation of perishable goods like fruits, vegetables and dairy products and Transporting processing and marketing of agricultural products; (c) Along with this, the project proponent also proposed to have area development, real estate development, emergency landing of plane, medical facilities, food courts, police stations, public toilets, petrol pumps; and (iv) Indirect and direct employment opportunity to people from all skilled, semiskilled and unskilled streams will act as social benefits.

4. The proposal was considered by the EAC in its 159th meeting held on 30-3 May, 2016 and was recommended for grant of scoping clearance. As per the recommendation of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords ToR to the **'Development of Access controlled Nagpur Mumbai Expressway from Kopergaon to Igatpuri'** in Nasik Division (Maharashtra) by Maharashtra State Road Development Corporation Ltd by Maharashtra State Road Development Corporation Ltd, for preparation of the Environment Impact Assessment (EIA) Report and Environment Management Plan (EMP) with the specific and general conditions as under:-

- (i) The facilities to be provided along the alignment shall be restricted to highway tourism, auto and auto ancillary hub, logistic park and convenience shopping in keeping with the given charter of MSRDC.
- (ii) A brief description of the project, project name, nature, size, its importance to the region/state and the country shall be submitted.
- (iii) In case the project involves diversion of forests land, guidelines under OM dated 20.03.2013 to be followed and necessary action taken accordingly.

- (iv) Details of any litigation(s) pending against the project and/or any directions or orders passed by any court of law/any statutory authority against the project to be detailed out.
- (v) Submit detailed alignment plan, with details such as nature of terrain (plain, rolling, hilly), land use pattern, habitation, cropping pattern, forest area, environmentally sensitive areas, mangroves, notified industrial areas, sand dunes, sea, rivers, lakes, details of villages, teshils, districts and States, latitude and longitude for important locations falling on the alignment by employing remote sensing techniques followed by "ground truthing" and also through secondary data sources.
- (vi) Describe various alternatives considered, procedures and criteria adopted for selection of the final alternative with reasons.
- (vii) Submit Land use map of the study area to a scale of 1: 25,000 based on recent satellite imagery delineating the crop lands (both single and double crop), agricultural plantations, fallow lands, waste lands, water bodies, built-up areas, forest area and other surface features such as railway tracks, ports, airports, roads, and major industries etc. and submit a detailed ground survey map on 1:2000 scale showing the existing features falling within the right of way namely trees, structures including archaeological & religious, monuments etc. if any.
- (viii) If the proposed route is passing through any hilly area, examine and submit the measures for ensuring stability of slopes and proposed measures to control soil erosion from embankment.
- (ix) If the proposed route involves tunneling, the details of the tunnel and locations of tunneling with geological structural fraction should be provided. In case the road passes through a flood plain of a river, the details of micro-drainage, flood passages and information on flood periodicity at least of the last 50 years in the area should be examined.
- (x) If the project is passing through/ located within the notified ecologically sensitive zone (ESZ) around a notified National Park/Wildlife Sanctuary or in the absence of notified ESZ, within 10 km from the boundary of notified National Park/Wildlife Sanctuary, the project proponent may simultaneously apply for the clearance for the standing committee of NBWL. The EC for such project would be subject to obtaining this clearance from the standing committee of NBWL.
- (xi) Study regarding the Animal bypasses/underpasses etc. across the habitation areas shall be carried out. Adequate cattle passes for the movement of agriculture material shall be provided at the stretches passing through habitation areas. Underpasses shall be provided for the movement of Wild animals.
- (xii) The information should be provided about the details of the trees to be cut including their species and whether it also involves any protected or endangered species. Measures taken to reduce the number of the trees to be removed should be explained in detail. Submit the details of compensatory plantation. Explore the possibilities of relocating the existing trees.
- (xiii) Necessary green belt shall be provided on both sides of the highway with proper central verge and cost provision should be made for regular maintenance.

- (xiv) If the proposed route is passing through a city or town, with houses and human habitation on either side of the road, the necessity for provision of bypasses/diversions/under passes shall be examined and submitted. The proposal should also indicate the location of wayside amenities, which should include petrol stations/service centres, rest areas including public conveyance, etc.
- (xv) Submit details about measures taken for the pedestrian safety and construction of underpasses and foot-over bridges along with flyovers and interchanges.
- (xvi) Assess whether there is a possibility that the proposed project will adversely affect road traffic in the surrounding areas (e.g. by causing increases in traffic congestion and traffic accidents).
- (xvii) Examine and submit the details of use of fly ash in the road construction if the project road is located within the 100 kms from the Thermal Power Plant.
- (xviii) Explore the possibilities of utilizing the debris/ waste materials available in and around the project area.
- (xix) Submit the details on compliance with respect to Research Traffic Notification of MoRTH.
- (xx) Examine and submit the details of sand quarry and borrow area as per OM No.2-30/2012-IA-III dated 18.12.2012 on 'Rationalization of procedure for Environmental Clearance for Highway Projects involving borrow areas for soil and earth' as modified vide OM of even No. dated March 19, 2013.
- (xxi) Climate and meteorology (max and min temperature, relative humidity, rainfall, frequency of tropical cyclones and snow fall); the nearest IMD meteorological station from which climatological data have been obtained to be indicated.
- (xxii) The air quality monitoring should be carried out as per the notification issued on 16th November, 2009. Input data used for Noise and Air quality modelling shall be clearly delineated.
- (xxiii) The base line data used for the EIA shall be not more than one year old.
- (xxiv) Identify project activities during construction and operation phases, which will affect the noise levels and the potential for increased noise resulting from this project. Discuss the effect of noise levels on nearby habitation during the construction and operational phases of the proposed highway. Identify noise reduction measures and traffic management strategies to be deployed for reducing the negative impact if any. Prediction of noise level should be done by using mathematical modelling at different representative locations.
- (xxv) Examine the impact during construction activities due to generation of fugitive dust from crusher units, air emissions from hot mix plants and vehicles used for transportation of materials and prediction of impact on ambient air quality using appropriate mathematical model, description of model, input requirement and reference of derivation, distribution of major pollutants and presentation in tabular form for easy interpretation shall be carried out.

- (xxvi) Also examine and submit the details about the protection to existing habitations from dust, noise, odour etc. during construction stage.
- (xxvii) If the proposed route involves cutting of earth, the details of area to be cut, depth of cut, locations, soil type, volume and quantity of earth and other materials to be removed with location of disposal/ dump sites along with necessary permission.
- (xxviii) If the proposed route is passing through low lying areas, details of filling materials and initial and final levels after filling above MSL, should be examined and submit.
- (xxix) Examine and submit the water bodies including the seasonal ones within the corridor of impacts along with their status, volumetric capacity, quality and likely impacts on them due to the project along with the mitigation measures.
- (xxx) Examine and submit details of water quantity required and source of water including water requirement during the construction stage with supporting data and also classification of ground water based on the CGWA classification.
- (xxxi) Examine and submit the details of measures taken during constructions of bridges across rivers/canals/major or minor drains keeping in view the flooding of the rivers and the life span of the existing bridges. Provision of speed breakers, safety signals, service lanes and foot paths should be examined at appropriate locations throughout the proposed road to avoid accidents.
- (xxxii) If there will be any change in the drainage pattern after the proposed activity, details of changes shall be examined and submitted.
- (xxxiii) Rain water harvesting pit should be at least 3 - 5 m. above the highest ground water table. Provision shall be made for oil and grease removal from surface runoff.
- (xxxiv) If there is a possibility that the construction/widening of road may cause an impact such as destruction of forest, poaching or reduction in wetland areas, examine the impact and submit details.
- (xxxv) Submit the details of road safety, signage, service roads, vehicular under passes, accident prone zones and the mitigation measures.
- (xxxvi) IRC guidelines shall be followed for widening & upgradation of roads.
- (xxxvii) Submit details of social impact assessment due to the proposed construction of the road.
- (xxxviii) Examine road design standards, safety equipment specifications and Management System training to ensure that design details take account of safety concerns and submit the traffic management plan.
- (xxxix) Accident data and geographic distribution should be reviewed and analyzed to predict and identify trends – in case of expansion of the existing highway and provide Post accident emergency assistance and medical care to accident victims.
- (xl) If the proposed project involves any land reclamation, details to be provided of the activity for which land is to be reclaimed and the area of land to be reclaimed.

- (xli) Details of the properties, houses, business activities etc likely to be effected by land acquisition and an estimation of their financial losses.
- (xlii) Detailed R&R plan with data on the existing socio-economic status of the population in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternative livelihood concerns/employment and rehabilitation of the displaced people, civil and housing amenities being offered, etc and the schedule of the implementation of the specific project
- (xliii) Submit environment management and monitoring plan for construction and operation phases of the project. Submit a copy of your corporate policy on environment management and sustainable development.
- (xliv) Estimated cost of the project including that of environment management plan (both capital and recurring) and source of funding. Also, the mode of execution of the project, viz, EPC, BOT, etc.
- (xlv) Submit a copy of your CSR policy and plan for meeting the expenditure to address the issues raised during Public Hearing.

General Guidelines

- (i) The EIA document shall be printed on both sides, as far as possible.
- (ii) All documents should be properly indexed, page numbered.
- (iii) Period/date of data collection should be clearly indicated.
- (iv) Authenticated English translation of all material provided in Regional languages.
- (v) The letter/application for EC should quote the MoEF&CC File No. and also attach a copy of the letter prescribing the TOR.
- (vi) The copy of the letter received from the Ministry on the TOR prescribed for the project should be attached as an annexure to the final EIA-EMP Report.
- (vii) The final EIA-EMP report submitted to the Ministry must incorporate the issues in TOR and that raised in Public Hearing. The index of the final EIA EMP report, must indicate the specific chapter and page no. of the EIA EMP Report where the specific TOR prescribed by Ministry and the issues raised in the P.H. have been incorporated. Questionnaire related to the project (posted on MoEF&CC website) with all sections duly filled in shall also be submitted at the time of applying for EC.
- (viii) Grant of TOR does not mean grant of EC.
- (ix) Grant of TOR/EC to the present project does not mean grant of approval in other regulations such as the Forest (Conservation) Act 1980 or the Wildlife (Protection) Act, 1972.
- (x) Grant of EC is also subject to Circulars issued under the EIA Notification 2006, which are available on the MoEF&CC website: www.envfor.nic.in.
- (xi) The status of accreditation of the EIA consultant with NABET/QCI shall be specifically mentioned. The consultant shall certify that his accreditation is for the sector for which this EIA is prepared.

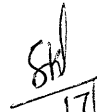
- (xii) On the front page of EIA/EMP reports, the name of the consultant/consultancy firm along with their complete details including their accreditation, if any shall be indicated. The consultant while submitting the EIA/EMP report shall give an undertaking to the effect that the prescribed TORs (TOR proposed by the project proponent and additional TOR given by the MoEF) have been complied with and the data submitted is factually correct (Refer MoEF office memorandum dated 4th August, 2009).
- (xiii) While submitting the EIA/EMP reports, the name of the experts associated with/involved in the preparation of these reports and the laboratories through which the samples have been got analysed should be stated in the report. It shall clearly be indicated whether these laboratories are approved under the Environment (Protection) Act, 1986 and the rules made there under (Please refer MoEF Office Memorandum dated 4th August, 2009). The project leader of the EIA study shall also be mentioned.
- (xiv) All the TOR points as presented before the Expert Appraisal Committee (EAC) shall be covered.

5. A detailed draft EIA/EMP report should be prepared in terms of the above additional ToRs and should be submitted to the State Pollution Control Board for conduct of Public Hearing. Public Hearing to be conducted for the project in accordance with the provisions of Environmental Impact Assessment Notification, 2006 and the issues raised by the public should be addressed in the Environmental Management Plan. The Public Hearing should be conducted based on the ToR letter issued by the Ministry and not on the basis of Minutes of the Meeting available on the web-site.

6. The project proponent submit the detailed final EIA/EMP prepared as per ToRs including issues raised during Public Hearing to the Ministry for considering the proposal for environmental clearance within 3 years as per the MoEF&CC O.M. No.J-11013/41/2006-IA-II(I) (P) dated 08.10.2014.

7. The consultants involved in preparation of EIA/EMP report after accreditation with Quality Council of India/National Accreditation Board of Education and Training (QCI/NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other Organization(s)/Laboratories including their status of approvals etc. vide notification of the MoEF dated 19.07.2013.

8. The prescribed ToRs would be valid for a period of three years for submission of the EIA/EMP Reports.


17/8/2016
(S.K. Srivastava)
Scientist E

Copy to:

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