

Iowa DOT Research Request for Proposal (RFP)

It is the intent of Iowa DOT Research to enter into agreement with the responsible bidder whose submitted proposal is the most advantageous, cost and other factors considered. Other factors include but are not limited to meeting or exceeding mandatory requirements, proposed staffing, and meeting required time schedule.

- Original RFP is posted at [the Iowa DOT Research Requests for Proposal page](#).
- Questions should be submitted to the project manager, identified below.
 - Questions are due no later than 14 calendar days prior to the proposal due date. Questions and responses will be posted on [the Iowa DOT Research Requests for Proposal page](#) no later than 7 calendar days prior to the proposal due date.
- Responses must be submitted in pdf form to Proposal.Research@iowadot.us.
 - Use the following naming convention for the PDF submission:
 - **ResearchRFPNumber_Agency_PrincipalInvestigatorLastName.pdf**
- Responses must comply with the proposal guidelines in "Required Format for Iowa DOT Research Proposals." Please refer to [the Iowa DOT Research Proposal & Deliverable Guidelines page](#).

RFP #: TMRC-2027b

RFP Title: Development of Performance-Based Selection Guidance for Asphalt Surface Treatments

RFP Posted: September 15, 2026

Proposals Due: On or Before November 1, 2026 at 12:00 Noon Central Standard Time.

Project Manager: Khyle Clute, khyle.clute@iowadot.us, (515)-239-1646

Budget

- ☒ Funding limitations have been established. Proposed budgets shall not exceed \$200,000.
- ☐ Proposed budgets are not limited. They will be considered during the evaluation process.

Timeline

- ☒ Timing limitations have been established. Proposed timelines shall not extend beyond 24 months.
- ☐ Proposed timelines are not limited. They will be considered during the evaluation process.

Literature Review

- ☐ A Literature Review has been performed as part of project development and should not be included as a task in the proposal. The Literature Review is available for download here:
- ☒ A Literature Review has not been performed and may be included as a task in the proposal.

Data Management Plan

- ☐ Development of a Data Management Plan (DMP) is a required task in the proposal.
Refer to [Iowa DOT DMP guidance](#) section for more information.
- ☒ Development of a Data Management Plan is not a required task in the proposal.

Problem Statement

Asphalt surface treatments, including chip seals, microsurfacing, cape seals, fog seals, and rejuvenators, slow pavement deterioration and extend service life at a lower cost than rehabilitation. They seal the surface against water, restore friction and surface texture, and protect the underlying asphalt from oxidation. Each treatment is effective only within a limited range of pavement condition, traffic, and climate, so the benefit an agency receives depends on applying each treatment to sections within that range.

Treatment selection in many state and local agencies still relies on local experience rather than measured performance. National research has produced methods for making these decisions. [NCHRP Report 523 Optimal Timing of Pavement Preventive Maintenance Treatment Applications](#) describes a method for determining the optimal timing of preventive maintenance treatments, and [NCHRP Report 858 Quantifying the Effects of Preservation Treatments on Pavement Performance](#) presents a framework for quantifying the effects of preservation treatments on pavement condition, service life, and life-cycle cost. Both depend on performance data from an agency's own treated pavements. Without such data for local climates, traffic levels, and materials, agencies cannot reliably estimate how long each treatment will last, when it should be applied, or whether it costs less over its life than rehabilitation.

Objectives

The objective of this research is to develop performance-based selection guidance for chip seals, microsurfacing, cape seals, fog seals, and rejuvenators applied to asphalt-surfaced pavements in TMRC partner states. For each treatment, the guidance shall define the pavement condition, traffic, and climate in which the treatment is effective, its expected service life, its effect on pavement condition, and its life-cycle cost compared with rehabilitation. Treatment performance models, a treatment selection guide, and a standalone decision-support tool with defined inputs and outputs that a partner state can supply from its own pavement management system should be outcomes of the study.

Most of these treatments last longer than the project duration, so service life and long-term benefit cannot be measured on sections built during the project alone. Estimates shall come from in-service pavements with known treatment histories and condition records. Proposals shall use pavement management and treatment records from at least three TMRC partner states, supported by field measurements on in-service treated sections selected with the Technical Advisory Committee. The field program is limited to between 40 and 60 sections measured during a single construction season, so the performance models shall rest mainly on the agency records, with field measurement confirming recorded condition and supplying the friction and texture data that agency records rarely contain. Because one season leaves no opportunity to repeat the field work, proposals shall schedule the data-sharing agreements and record assembly so that section selection is complete before that season begins, and shall state what the team will do if a partner state's records arrive late. Proposals may also include new test sections to measure early performance, and any new test sections shall come with a plan for monitoring them after the project ends. Selection criteria shall account for pavement type and condition, traffic, climate, and agency objectives such as restoring friction or sealing the surface. Acceptance testing of chip seals and microsurfacing is being addressed under [NCHRP Project 10-134 Guidelines for the Selection of Performance-Related Tests for the Acceptance of Preservation Treatments](#) and is outside the scope of this project.

Minimum Project Tasks

1. Document current surface treatment practice in the state DOTs and local agencies of TMRC partner states, including selection criteria, specifications, typical costs, and the records kept on treated sections.

2. Assemble treatment histories and pavement condition data from the pavement management systems of at least three partner states for in-service sections treated with chip seals, microsurfacing, cape seals, fog seals, or rejuvenators.
3. Work with the Technical Advisory Committee to select between 40 and 60 in-service treated sections for field evaluation, covering the range of treatments, pavement condition at the time of treatment, traffic levels, climates, and treatment ages. Complete the selection before the field season begins.
4. Measure pavement condition, cracking, raveling and aggregate loss, bleeding, friction, and macrotexture on the selected sections during one construction season, and compare them with untreated sections of similar age and traffic where such sections exist.
5. Quantify the effect of each treatment on pavement condition and service life, using or building on the performance measures in NCHRP Research Report 858.
6. Develop treatment performance models that estimate condition after treatment and expected service life as functions of pavement condition at the time of treatment, traffic, and climate.
7. Compare surface treatment strategies with conventional rehabilitation through life-cycle cost analysis, and estimate the life-cycle greenhouse gas emissions of each strategy using published emission factors.
8. Develop a treatment selection guide and a standalone decision-support tool based on performance models. Specify the tool's inputs and outputs so that a partner state can supply them from its own pavement management system, and document the calculations the tool performs.
9. Prepare training materials on treatment selection, construction practices, and performance evaluation.

Products and Deliverables

1. Quarterly Progress Reports
2. Draft Final Report
3. Final Report
4. Technology Transfer Technical Brief
5. Research Implementation Plan(s)
6. Photo or Image Files
7. Treatment Performance Models
8. Surface Treatment Selection Guide
9. Standalone Decision-Support Tool, with User Documentation and Training Materials

Note: All products and deliverables shall comply with ADA accessibility and Section 508 requirements, regardless of funding source. Section 508 is an amendment to the federal Rehabilitation Act of 1973 mandating that all electronic and information technology developed, procured, maintained, or used by the federal government be accessible to people with disabilities. Refer to 29 U.S.C 794d for additional information.

Additional Information

- This RFP is funded through the Transportation Materials Resource Center (TMRC) under a multi-state pooled fund led by Iowa DOT as TPF-5(546). Information about the current TMRC pooled fund is available on [the Transportation Materials Resource Center pooled fund page](#).
- Access to pavement management and treatment records may require a data-sharing Memorandum of Understanding with each partner state. Proposals should allow time for these to be executed before record assembly begins.

- Proposals should show the team's experience in pavement preservation treatments, analysis and modeling of pavement performance data, field pavement evaluation, and life-cycle cost analysis.
- Proposals should respond to the identified budget, timeline and project goals. Additional project tasks, beyond those outlined in the solicitation, may be identified by the principal investigator if deemed useful in improving the general objective of the project. All additional tasks, budget items and timelines should be clearly identified in the proposal as extra work and shown separately from the project tasks and budget items associated with the RFP's objectives.
- ****Proposal Restrictions****
 - o Proposals are limited to 10 pages. Resumes of the principal investigator and other named team members, along with other relevant materials, may be provided for additional information in appendices, but the proposal itself shall be a stand-alone document. The proposer should not expect the reviewers to read appendices to be able to evaluate the merit of a proposal.
 - o Proposals submitted by current TMRC principal investigators that have projects one year or more behind their originally contracted end date will not be considered.
 - o Individual respondents are limited to submitting on only one TMRC proposal per year as either a principal investigator or co-principal investigator.

Non-Discrimination Statement

Iowa DOT ensures non-discrimination in all programs and activities in accordance with Title VI of the Civil Rights Act of 1964. Any person who believes that they are being denied participation in a project, being denied benefits of a program, or otherwise being discriminated against because of race, color, national origin, gender, age, or disability, low income and limited English proficiency, or needs more information or special assistance for persons with disabilities or limited English proficiency, please contact Iowa DOT Civil Rights at 515-239-7970 or by email at civil.rights@iowadot.us.