



IOWA HIGHWAY RESEARCH BOARD (IHRB)

*Minutes of April 24,
2026*

Regular Members Present

M. Nop
A. Karimpour
R. Koester
R. Knoche
A. Bradley
D. Sanders
J. Thorius
B. Billings
B. Wilkinson
T. Wolken
D. Davenport
T. Roll

Alternate Members Present

B. Younie
M. Kelley
J. Lang
C. Nicolas
T. Kinney

Members with No Representation

Executive Secretary

V. Goetz

Administrative Assistant

T. Bailey

Visitors

Khyle Clute
Lee Bjerke
Bora Cetin
Kenneth Elgersma
Kristine Nemec
Nathaniel Bryant
Dheryta Jaisinghani
Rebecca Kanten

Iowa County Engineers Association
Iowa County Engineers Association
Michigan State University
University of Northern Iowa
University of Northern Iowa
University of Northern Iowa
University of Northern Iowa
Iowa Northland Regional council of Governments

1. Agenda review/modification

Motion to Approve by D. Sanders, 2nd by B. Billings

Motion carried with 16, 0, 0

2. Membership Update

Regular Member: Alan Karimpour, Iowa DOT District 5 Materials Engineer. Alternate is Mary Kelly, District 2 Assistant District Engineer.

Regular Member: Brandon Billings, District 2 Cerro Gordo County Engineer. Alternate is Catherine Nicolas Black Hawk County Engineer.

Regular Member: Dillon Davenport, District 5 Wayne County Engineer. Alternate is Ryne Thornburg Van Buren County Engineer.

3. Minutes Approval of the December 2, 2025, meeting - deferred

The minutes will be approved at the following IHRB meeting.

4. TR-814, Final Report, "Concentration Preserving Deicing Solutions for Higher Ice Melting", Ravi Yellavajjala, Arizona State University, \$109,697.00, (20 min)

[Link to Final Report](#)

Q. If they do a 10% replacement for salt brine for the Super Absorbent Polymers (SAP), is the cost neutral or is that an added cost? I'm curious about implementation.

A. We have not done the lifecycle analysis or the cost benefit analysis. The 10-percentage replacement and addition were not found to provide any additional benefit. The 5-percentage replacement the SAP particles are not like salt grain, so they'll stay on the road for the entire season. The reapplication cost will be low, but the initial cost could be higher.

A. How long do the SAP last until they wear off with traffic and adapt and reapply?

Q. You can anticipate close to 20 percent deterioration in the performance within a season but nothing more than that.

Q. With the frictional study, did you study dehydrated material on the surface?

A. We have not done anything with dehydrated material on the surface because dehydrated material will be like sand. It would only add more friction to the surface.

Q. You gave credit to Tina Greenfield and Craig Bargfrede, were they part of your Technical Advisory Committee also?

A. Yes, they were part of the TAC.

Q. Are you doing anything else with the Grant funding from this project?

A. We found out there is a way to remove the chloride ions from the bridge deck using the hydrogels. This will have a real impact because the top two-inch layer will be deprived of chloride ions that will improve the durability of the bridge decks in the long run. This is one thing we thought was a valuable offshoot of this project.

Q. The Polyols, are you deriving these from corn?

A. Yes, they are corn derived.

Q. Can these be derived with soybeans?

A. Yes, we can derive them from soybean. The reason we don't study soybean is soybeans are considered to be a food we opted for non-food options.

Motion to Approve by R. Koester, 2nd by A. Karimpour
Motion carried with 16, 0, 0

5. Proposal, Additional Funding, "TR-809 Introducing Smart Materials in Granular Roadway and Pavement Foundation Systems for Mitigating Freeze-Thaw Damage & TR-783 Use of Organosilanes to Mitigate the Impact of Freeze-Thaw Damage to the Granular Roadways in Iowa", Bora Cetin, Michigan State University, \$142,873.34, (20 min)

Motion to Approve by R. Knoche, 2nd by T. Roll
Motion carried with 16, 0, 0

6. RFP IHRB-3799, "Ongoing Evaluation of Full-Scale Unpaved Research Test Sites"

Motion to Approve for posting by T. Roll, 2nd by T. Kinney
Motion carried with 16, 0, 0

7. 2026 STIC Funding Selection

- a. STIC-4256 - Evaluating the Effectiveness of Modified Culverts for Flood Mitigation in Iowa
- b. STIC-4555 - Data-Driven Event Traffic Signal Performance Fine-Tuning Using Telematics Data Analytics (SigNature OS)
- c. STIC-4566 - "Open-Source Digital-As Built and Digital Twin workflow and validation of IFC 4.3 Schema with Shop Drawing

Motion by Taylor to proceed with STIC funding application for STIC-4256

Motion to Approve by T. Roll, 2nd by R. Knoche
Motion carried with 15, 0, 1

8. Innovative Project Ideas Funding - \$300,000 from FY27 set aside for limited time campaign. Provide seed funding for ideas up to \$50,000.

Motion to Approve by B. Billings, 2nd by B. Wilkinson
Motion carried with 16, 0, 0

9. New Business

Vanessa wanted to thank the University of Northern Iowa for hosting the IHRB members and visitors. The Iowa DOT has management agreements with all three of our in-state Universities. The IHRB will discuss adding a third university member spot to the IHRB and invite the University of Northern Iowa to become a member.

The University of Iowa visit was canceled in March, this will be rescheduled. ISU is tentatively scheduled to host the IHRB meeting in the fall.

10. Adjourn Regular Meeting – by common consent.

The next regular meeting of the Iowa Highway Research Board is scheduled for May 29, 2026 at the Iowa DOT Ames Complex.

For a list of current members or for more information about the Iowa Highway Research Board visit our website.

To submit Project Ideas, visit <https://ideas.iowadot.gov/>

TB/VG