

**No. RW/NH/TZ/RTAC/2021-22**  
**Government of India**  
**Ministry of Road Transport & Highways**  
**(Tunnel Zone)**

Transport Bhawan, 1, Parliament Street, New Delhi-110001

Dated: 27<sup>th</sup> January, 2022

**ORDER**

**Subject: Constitution of Road Tunnels Advisory Committee (RTAC) reg.**

With the approval of competent authority in the Ministry of Road Transport & Highways, Road Tunnels Advisory Committee (RTAC) has been constituted in the Ministry, with following composition:

Sl. No.	Name	Position in the RTAC
1	Shri S.K. Dharmadhikari	Chairman
2	Geology expert	Member
3	E&M expert	Member
4	Shri Ramshid Padusha N.T., Executive Engineer (Tunnel), MoRTH	Member Secretary

The Geology Expert and E&M Expert to be finalized by DG (RD) &SS in consultation with the Chairman.

2. Terms of reference (TOR) of the RTAC is Annexed.

3. **Facilities:** The RTAC shall make his own arrangement for travel, accommodation, transport etc. The expenditure incurred on travel and accommodation will be reimbursed as explained under financial aspects. RTAC will not take any type of support/facilities from the contractor in discharging of its functions under aforesaid TOR.

4. **Financial aspects:** The Chairman and all other non-official members of the RTAC will be paid honorarium as detailed below:

\$ N	Particulars	Amount
1	Per Day Fee during working period	Rs.15,000/- (Honorarium)+ Rs. 2,000/- (D.A)
2	Lodging and Boarding charges per day	Rs. 7,500/- (metro cities), Rs.5,000/- (other cities)
3	Travelling Expenses	Economy class air fare/first class AC railway fare/AC taxies fare for to and fro journey from place of residence
4	Per day fee during journey period	Rs.1,000/-

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5. **Payment procedure:** RTAC shall submit bills (signed by the Chairman) towards expenses incurred in discharging duties as per ToR to the Chief Engineer, Tunnel Zone. Expenditure incurred on RTAC will be debitable to Major Head 3054-Roads & Bridges (Major Head), 80.004-Research and Development (Minor Head), 01.07-Quality Assurance, Research, Development and Training, 01.07.28-Professional Services under Demand No. 85 for the year 2021-22.

6. This issues with the approval of the Competent Authority.

Encl.: As above.



(Kamal Parkash)

Under Secretary to the Government of India

To:

1. Sh. S. K. Dharmadhikari, T6/302, Kapil Malhar society, Baner, Pune, 411045, Maharashtra

Copy To:

1. The Chairman, National Highways Authority of India (NHAI), G-5&6, Sector-10, Dwarka, New Delhi-110 075.
2. The Managing Director, National Highways Infrastructure Development Corporation Ltd., 3rd floor, PTI Building, Parliament Street, New Delhi- 110 001
3. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, Naraina, New Delhi.
4. All CEs in the Ministry of Road Transport & Highways
5. All ROs of the Ministry of Road Transport & Highways

Copy also to:

1. PS to Hon'ble Minister, RTH
2. PS to Hon'ble MoS (RT&H)
3. Sr. PPS to Secretary (RT&H)
4. Sr. PPS to DG(RD)&SS
5. Dir. (NIC)- for uploading the order on Ministry's website and E- office.
6. The Pay and Account Officer (Sectt.), Ministry of RT&H, New Delhi
7. Cash Section/W&A Section/General Section/Budget Division / Reception Officer.

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Annexure

Enclosure to MoRTH order No. RW/NH/TZ/RTAC/2021-22 dated 27<sup>th</sup> January, 2022

TERMS OF REFERENCE (TOR) OF ROAD TUNNELS ADVISORY COMMITTEE (RTAC)

1. The RTAC will advise the Ministry of Road Transport & Highways (MoRTH) in establishing a centre of excellence in tunnelling.
2. The RTAC shall develop a framework for development of the road tunnel sector over the next decade.
3. The RTAC shall convene its meeting at least every quarter. Further, RTAC will convene its meeting as and when requested by DG(RD)&SS, to deliberate the issues referred therein.
4. The RTAC shall examine all technical matters including investigation, design, construction programme, monitoring and supervision of major road tunnel projects being referred by MoRTH/executing agency.
5. The RTAC shall inspect major tunnel project site referred by MoRTH (at least one project-bimonthly) and give their suggestion/ recommendation report highlighting the following:
  - a. Identification of bottlenecks if any, in the ongoing project and suggest measures for timely completion.
  - b. Identification of system flaws in the quality assurance process and ways to improve it.
  - c. Review the availability of adequate technical manpower and machinery with the contractor. Further, the committee should also ensure deployment of adequate manpower by the Authority Engineer/Independent Engineer/Supervision Consultant etc. Committee may also advise upon the training required for the professionals involved in the project.
  - d. Observe the Quality Control and Quality assurance mechanism adopted in the project and identify the flaws, if any.
  - e. Observe the cash flow of the contractor and progress of the work.
  - f. Preparing a list of non-conforming works, holding coordination meeting with contractor, Engineer-In-Charge, supervision consultant / Authority Engineer/ Independent Engineer, to discuss and arrive at an agreed list of non-conforming works, formulate remedial measures and work out timelines. The report should contain the record of discussions and specific recommendations of the RTAC.
  - g. Preparing a list of work activities to be crashed to mitigate delays and the additional resources to be mobilized for crashing the activities.
  - h. Comparative study of geology encountered during excavation of tunnel viz-a-viz the geology/GBR detailed in the DPR for the project.
  - i. Inadequacies, if any in the technical provisions made for the project.

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- j. Identifying best practices and documenting them clearly in a separate section in the report.

The aforesaid report should be submitted within fortnight to DG(RD)&SS with a copy to Executing Agency(NHAI/NHIDCL/BRO/State PWDs).The recommendations of the Committee should be comprehensive and include all related aspects of structural design and drawings, construction procedure/sequences, interpretation of codes/guidelines/ specifications etc. The RTAC will be assisted in his independent evaluation of the project by the concerned officers of the Executing Agency. The tests for quality control, if desired, shall be carried out in either of the following:

- a. Field laboratories established by the contractor.
  - b. For specific tests: Testing to be done in district/ regional/ State level laboratories of the Employer/ NABL accredited labs/ Government Engineering Colleges.
6. The Executing agency shall be responsible for ensuring that the RTAC is provided full support in performing task assigned to RTAC, including support in taking samples, transportation of samples to the laboratory and testing in presence of representative of implementing authority. The employer shall bear all associate expenses. The RTAC shall have complete access to the documents pertaining to the project and for this purpose he shall be assisted in his inspection by concerned Executive Engineer of State PWD or BRO/ PD of NHAI/ PD of NHIDCL, as is applicable.
  7. The RTAC shall revisit the provisions contained in the existing Request for Proposal (RFP) for tunnel consultancy services for preparation of DPR/PMC in terms of requirement of data to be collected from the specific site to prepare a robust DPR in accordance with the provisions of IRC SP-91:2019 and latest international practices. The various cost elements pertaining to various activities to be undertaken by the consultant on and off the field activities shall be identified and accounted for under various heads in the ToR of consultancy agreement and financial proposal under various heads such as survey and geotechnical/geophysical investigations geological mapping, areal imagery, preliminary design, detailed geotechnical investigations, final design and DPR, land acquisition, environmental Impact Assessment etc. The collection of data should be comprehensive so that the same will ultimately leads to the adoption of digitalization of full spectrum of above activities by adopting latest technologies viz. Internet of Things (IoT) and Artificial Intelligence (AI).
  8. The RTAC may also suggest required changes in IRC Codes/Ministry's specification on aspect related to road tunnels for the adoption of latest international equipment/materials and technology in Indian condition on National Highway projects.
  9. For faster and economical construction, the RTAC shall study the latest international practices being followed in construction of road tunnels and should provide guidance to all stakeholders in adopting latest technology in India.
  10. For capacity building of professionals involved in road tunnel projects, the committee shall advice the Ministry in imparting proper training to officials as well as professionals in collaborate with reputed International institutes in the field of Tunnel engineering.
  11. Periodic feedback of the performance of RTAC shall be gathered by the Employer. The Reports/ Performance of the RTAC shall be periodically reviewed by the Employer. In case of unsatisfactory performance/ actions prejudicial to fair and transparent contact/ concession operation, the Employer may consider debarment/ blacklisting of the RTAC.

Signed by Kamal Parkash

Date: 27-01-2022 16:04:35

Reason: Approved

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