

Nic

NH-12037/8/2024/Tunnel/Misc/North-I
Government of India
Ministry of Road Transport & Highways
(Tunnel Zone)

No.1, Parliament Street, Transport Bhawan, New Delhi-110001

Dated: 24th October, 2024

To:

1. The Chief Secretaries of all the State Governments/UTs
2. The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes)
3. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi- 110 010.
4. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi-110 075.
5. The Managing Director, National Highway infrastructure Development Corporation Ltd., 2nd Floor, Tower A, World Trade Centre, Nauroji Nagar, New Delhi - 110029
6. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/ UTs/Road Construction Department/ Highways Departments (dealing with National Highways and other Centrally Sponsored Schemes.
7. The Secretary General, Indian Roads Congress
8. The Director, IAHE, Noida, UP

Subject: Checklist for submission of proposals for long tunnel projects - reg.

Sir,

Please refer to this Ministry's circular No. NH-12037/8/2024/Tunnel/Misc/North-I dated 06.09.2024 regarding submission of proposals for long tunnel projects (length > 1.5 km) on NHs to Ministry for technical review and obtaining expert advice from advisory panel.

2. In this regard, a checklist for submission of proposals to Ministry is enclosed as Annexure for necessary compliance.
3. The proposal must include all requisite reports and data as listed in the checklist. The checklist will be signed by the Chief Engineer in PWD/ Chief Engineer in BRO/ Chief General Manager in NHAI/Director (Technical) in NHIDCL as applicable.
4. This issues with the approval of Competent Authority.



Yours Sincerely,

Encl: As above

Bharat
24/10/24
(Bharat Kumar Sharma)

Assistant Executive Engineer

For Director General (Road Development) & Special Secretary

E-mail: tunnelzonemorth@gmail.com

Copy To:

1. All CEs in the Ministry of Road Transport & Highways
2. All ROs of the Ministry of Road Transport & Highways
- ✓ 3. NIC-for uploading on Ministry's website under "What's new" & e-Mice.

Copy for information to:

1. PS to Hon'ble Minister (RT&H)
2. PS to Hon'ble MOS (RT&H)
3. PSO to Secretary (RT&H)
4. PSO to DG (RD) & SS
5. Sr. PPS/PPS to ADGs/AS&FA/AS(NHIDCL Cell)
6. Sr. PPS to JS Highways

ANNEXURE-I**CHECKLIST FOR SUBMISSION OF PROPOSALS OF TUNNEL PROJECTS FOR TECHNICAL REVIEW IN MORTH**

S.No.	Particulars (Details to be submitted with the proposal)	Yes/No	Remarks
1.	Desk Study		
	a. Study of earlier Investigations i.e. Topographical, Geological, Geophysical and Hydrological Investigations and Survey done in the Project area		
	b. Study of Geological maps (on a scale of 1: 5,000 / 1: 10,000) obtained from GSI/Satellite data		
2.	Alignment Report		
	a. Selection of Alignment based on Desk Study and Site Information		
	b. Alignment Options on High Resolution Satellite Imagery (HRSI) (with minimum 50cm Ground Sample Distance as per IRC SP 91:2019)		
	c. Detailed Topographic Survey Report and DEM/DTM generated represented in A3 size high resolution photographs (Scale 1:10000 with 5 m contour interval. However, at portal location the scale shall be 1:5000 with 2m contour interval, as per IRC SP 91:2019).		
	d. Alignment Approval Details		
3.	Traffic Studies		
	a. Traffic Survey Report as per IRC:108 and IRC:102		
4.	Geotechnical Investigation Factual Report (GFR)		
	a. Detailed Geological Mapping		
	b. Geomorphology		
	c. Geophysical Investigations		

Bmt

	d. Development of Geological Reference Model (GRM)		
	e. Borehole Drilling and Geological core logging (for tunnels having length > 1500m, minimum 2 borehole at portal location, 1 borehole at $\frac{1}{4}$ length, 1 borehole at $\frac{1}{2}$ length, and 1 borehole at $\frac{3}{4}$ length as per IRC SP: 91:2019)		
	f. Details of In-situ Testing of Soil/Rock samples		
	g. Details of Laboratory Testing of Soil/ Rock samples		
	h. Details of Hydrogeology in the project area		
5.	Geological Interpretative Report (GIR)		
	a. Rock Type and Rock Mass Characterization (using RMR, Q, GSI etc.)		
	b. Geotechnical Plan and Profile		
	c. Insitu stress state estimation		
	d. Recommendations for foreseen ground improvement techniques, if any		
	e. Expected Extraordinary Geological Occurrences like major shear zones etc. and mitigation techniques, if any		
6.	Tunnel Design Report		
	a. Design and Structural Analysis for Primary and Secondary Support System		
	b. Design and Structural Analysis for Portal Slopes and Support Measures		
	c. Seismic Analysis for Primary and Secondary Support System		
	d. Provision of Escape Tunnel		
7.	Construction Program and Methodology		
	a. Method of Excavation and Machinery		
	b. Cycle Time Calculations		
	c. Muck Disposal Strategy		
8.	E&M Works		
	a. Ventilation Design Report		
	b. Firefighting (Tunnel fire design, fire detection and fixed firefighting systems),		

Short

	Lighting, Communication Systems, Uninterrupted Power Supply and Signage		
9.	Instrumentation and Monitoring		
	a. Instruments and Monitoring Devices Proposed		
	b. Proposed Monitoring and Safety measures during Construction and Operation		
10.	Cost Estimate		
11.	Risk assessment Study of the project		
12.	Economic and Financial Analyses		
	Estimation of Economic Internal Rate of Return (EIRR), Financial Internal Rate of Return (FIRR) and Net Present Value (NPV)		
13.	Environmental Impact Assessment (EIA)		
14.	Status of Preconstruction Activities		
	a. Land Acquisition		
	b. Forest Clearance		
	c. Utility Shifting		
	d. Any Other Clearances required		

[Handwritten signature]