

## **CSIR – Central Road Research Institute, New Delhi**

### **Minutes of the 136<sup>th</sup> Research Council (RC) Meeting (Online)**

The 136<sup>th</sup> Research Council (RC) Meeting was held on 20.2.2026 in the Council Hall of the Institute on online mode. The following RC members have attended the meeting:

#### **Research Council Members (attended online):**

1. **Prof. Mahesh Tandon, RC Chairman**, Tandon Consultants Pvt. Ltd., New Delhi.
2. **Dr. Ch. Ravi Sekhar**, Director, CSIR-Central Road Research Institute (*CRR*), New Delhi.
3. **Prof. R. Pradeep Kumar**, Director, CSIR - Central Building Research Institute (*CBRI*), Roorkee
4. **Sh. Dharmanand Sarangi**, Director General (*Retd.*), MoRT&H & Special Secretary, GoI.
5. **Prof. Lelitha Devi Vanajakshi**, Department of Civil Engineering, IIT Madras.
6. **Dr. (Ms). Minimol Korula**, Head, Strategic Projects, Maccaferri Environmental Solutions Ltd.
7. **Prof. K. Sudhakar Reddy**, Department of Civil Engineering, IIT Kharagpur.
8. **Sh. Mayank Mathur**, Chief Scientist, Central Planning Directorate (*CPD*), CSIR HQ, New Delhi.
9. **Dr. Errampalli Madhu**, Chief Scientist, TPE Division, Secretary, RC, CSIR - CRR, New Delhi

#### **Item 1: Welcome Address by Dr. Ch. Ravi Sekhar, Director CSIR - CRR**

At the outset, **Dr. Ch. Ravi Sekhar** welcomed the RC Chairman and other RC members who joined online for the 136<sup>th</sup> RC meeting. He made a brief presentation by giving details on ULIP Project, RDSF Proposals and In-house Project Proposals. He mentioned ULIP project proposal has been submitted to CSIR after taking inputs from the RC members for which the Special RC Meeting was held on 16.1.2026 and also taking the suggestions of DG CSIR especially modifying the title of ULIP Project. He also mentioned that RDSF and In-House proposals have been shortlisted by the Internal Committees involving expert members like Prof. K. Sudhakar Reddy, Sh. D. Sarangi, Prof. Sanjay Gupta and Sh. Bidur Kant Jha. Accordingly he has shown the finalised RDSF and In-house Project Proposals. Thereafter, he requested RC Chairman to deliver his opening remarks.

#### **Item 2: Opening Remarks by Prof. Mahesh Tandon, RC, Chairman**

**Prof. Mahesh Tandon** started his address by welcoming Director CRR and RC members who joined online for the 136<sup>th</sup> RC meeting. He mentioned that he is looking forward to hear the proposals and invited members to give their view points.

#### **Item 3: Viewpoints of RC Members**

The RC members also expressed their willingness to hear the presentations. Further Sh. Mayank Mathur added that maximum of 5 project proposals can be submitted to CSIR after Sh. D. Sarangi sought clarification about shortlisting of proposals.

#### **Item 4: Presentation of RDSF Project Proposals**

**Dr. Madhu**, Secretary RC, invited the individual project leaders for making presentation and the discussions conspired during that are given below:

| S. No. | Details of RDSF Project Proposal and Project Leader                                                                                                                              | Comments / Suggestions of the RC members                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5.1    | <b>Automated Detection and Severity Assessment of Pavement Surface Degradation (Ravelling) Using Image Processing and Texture Analysis</b><br>Sh. Porchelvan, A., Scientist, PED | <ul style="list-style-type: none"> <li>Review of the literature can be carefully done and other methods adopted in different countries can be explored.</li> <li>Problems faced by current methods need to be addressed and propose technique to overcome.</li> <li>Validation part need to be considered.</li> </ul>                                                                                                                                                                                                                                                                                                                     |
| 5.2    | <b>A Performance- driven decision support tool for optimizing road maintenance and rehabilitation strategies</b><br>Sh. Soumyarup Biswas, Scientist, PED                         | <ul style="list-style-type: none"> <li>Confine to flexible pavements in this project, later it can be extended to other types of pavements based on its success and experience.</li> <li>Select a small portion and do it thoroughly and used the existing data rather than going for extensive fresh data.</li> <li>Previous studies and experience from literature may be considered.</li> </ul>                                                                                                                                                                                                                                        |
| 5.3    | <b>Precursor-Informed Mix Design and Performance Evaluation of Fly Ash-Slag-Based Geopolymer Concrete for Rigid Pavement</b><br>Dr. Shubham Raj, Scientist, RPD                  | <ul style="list-style-type: none"> <li>Cost of geopolymer is a major consideration compared to OPC.</li> <li>Thermal behavior may be studied in an extended project.</li> <li>Scope of work may be limited to development of chemistry-optimized geopolymer mix design framework. PQC may be pursued if time permits.</li> </ul>                                                                                                                                                                                                                                                                                                          |
| 5.4    | <b>Perspective-corrected machine learning framework for crack-induced distress assessment in bridge structures</b><br>Dr. Shubham Saurabh, Scientist, BES                        | <ul style="list-style-type: none"> <li>Automatic crack classification has to be considered based on international studies experience.</li> <li>Computation of crack depth can also be explored.</li> <li>Other causes can also be explored for distress.</li> <li>Take the help of senior persons in the division who have worked on MBIU.</li> <li>Collect adequate data and prepare a framework.</li> <li>Advanced versions of CNN-based models may be considered based on the literature review. Recent algorithms need to be explored like A-CNN.</li> <li>Use images available in the literature and train the algorithm.</li> </ul> |
| 5.5    | <b>From Adoption to End-of-Life: Projections of Electric Vehicle Battery Demand and Associated Battery Waste</b><br>Sh. Amim Altaf Nabi, Scientist,                              | <ul style="list-style-type: none"> <li>Incorporate research component in prediction of demand.</li> <li>Bring information and details which can be used to make policy guidelines/ recommendations.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                            |

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|  | <b>TPE</b> | <ul style="list-style-type: none"> <li>Consider Government of India battery disposal policies.</li> </ul> |
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### **Item 5: Closing Remarks of RC Chairman**

**Prof. Mahesh Tandon**, RC Chairman mentioned that the suggestion made by the RC members may be considered in their respective proposals and given RC consent to submit the same to CSIR. Further, he mentioned that the progress of these projects can be monitored in the forthcoming RC Meetings. He finally extended his thanks to all the RC members for attending the meeting and giving valuable inputs.

### **Item 6: Closing Remarks of Director CRR**

**Dr. Ch. Ravi Sekhar** also extended his thanks to RC Chairman and Members for attending this meeting and told that the suggestions given by the RC would be considered and submitted to CSIR before 28<sup>th</sup> Feb 2026.

The meeting ended with a thanks to the Chairman.