



## **Wisconsin Department of Transportation**

### **Policy and Safety First Research Programs**

**Request for Proposals  
FFY 2025**

### ***Overheight Vehicle Detection System***

## 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 <a href="#">Proposal Preparation Instructions</a> 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 <a href="mailto:research@dot.wi.gov">research@dot.wi.gov</a> . 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: <a href="http://wisdotresearch.wi.gov/rfps-and-proposals">http://wisdotresearch.wi.gov/rfps-and-proposals</a>
<b>May 4, 2025</b> 4:30 PM (CST)	<b>Proposals are due by this date and time.</b> Proposals must be submitted in a PDF version to: <a href="mailto:research@dot.wi.gov">research@dot.wi.gov</a> . 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)
	<b>Project Budget and Schedule</b>
<b>\$150,000</b>	<b>Project Budget shall not exceed this amount.</b> Matching funds will not be considered in the proposal evaluation process. Proposals which exceed this amount will be disqualified.
24 Months	Period of Performance / Duration of Project
<b>August 1, 2025</b>	<b>Anticipated Start Date of Project</b>
April 31, 2027	Researcher's Final Report Anticipated due date
July 31, 2027	Anticipated End Date of Project
	For more information regarding this RFP contact the WisDOT Research Program at: <a href="mailto:research@dot.wi.gov">research@dot.wi.gov</a> .

**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.

# Wisconsin Department of Transportation Policy and Safety First Research Programs Request for Proposals

## *Overheight Vehicle Detection System Research Project*

### Definitions

The following definitions are used throughout the Request for Proposal

- **WisDOT** – Wisconsin Department of Transportation
- **MUTCD** – Manual on Uniform Traffic Control Devices
- **POC** – Project Oversight Committee comprised of subject matter experts who are the main point of contact with the PI
- **PI** – Principal Investigator, lead researcher
- **R&L** – WisDOT Research and Library – research administration staff
- **RFP** – Request for Proposal
- **USC** – United States Code
- **CFR** – Code of Federal Regulations
- **lat/longs** – Latitude and Longitude
- **Bridge ID number** – Bridge Identification Number assigned by WisDOT

### I. Background and Problem Statement

There have been numerous overheight highway vehicle impacts/collisions with Wisconsin state-owned bridges in the last few years. The average cost of the bridge repairs alone is \$200,000 with some repairs greater than \$1 million. Additionally, overheight vehicle impacts create traffic delays and cause injuries to the overheight vehicle driver and other drivers in the vicinity. Reducing these impacts/collisions can be accomplished by investing in appropriate overheight vehicle detection warning systems with the best configuration for the locations.

Overheight vehicle detection systems warn the vehicle drivers that their vehicle/load may exceed the height restriction of a bridge. To enhance traffic safety on its highway system, WisDOT is exploring the use of early warning systems to alert drivers of height restrictions. The real-time vehicle detection systems generate a warning to the vehicle drivers in advance of the structure that the overheight vehicle is approaching.

Determine a real-time vehicle detection system for use in Wisconsin, secure a chosen system for a pilot, and install at a location(s) determined to be the best fit for testing.

## **II. Research Objectives**

- a. Identify existing real-time vehicle detection systems available.
- b. Determine effectiveness of systems currently in use in all weather conditions, include identifying any technical or maintenance concerns with available systems.
- c. Identify potential locations for installation based on historical records of impacts, including identifying locations for installation of detection equipment, vehicle alert/notification equipment, and safe alternate routes.
- d. Recommend to WisDOT a system for installation at the potential location identified in c.
- e. Purchase and install WisDOT selected/approved system.
- f. Monitor the results.

## **III. Research Approach - Scope of Work/Work Plan**

### **Task 1: Literature Review**

Conduct a comprehensive literature review and assessment of current practices and systems being used for overheight vehicle detection systems. In this task, the researcher will collect and review relevant efforts by other states and public agencies who are highway overpass owners that have tried or use overheight vehicle detection systems and their successes and failures.

The Literature Review may be submitted with a presentation to the POC.

### **Task 2:**

Work with WisDOT staff to identify locations on the state highway system that would benefit from installation of a system based on history of bridge impacts, potential disruption of the transportation systems affected by a bridge impact, and ability to notify oversized vehicle before impact.

The deliverable will be an interim report identifying locations in Wisconsin that would benefit from the use of a successfully used warning system, current practice, or method. This information will be delivered in a GIS layer and a spreadsheet of the location information (coordinates-lat/longs, bridge ID number, highway on and over, county names, short description. This may be submitted with a presentation to the POC.

### **Task 3:**

Identify real time warning systems or methods that are successful or have potential to be successful. Provide cost estimates for installation, maintenance concerns, and operation for the systems or methods identified. WisDOT will work with the researcher to select a system to pilot as part of this research.

The deliverable will be a list of warning systems or methods with cost estimates, maintenance concerns and operation identified. The deliverable will

recommend systems or methods to use at each of the identified locations in Wisconsin along with cost estimates for installation and maintenance. This may be submitted with a presentation to the POC.

**Task 4:**

Acquire and pilot the real time system or method chosen. Provide training to WisDOT staff in the operation and maintenance.

The deliverable will be the system or method chosen should be piloted at the location chosen by WisDOT. The deliverable will include training for WisDOT staff in the operation and maintenance as well as training documents. This may be submitted with a presentation to the POC.

**Task 5:**

Monitor system operation and maintenance of pilot system installed. Trouble shoot any operational issues. Recommend any improvements to the installed pilot system.

The deliverable will include information about the system operation and maintenance, including any recommended improvements to the installed system. This may be submitted with a presentation to the POC.

**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)**

**a. Required Testing**

- i. Test the functionality of the pilot equipment pre and post installation.

**b. Equipment**

- i. Monitor installed pilot equipment for proper function for 8-14 months after installation.
- ii. Make adjustments to pilot equipment installed for proper function.
- iii. Installation of pilot system warning devices and signage must be per the MUTCD and WisDOT.

**c. Non-WisDOT Equipment and Materials**

**d. Materials**

**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. 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 40 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. WisDOT will provide historic bridge records, as needed, and provide assistance in querying inventory, inspection, and historic data from its Highway Structures Information System.
- f. Please see the [Proposal Preparation Instructions](#) for more details.

## 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:	The model will include the warning system or method recommended as a result of the research. Additionally, the model should include training for WisDOT staff in the operation and maintenance, training documentation and recommended improvements to the warning system.

<input checked="" type="checkbox"/> New Design Method or Guidance:	Provide guidance to WisDOT on criteria to use for selection of future installation locations.
<input checked="" type="checkbox"/> New Design Method or Guidance:	Provide guidance on locating advanced signage and notifications to the highway user depending on the site characteristics.
<input checked="" type="checkbox"/> New Product Implementation:	If successful, new warning systems would be installed on roads at identified underpasses that would have the highest benefit to WisDOT and the general public.
<input type="checkbox"/> Recommend Future Studies:	
<input type="checkbox"/> Revise a Specification:	
<input type="checkbox"/> Inform Policy:	
<input checked="" type="checkbox"/> Other:	A list of locations that would benefit from installation of the system based on the criteria given in Task 2. Identify locations in Wisconsin that would benefit from the use of a successfully used warning system, current practice, or method. This information will be delivered in a GIS layer and a spreadsheet of the location information (coordinates-lat/longs, bridge ID number, highway on and over, county names, short description.
<input checked="" type="checkbox"/> Other:	Recommend systems or methods to use at each of the identified locations in Wisconsin along with cost estimates for installation and maintenance.
<input checked="" type="checkbox"/> Other:	Provide guidance on future maintenance requirements for the system that is installed.

## VIII. Deliverables

### a. Quarterly Progress Reports (QPRs)

### b. Invoices

### c. Interim Reports

- i. Task 1 - The Literature Review may be submitted with a presentation to the POC.
- ii. Task 2 – The deliverable will be an interim report identifying locations in Wisconsin that would benefit from the use of a successfully used warning system, current practice, or method. Provide cost estimates for installation and maintenance. This information will be delivered in a GIS layer and a spreadsheet of the location information (coordinates-lat/longs, bridge ID number, highway on and over, county names, short description. This may be submitted with a presentation to the POC.
- iii. Task 3 - The deliverable will be a list of warning systems or methods with cost estimates, maintenance concerns and operation identified. This may be submitted with a presentation to the POC.



- iv. Task 5 - The deliverable will include information about the system operation and maintenance, including any recommended improvements to the installed system. This may be submitted with a presentation to the POC.
- d. Implementation Deliverables**
  - i. Task 4 - The deliverable will be the system or method chosen by WisDOT installed at the location chosen by WisDOT. The deliverable will include training for WisDOT staff in the operation and maintenance as well as training documents. This may be submitted with a presentation to the POC.
- 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	