



Wisconsin Department of Transportation

Policy and Safety First Research Programs

**Request for Proposals
FFY 2025**

Wisconsin Highway Delay Causation Study

Request for Proposals Timeline and Information

March 17, 2025	Issue Date of this Request for Proposal (RFP). This RFP has been posted at: http://wisdotresearch.wi.gov/rfps-and-proposals .
	Please read the Proposal Preparation Instructions as this document has been updated recently and contains important information, including tables and templates, necessary for writing a proposal for submission.
April 8, 2025 4:30 PM (CST)	Questions regarding this RFP are due by this date and time. Questions need to be submitted with the project name to research@dot.wi.gov . Questions submitted after this date and time will not be considered.
April 17, 2025 4:30 PM (CST)	Responses to Questions will be posted on the WisDOT Research and Library website at: http://wisdotresearch.wi.gov/rfps-and-proposals
May 4, 2025 4:30 PM (CST)	Proposals are due by this date and time. Proposals must be submitted in a PDF version to: research@dot.wi.gov . Proposals submitted after this date and time will not be considered. A confirmation email will be sent in response within 2 business days of the due date.
June, 2025	Award and Deny letters will be sent by email to all proposal submitters (only lead investigator will be notified)
	Project Budget and Schedule
\$200,000	Project Budget shall not exceed this amount. Matching funds will not be considered in the proposal evaluation process. Proposals which exceed this amount will be disqualified.
12 Months	Period of Performance / Duration of Project
August 1, 2025	Anticipated Start Date of Project
April 30, 2026	Researcher's Final Report Anticipated due date
July 31, 2026	Anticipated End Date of Project
	For more information regarding this RFP contact the WisDOT Research Program at: research@dot.wi.gov .

NOTICE: Submission of a proposal does not guarantee an award. The Wisconsin Department of Transportation (WisDOT) reserves the right to reject any and all proposals received; however, in the event WisDOT does award a project, such award will be based on uniform evaluation criteria.

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Definitions

The following definitions are used throughout the Request for Proposal:

- **COP** – Close-Out Presentation
- **PI** – Principal Investigator, lead researcher
- **POC** – Project Oversight Committee comprised of WisDOT and/or other representatives to supervise the research.
- **RFP** – Request for Proposal
- **R&L** – WisDOT Research and Library administrative support staff
- **WisDOT** – Wisconsin Department of Transportation

I. Background and Problem Statement

The concepts of delay and the related metric of travel time reliability are ingrained in multiple processes at the Wisconsin Department of Transportation (WisDOT). Drivers are familiar with delay, because they experience it due to construction, bottlenecks, weather, crashes, and other incidents. While statewide and corridor delay and reliability are regularly quantified, the portion of delay attributable to each source has not been calculated or analyzed at either level. Having a better understanding of delay causation will improve decision making and communication.

II. Research Objectives

The department is seeking research proposals to investigate the causation of delay in Wisconsin at a statewide and corridor level and develop a methodology that can be used to estimate delay causation in future years. The selected research proposal will:

- a. Determine the major factors leading to delay on major Wisconsin highways, based on literature review and data analysis.
- b. Analyze how to classify delay by causative factor using available data sources.
- c. Calculate delay by factor for several recent years on a statewide basis.
- d. Calculate delay by factor for major Wisconsin highway corridors and explain differences and similarities between corridors.
- e. Develop a repeatable methodology that WisDOT can use to estimate delay by factor in the future at both a statewide and corridor level.

III. Research Approach - Scope of Work

Task 1: Literature Review

The researcher will conduct a comprehensive literature review and assessment of current practices related to classification of delay by causative factor. This review will focus on efforts conducted or sponsored by state DOTs and other large transportation organizations. Factors causing delay, their relative order of impact, and variables that can impact the share of delay attributable to each of the major sources should be documented, as well as methodologies and data sources used to determine the impact of these sources.

The literature review will be submitted in written format as part of the Task 2 report deliverable.

Task 2: Preliminary Wisconsin Data Exploration

The researcher, in coordination with WisDOT subject area experts, will evaluate available Wisconsin data associated with major sources of delay and other critical elements such as speeds and volumes. Using the results of the literature review and an exploratory analysis using the available data, the researcher will identify the primary causes of delay on major Wisconsin highways and their relative magnitude.

The deliverable of this task will be an interim report documenting the results of the exploratory data analysis that identifies the primary causes of delay. This report will also include the literature review from Task 1. A presentation of the report will be given to the POC.

Task 3: Delay Causation Methodology Development and Statewide Application

The researcher will develop a methodology to classify delay by causative factor using the available data. This methodology will identify patterns and correlations between the data associated with major sources of delay such as speed and volume. This methodology will then be applied at a statewide level for several recent years. Results will be compared against findings from the literature review in Task 1 and preliminary data analysis from Task 2 to ensure reasonability. If additional delay sources need to be added, the methodology will be updated accordingly.

The deliverable will be a methodology to classify delay by causation, along with results from applying it at a statewide level for several recent years. Results will be submitted as a presentation to the POC. This delay causation methodology will be used in the remaining tasks.

Task 4: Application of Delay Causation Methodology to Corridors

The researcher, in coordination with WisDOT subject area experts and previously identified corridor limits, will identify major Wisconsin highway corridors that will be evaluated using the delay causation methodology developed in Task 3. Several recent years will be evaluated for each corridor, and the results will be compared to each other

and the statewide results. Insights that can be drawn based on comparisons between corridors and years will be documented.

The deliverable will be the delay causation analysis results for selected corridors submitted as a presentation to the POC.

Task 5: Methodology Documentation

The researcher will thoroughly document the methodology used to identify delay causative factors at the statewide and corridor level. The methodology will be repeatable by WisDOT staff using existing state enterprise software programs and available data sources.

Methodology documentation will be incorporated into the final report deliverable as part of Task 6.

Task 6: Researcher Final Report

The research team will prepare and submit a Researcher Final Report three months before the project end date, including background, best practices, recommendations, and interpretation developed during the project.

Task 7: Close-Out Presentation

The research team will create and present a one-hour PowerPoint presentation that includes background, best practices, recommendations, and interpretations developed during the project.

Task 8: Approved Final Report

The researcher will address all questions and comments from the Researcher Final Report and COP and submit a publication-ready Approved Final Report due one month before the project's end date.

Please see the [Proposal Preparation Instructions](#) for more details regarding the Final Reports and Close-Out Presentation.

IV. Required Testing/Equipment/Materials (if required)

N/A

V. Required Travel

a. Travel for Tasks and/or Field Work

- i. Travel by the researcher is not required for this project.

b. Meetings

- i. A kick-off meeting, periodic progress meetings, and a close-out presentation are required.

- ii. Meetings are anticipated to be virtual.
 - iii. At the start of the project the POC Chair, lead PI and R&L will determine points in the project where discussions and decisions are needed. One-hour long meetings will be set for the full POC, the researchers, and R&L staff at those times.
 - iv. If there are gaps of more than eight weeks between meetings, check-in meetings of 20-30 minutes will be scheduled for the POC Chair, lead PI and R&L staff.
 - v. Presentations to the POC for Task 3 and Task 4 are anticipated to be virtual.
 - vi. WisDOT welcomes a virtual Close-Out presentation; however, the researcher may present the results in person, paid by contract funds, if included in the project budget.
- c. Conferences**
- i. Conference attendance by the researcher is not required for this project.
- d. Notice: **WisDOT will NOT fund travel expenses apart from what is included in the research project proposal budget.****

VI. WisDOT Contribution

WisDOT will provide the following support through the Project Oversight Committee (POC) to support the successful completion of the project.

- a. Work will be conducted with project oversight by WisDOT staff.
- b. The research team may assume that WisDOT staff/POC members can contribute a maximum of 120 hours over the project's duration.
- c. The research team will not assume the availability of WisDOT staff or equipment in the proposal. If WisDOT or another entity donates equipment or staff time, a commitment letter must be included in the proposal.
- d. The POC will also coordinate access to WisDOT databases, if needed, as requested and approved.
- e. Please see the [Proposal Preparation Instructions](#) for more details.
- f. WisDOT will provide access to relevant available data sources and subject area experts familiar with these data sources.

VII. Research Results and Implementation Plan

WisDOT seeks to fund research with high implementation potential. Implementation potential will be tracked throughout the lifecycle of this research project and may include changes to expected implementation. The research plan must include specific statements describing anticipated research results and an assessment of implementation potential.

a. Research Results

- i. Proposals should detail the research results in terms of a specific deliverable, (i.e. a design/analysis tool, test methods, or change in performance

thresholds and specifications) and their impact on current WisDOT practice (including cost savings, cost-benefit analysis, etc.).

b. Implementation Plan

- i. This section must also include an implementation plan to address the planned implementation type(s) indicated in the RFP. While the plan may change as the research progresses, at a minimum the proposal should indicate:
 1. The product expected from the research.
 2. The stakeholder or intended audience that will most likely be impacted by the research results.
 3. Potential impediments to implementation.
 4. Activities necessary for successful implementation.
 5. Implementation deliverables
 6. Measures of success
 7. Data collection requirements

Please see the [Proposal Preparation Instructions](#) for specific directions related to completing this table.

Implementation Plan

Successful implementation of this research will be achieved through the development, at a minimum, of the following items:

Implementation Type	Description (Manuals, Data Sources, etc.)
<input checked="" type="checkbox"/> Develop a Model:	A methodology to identify causes of delay at a statewide and corridor level. The methodology will quantify delay by causation source. This methodology will be repeatable by WisDOT staff for future use in statewide and corridor evaluations.
<input type="checkbox"/> New Design Method or Guidance:	
<input type="checkbox"/> New Product Implementation:	
<input type="checkbox"/> Recommend Future Studies:	
<input type="checkbox"/> Revise a Specification:	
<input type="checkbox"/> Inform Policy:	
<input checked="" type="checkbox"/> Other:	Statewide and corridor-level results for delay by causation source for several recent years.

VIII. Deliverables

- a. Quarterly Progress Reports (QPRs)**
- b. Invoices**
- c. Interim Reports**
 - i. An interim report documenting the exploratory data analysis and primary cases of delay that were found in Task 1 (Literature Review) and Task 2 (Preliminary Data Exploration). This report will be submitted with a presentation to the POC.
- d. Implementation Deliverables**
 - i. A presentation to the POC communicating the delay causation methodology developed in Task 3, and the results of applying the methodology on a statewide basis.
 - ii. A presentation to the POC for the delay causation methodology results applied to corridors from Task 4.
- e. Researcher's Final Report**
 - i. Must be submitted three months before the contract end date to allow time to review and revise before the Close-Out Presentation.
- f. Close Out Presentation (COP) for project**
 - i. The Principal Investigator presents to the POC a summary of the research project's results and recommendations two months before the contract end date.
- g. Approved Final Report**
 - i. The Approved Final Report, addressing comments made on the Researcher's Final Report and during the COP, is due one month before the contract end date.
- h. Research Data**
 - i. All research data will be identified and made available per the Data Management Plan.

IX. Data Management Plan

The research team will include a Data Management Plan (DMP) documenting all field/laboratory data and analyses to ensure accessibility and transparency of research data as required by the USDOT per the Public Access Plan (<https://ntl.bts.gov/ntl/public-access/creating-data-management-plans-extramural-research>). See [Proposal Preparation Instructions](#) for details.

X. Proprietary Information in Proposal

- a. Any restrictions on the use of data contained within a proposal must be clearly stated in the proposal itself. Proprietary information submitted in response to a request will be handled under applicable Wisconsin procurement regulations and the Wisconsin

public records law. Proprietary restrictions usually are not accepted. However, when accepted, it is the proposer's responsibility to defend the determination in case of an appeal or litigation.

- b. Any material submitted in response to this request that the proposer considers confidential and proprietary information and which qualifies as a trade secret, as provided in s. 19.36(5), Wis. Stats., or material which can be kept confidential under the Wisconsin public records law, must be identified on a **Designation of Confidential and Proprietary Information form (DOA-3027)** (see attachment) Proposers may request the form if it is not part of the Request for Proposal package. Proposal prices cannot be held confidential.

XI. Public Records

- a. WisDOT intends to maintain an open and public process in the solicitation, submission, review, and approval of procurement activities. Notwithstanding the foregoing, records may not be available for public inspection before issuance of the award of the proposal.
- b. The proposer shall retain all records produced or collected under an awarded contract for five (5) years following final payment under the contract and allow access to such records in accordance with requirements established under 49 Code of Federal Regulations 18.42, subch. II of Chapter 19, Wis. Stats. and Chapter 16, Wis. Stats.

XII. Evaluation Criteria (See [Proposal Preparation Instructions](#))

Attachment: **Designation of Confidential and Proprietary Information form (DOA-3027)**



DESIGNATION OF CONFIDENTIAL AND PROPRIETARY INFORMATION

The attached material submitted in response to Bid/Proposal # _____ includes proprietary and confidential information which qualifies as a trade secret, as provided in s. 19.36(5), Wis. Stats., or is otherwise material that can be kept confidential under the Wisconsin Open Records Law. As such, we ask that certain pages, as indicated below, of this bid/proposal response be treated as confidential material and not be released without our written approval.

Prices always become public information when bids/proposals are opened, and therefore cannot be kept confidential.

Other information cannot be kept confidential unless it is a trade secret. Trade secret is defined in s. 134.90(1)(c), Wis. Stats. as follows: "Trade secret" means information, including a formula, pattern, compilation, program, device, method, technique or process to which all of the following apply:

1. The information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.
2. The information is the subject of efforts to maintain its secrecy that are reasonable under the circumstances.

We request that the following pages not be released.

Section	Page #	Topic

In the event the designation of confidentiality of this information is challenged, the undersigned hereby agrees to provide legal counsel or other necessary assistance to defend the designation of confidentiality and agrees to hold the state harmless for any costs or damages arising out of the state's agreeing to withhold the materials.

Failure to include this form in the bid/proposal response may mean that all information provided as part of the bid/proposal response will be open to examination and copying. The state considers other markings of confidential in the bid/proposal document to be insufficient. The undersigned agrees to hold the state harmless for any damages arising out of the release of any materials unless they are specifically identified above.

Company Name	
Authorized Representative	
	Signature
Authorized Representative	
	Type or Print
Date	