



Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The General Manager
National Highways Authority of India
G-5 & 6, Sector-10, Dwarka, New Delhi-110075, G-5 & 6, Sector-10,
Dwarka, New Delhi-110075, South West, Delhi-110075

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/MH/MIS/110764/2019 dated 15 Oct 2021. The particulars of the environmental clearance granted to the project are as below.

- | | |
|--|--|
| 1. EC Identification No. | EC22A034MH143498 |
| 2. File No. | 10-29/2019-IA.III |
| 3. Project Type | New |
| 4. Category | A |
| 5. Project/Activity including Schedule No. | 7(f) Highways |
| 6. Name of Project | Development of 8-lane SPUR Starting from Km 26.582 of Vadodara - Mumbai Expressway Main Alignment (Design Chainage km. 0+000 of SPUR) and terminating at proposed junction with the Multi-Modal Corridor of MMRDA (Design Chainage of SPUR km. 79.783) in the state of Maharashtra (Total Length is 79.783 km) |
| 7. Name of Company/Organization | National Highways Authority of India |
| 8. Location of Project | Maharashtra |
| 9. TOR Date | 16 Mar 2020 |

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 12/04/2022

(e-signed)
Amardeep Raju
Scientist E
IA - (INFRA-1 sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

This is a computer generated cover page.

PARIVESH

*(Pro-Active and Responsive Facilitation by Interactive,
and Virtuous Environment Single-Window Hub)*



2. The proposed Vadodara Mumbai Expressway (VME) – SPUR is a Greenfield alignment, which starts at km 26.582 of main alignment of the Vadodara Mumbai Expressway at Koshimb village of Palghar district at Ch. 0+000 and terminate at the proposed junction with the Multi-Modal Corridor of Mumbai Metropolitan Region Development Authority (MMRDA) in Morbe village of Raigad district at Ch. 79+783. Total length of the VME-SPUR alignment is 79.783 km; out of which 18.900 km lies in Palghar district, 55.260 km lies in Thane district and remaining 5.623 km lies in Raigad district of Maharashtra.
3. The proposed alignment is passing through 68 villages and 6 Talukas (Vasai, Wada, Bhiwandi, Kalyan, Ambarnath and Panvel) in the State of Maharashtra.
4. The proposal was considered by the Expert Appraisal Committee (EAC) in its 220th meeting held on 26 July, 2019 and 232nd meeting held on 27th February, 2020 for the ToR. The ToR was issued vide F. No. 10-29/2019-IA.III dated 16th March 2020.
5. The geo-coordinates of project site are starting point 19°29'19.44"N, 72°52'58.86"E, 19° 3'59.65"N, 73°10'49.57"E. Length of the proposed expressway is 79.783 km. Virar Railway Station is located at a distance of approx.11.5 km from the start point of the expressway and Pavel Junction Railway Station is located at a distance of approx.12.6 km from the end point of the expressway. Chhatrapati Shivaji International Airport / Mumbai Airport is approx. 30 km from the start point of the proposed expressway.
6. About 7 major bridges, 6 major bridge cum viaduct, 23 minor bridges, 7 interchange, 3 flyover, 2RoB,4.160 km tunnel, 5 vehicular underpasses, 8 vehicular overpass, 29 light vehicular / pedestrian underpasses, 2 animal overpass, 53 dedicated animal crossing (box culvert), 33 small vehicular / animal underpasses,185 culverts, toll plaza at 7 locations, truck parking at 2 locations, wayside amenity at 1 location, smaller parking with toilet facilities at 2 locations and connecting roads at the identified locations for a length of 2.389 km on left side and 5.170 km on right side have been proposed along the expressway.
7. The proposed project falls under 7(f), Category-A, Highway as per EIA notification 2006. Total Project Cost including Centage & Pre-construction Cost is Rs, 10,510 Cr.
8. The proposed Right of Way (RoW) in general is 100 m in non-forest area and 70 m forest area except at interchanges, highway amenities, truck parking, where additional land shall be required as per actual design.
9. The proposed alignment is passes through plain, rolling and hilly terrain with elevation varies from about 3 m to 639 m above MSL.
10. Public Hearing was conducted in three District Raigad on 15th March 2021, Thane on 16th March, 2021 and Palghar on 24th March, 2021.
11. The proposed project involves diversion of approx. 122.6133 ha Forest Land. Proposal has been uploaded on 6th November 2020 (FC Proposal No. FP/MH/ROAD/53857/2020) and it is under examination with the State Government.
12. The proposed SPUR alignment is located at a distance of 0.619 km from the boundary of the Tungareshwar Wildlife Sanctuary and at a distance of 0.275 km from the notified ESZ boundary.

13. The proposed alignment passes through Matheran Eco-Sensitive Zone from km 71+532 to 75+426(both buffer and eco-sensitive zone) and from km 77+115 to km 77+691 (only buffer zone).

14. Water requirement: The total water demand of the project is 23,75,760 KL. In compliance to the Sub-Clause 111.8.3 of MoRTH Specifications, the contractor will identify the nearest source of water body at plant and camp site and shall source the water preferably from surface water bodies, rivers, streams in the project area. Only at locations where surface water sources are not available, the contractor shall contemplate extraction of ground water, after intimation and consent from the CGWB. As per the CGWB classification, all the Talukas, through which the proposed VME-SPUR is passing, fall under “safe” category. During the operations phase the water would be required primarily for domestic use at the toll plaza and landscaping.

15. Daily water requirement for drinking & domestic purposes in the 4 construction camps are 42,000 liters (10,500 liters in each construction camp) and generation of wastewater is 33,600 liters (8,400 liters in each construction camp). Therefore, Packaged Wastewater Treatment Plant has been recommended for each construction camp.

16. Refuse Containers will be provided at site for the management of domestic waste generated by the construction laborers and these containers shall be emptied at least once daily and will be disposed of as per SWM Rules, 2016 in consultation with the local authority.

17. Tree cutting: Loss of flora will occur due to vegetation clearing within the proposed ROW. There are approximately 55,355 trees within the proposed RoW; out of which 13,839 trees in forest land and 41,516 trees in non-forest land. About 69,680 no. of trees and 40,098 no. of hedges have been proposed to be planted under greenbelt development plan. Preference to native species including fruit species shall be given. These species are valuable from the socio-economic point of view. Plantation will be maintained upto 5 years and protected from cattle, wildlife and illegal felling. Dead saplings will be replaced to maintain the survival percentage of 90%. A capital cost provision of about Rs. 14.46 Crore has been kept for greenbelt development.

18. As per the CGWA classification, all the Talukas (Vasai, Wada, Bhiwandi, Kalyan, Ambarnath and Panvel) through which the proposed expressway is passing fall under safe category. However, as per MoRTH requirement rainwater harvesting structure has been proposed. 75 numbers (1 structure in every km excluding tunnel area) of Rain water harvesting with provision of oil filters and de-silting chambers shall be provided along the expressway as per requirement of IRC SP: 42-2014 and IRC SP: 50-2013.

19. The proposed VME-SPUR alignment crosses tidal influenced parts of a small nala (connected to Tansa River), the Bhatsa River and Kalu River. CRZ map and report has been prepared by the National Centre for Earth Science Studies (NCESS), Thiruvananthapuram. Length of the proposed expressway in CRZ area is 609 m and total area in CRZ is 6.972 ha.

Location	CRZ IA		CRZ IB	CRZ II	CRZ III	CRZ IVA	CRZ IVB
	Mangrove	Mangrove Buffer					
KashidKopar	-	-	141.19	-	1533.8	-	280.47

Sange	-	-	2161.09	-	9093.73	-	4810.18
Konderi	-	-	938.22	-	9355.1	-	1488.8
Sangode	-	-	3889.35	-	16573.49	-	10472.23
Balyani	-	-	0	8978.1	0	-	0
Total (in sq. m.)			7129.85	8978.1	36556.12		17051.68
Total (in ha)			0.713	0.898	3.656		1.705
Grand Total = 69715.75 Sq. m / 6.972 ha							

20. The CRZ proposal was considered by the Environment and Climate Change Department, Government of Maharashtra on 21st September 2021 and recommended the proposal for grant of CRZ clearance to MoEF&CC, New Delhi vide letter dated 29.09.2021 with certain conditions.

21. The project falls under permissible activities as per the CRZ Notification, 2011.

22. R&R Issues: The land required for construction of proposed expressway is tentatively 1031.91 ha, which includes 122.6133 ha forest land and 909.2967 ha non-forest land. Land will be acquired by the CALA (Competent Authority for Land Acquisition) as per National Highways Act, 1956 and relevant provisions of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013 & amendment of State Government.

23. Total manpower requirement is 2200 out of which 1400 manpower will be required during construction phase and 800 during operation phase.

24. Benefits of the project: The spur connects the main expressway to JNPT, Maha Samrudhi Marg (Mumbai-Nagpur Expressway) and Mumbai Pune Expressway. Therefore, the traffic bound for JNPT, Nagpur and Pune will play on SPUR and will not enter the Mumbai city. This will reduce both traffic congestion and pollution in the city. The Vadodara Mumbai Expressway with Spur is linking already existing Ahmedabad- Vadodara Expressway, Delhi-Vadodara Expressway, Mumbai –Nagpur Expressway and Mumbai Pune expressway and thus will provide expressway connectivity between Delhi-Mumbai-Nagpur-Pune. The expressway along with SPUR will provide connectivity to Dahej Port and Jawahar Lal Nehru Port (JNPT) thus facilitating imports and exports from these two ports. The project will be beneficial to Local Trade and Economy and will provide employment opportunity.

25. The PP has submitted the recommendations of the Matheran Monitoring Committee. The Matheran Monitoring Committee recommended the proposal for approval during its 4th meeting held on 23.02.2022. The Office of the District Collector, Raigad vide letter dated 22.03.2022 forwarded the copy of the minutes of the meeting of the Monitoring Committee.

26. Details of Court cases: No court case is pending against the proposed project.

27. The EAC based on the information submitted and clarifications provided by the project proponent and detailed discussions held on all the issues during 279th meeting on 15th November 2021, recommended the project for grant of environmental clearance and stipulated specific conditions along with other Standard EC Conditions.

28. The Ministry of Environment, Forest and Climate Change has considered the proposal based on the recommendations of the Expert Appraisal Committee (Infrastructure, CRZ and other Miscellaneous projects) and hereby decided to grant Environmental Clearance and CRZ clearance for the “Development of 8-lane SPUR Starting from Km 26.582 of Vadodara - Mumbai Expressway Main Alignment (Design Chainage 0+000) and terminating at proposed Junction with the Multi-Modal Corridor of MMRDA (Design Chainage 79+783) in the state of Maharashtra (Length 79.783) by M/s National Highways Authority of India” under the EIA Notification, 2006 as amended, subject to strict compliance of the following specific conditions, in addition to all standard conditions applicable for such projects.

SPECIFIC CONDITIONS

Statutory Provisions

- i. All recommendations/decision taken by the Matheran Monitoring Committee (MMC) in its meeting dated 23.02.2022 shall be strictly complied with.
- ii. The proponent shall obtain Forest Clearance for diversion of forest land as per Forest (Conservation) Act, 1980. Proponent shall submit an undertaking that work on non-forestry land may only be executed upto such point (to be selected by the user agency) on either side of forest land if it is explicitly certified by the user agency that in case approval under the Forest (Conservation) Act, 1980, for diversion of forest land is declined, it is technically feasible to execute the project along an alternate alignment without involving diversion of forest land. Details of all such stretches along with alternate alignment identified to bypass the forest land should be explicitly provided in the proposal seeking approval under the Forest (Conservation) Act, 1980 and the EIA Notification, 2006.
- iii. Commencement of work in non-forest land will not confer any right to NHAI for granting approval under the Forest (Conservation) Act, 1980.
- iv. SACON will monitor and document the wildlife movement during the construction and for five years after the construction and document efficacy of over/underpasses. Adequate financial provisions be made for the same in consultation with SACON.
- v. All conditions stipulated by the Environment and Climate Change Department, Government of Maharashtra vide letter No CRZ 2021/CR126/TC4 dated 29.09.2021 shall be strictly complied with.

Green Belt

- vi. Green belt development (tree plantation) in lieu of the trees being felled in non forest land should be carried out by the State forest department as deposit work and not by the private contractor. No Ground water shall be extracted and used. Approval/permission of concerned authority shall be obtained before drawing surface water from canal or any other sources.
- vii. The proponent shall obtain permission from the competent authorities for tree felling along the proposed alignment.
- viii. Afforestation using compensatory plantation in the ratio of 1:10 shall be carried out.



Native tree species shall be provided as per the IRC Guidelines on Landscaping and Tree Plantation (IRC:SP:21-2009). Effort should be made to plant native trees and *Ficus* species on both sides of the alignment. Special attention shall be given for protecting giant trees, and locally important trees (having cultural importance) and should be identified chainage wise.

- ix. Project alignment should be managed in such a way to save the Heritage/old trees supposed to be affected by the proposed alignment.

Water Environment

- x. Rain water harvesting pit shall be at least 3 - 5 m above the highest ground water table.
- xi. In borrow pits, the depth of the pit shall be regulated such that the sides of the excavation will have a slope not steeper than 1:2, from the edge of the final section of bank. Soil erosion checking measures shall be carried out. Details for Borrow area operation and rehabilitation given in EIA report shall be followed.
- xii. Quarry areas shall be barricaded during mining operations. The abandoned quarry shall be developed as water reservoirs with proper fencing around quarry area. Details for Quarry area operation and rehabilitation given the EIA report shall be followed.

Pollution Control/Safety

- xiii. In all the construction sites within 150 m of the nearest habitation, noisy construction work such as crushing, concrete mixing will be stopped during the night time between 10.00 pm to 6.00 am. No noisy construction activities will be permitted around educational institutions/health centres (silence zones) up to a distance of 100 m from the sensitive receptors. All plants and equipment used in construction shall strictly conform to the CPCB/SPCB noise standards.
- xiv. Traffic Control Devices/Road Safety Devices/ Roadside Furniture including various types of cautionary, informatory, regulatory as mandatory signboards, road markers, studs, etc. shall be provided at appropriate locations all along the project stretch in accordance with the specifications laid down in Manual of Specifications and Standards for Expressways (IRC: SP:99-2013) and IRC:8, IRC:25, IRC:26, IRC:35, IRC:67, IRC:79, IRC:103 and Section 800 of MORTH Specifications.
- xv. Prepare the traffic prediction report for complete project (including all packages of this project) considering the cumulative impact of the traffic on the environment and submit to the Ministry and concerned Regional Office within 3 months.
- xvi. All the major, minor bridges and culverts should not affect the drainage systems. Flood plains of the rivers/ drainage systems are not to be disturbed.
- xvii. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them to address the concerns raised during the public consultation. The project proponent shall initiate the activities proposed by them, based on the commitment made in the public hearing, and incorporate in the Environmental Management Plan and submit to the Ministry. All other activities including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures

including the NPV, Compensatory afforestation etc., either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also become part of EMP and shall be implemented.

- xviii. Proponent shall keep the finish road level sufficiently elevated from ground level with provision of railing on both sides to restrict animal crossing in order to avoid the possibility of wildlife injury/death. Animal underpasses, watch tower, water holes and other mitigation measures proposed shall be constructed in supervision of forest department.
- xix. While constructing the over bridges as proposed over major water bodies efforts should be made to avoid construction of pillars in beds of water bodies.

GENERAL CONDITIONS AND IRC GUIDELINES

- i. Cut and fill works shall be carried out strictly in accordance with the design drawings proposed at the time of appraisal of the project.
- ii. Sidewalk shall be provided along the bridges.
- iii. The drain shall be at least 1m away from the toe of the embankment of the road adopting IRC guidelines. Longitudinal drains shall be provided all along the project road to ensure proper drainage of the area. In addition, adequate number of under passes and culverts to act as cross drainage structures shall also be provided.
- iv. Blasting shall be carried out during fixed hours (preferably during mid-day) or as permitted by the concerned authority. The timing shall be made known to all the people within 1000m (200m for pre-splitting) from the blasting site in all directions.
- v. Rain water harvesting including oil and grease trap shall be provided as prescribed by CGWB guidelines. Water harvesting structures shall be located at every 500m along the road. Vertical drain type rainwater harvesting structures shall be set up to minimize surface runoff losses of rainwater.
- vi. The embankments/slopes and the slopes left after cutting shall be provided with vegetative growth to avoid soil erosion.
- vii. Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dump sites for such materials must be secured so that they shall not leach into the ground water. The non-usable bitumen spoils shall be disposed off in a deep trench providing clay lining at the bottom and filled with soil at the top (for at least 0.5m)
- viii. Construction camps shall be proposed 500 m away from the nearest settlements to avoid conflicts and stress over the infrastructure facilities with the local community. Location for stockyards for construction materials shall be identified at least 1000m from water sources. Garbage tanks and sanitation facilities will be provided at camps.

(i) Compliance Reporting

- (a) The project proponent shall submit online six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change and also upload the same, including results of monitored data, on their company website.



- (b) For compliance of conditions during operation phase, PP shall either itself undertake the responsibility of compliance or ensure setting up institutional mechanism for compliance of conditions under intimation on the website of the Ministry of Environment, Forest and Climate Change.
- (c) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- (d) The Ministry reserves the right to stipulate additional conditions, if found necessary.
- (e) Beside fulfilling obligations under Corporate Social Responsibilities as per Company's Act, 2013, the proponent has to adhere to the followings Environment Responsibilities:
 - i. The Company shall have a well laid down Environment Policy approved by the Board of Directors.
 - ii. The Environment Policy shall prescribe for standard operating process/ procedures to bring into focus any infringements/ deviation/violation of the environmental or forest norms/ conditions.
 - iii. The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
 - iv. To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/ violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

NOTE:

- (i) The above conditions shall be enforced in a time bound manner
- (ii) The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.
- (iii) The PP is under obligation to implement commitments made in the to the issues raised during public hearing Conceptual Plan/ Environment Management Plan, which forms the part of this EC.

31. Further attention of project proponent is drawn towards the following Acts/ Regulations/ Statutes/ Guidelines issued from time to time:

- (a) All the Indian Road Congress (IRC) guidelines wherever applicable may be followed.
- (b) Provisions related to tree cutting as contained in the Forest (Conservation) Act, 1980 and related rules of the respective state.
- (c) Dust Mitigation Measures stipulated for Construction and Demolition Activities as provided in the amendment Notification GSR 94(E) dated 25.01.2018 of MoEF&CC.
- (d) Provisions for use of Fly ash as building material in the construction as per stipulated under Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016.
- (e) Provisions for management of construction and demolition activities related thereto as contained in Construction and Demolition Waste Management Rules, 2016.

32. **General Instructions:**

Part A



- (a) Approval/permission of concerned authority shall be obtained before drawing surface water from canal or any other sources.
- (b) The proponent shall obtain permission from the competent authorities for tree felling along the proposed alignment.
- (c) As per MoEF&CC's circular no. J-11013/41/2006-IA.II (I) dated 22.09.2008, provision shall be made for supply of kerosene or cooking gas and pressure cooker to the labourers, mobile toilets, mobile STP, safe drinking water, medical health care, Crèche and temporary structures for living during construction phase.
- (d) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to MoEF&CC and its concerned Regional Office.

Part B

- (a) The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.
 - (b) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
 - (c) The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions.
 - (d) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Six monthly progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.
 - (e) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 - (f) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
 - (g) Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
33. This issues with the approval of the Competent Authority.



(Amardeep Raju)
Scientist-E

Copy to:

1. The Principal Secretary, Department of Forests & Environment and Chairman, MCZMA, Govt. of Maharashtra, Annexe Building, Mantralaya, Mumbai- 32.
2. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 32
3. The Member Secretary, Maharashtra Pollution Control Board, Kalpataru Points, 3rd & 4th Floor, Opp. Cine Planet, Sion Circle, Sion, Mumbai-400 022, Maharashtra.
4. The APCCF (C), MoEF& CC, Regional Office (WCZ), Ground Floor, East Wing, New Secretariat Building, Civil Lines, Nagpur-440 001, Maharashtra.
5. Monitoring Cell, MoEF&CC, Indira Paryavaran Bhavan, New Delhi.
6. Guard File/Record File
7. Notice Board.



(Amardeep Raju)
Scientist-E