

February 10, 2022

Dear Research Partner:

The Missouri Highways and Transportation Commission requests proposals from qualified organizations—namely private consultants, universities, and research organizations—to furnish professional services as described in the following request for proposal to be coordinated by the Research Unit of the Construction and Materials Division.

Please submit a proposal for project **TR202212** entitled, **“Mitigating and Preventing MoDOT Safety-Related Incidents through Root-Cause Elimination and Utilization of Leading Safety Indicators.”** Your submittal must include a work plan, the proposed project team and its background, and any related projects now active or recently completed by your firm. The project team must be led by a licensed professional engineer in the state of Missouri and the final report must be sealed, in accordance with the provisions of Chapter 327 RSMo.

The selection committee will use Qualification Based Selection. A “not to exceed” budget amount is included in the RFP to assist with the required scope, but budgets are not to be included with the proposal submissions, and will not be presented to the selection committee.

Please submit all proposals to [MoDOTResearchRFP@modot.mo.gov](mailto:MoDOTResearchRFP@modot.mo.gov) by **March 29, 2022 10:00 AM (CST)**. More information about project contracting in general can be found at <https://www.modot.org/information-researchers> under RFP documents.

Sincerely,



Jen Harper  
Research Director



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## Background

The Missouri Department of Transportation (MoDOT) has an extensive fleet of equipment and staff that maintains one of the largest transportation systems in the United States. MoDOT hires contractors to rehabilitate and construct new infrastructure for an investment of approximately \$1 billion each year. For both MoDOT staff and contractors, the work performed daily utilizes a variety of equipment and tools as well as quality control and quality assurance personnel that are exposed to potential risk. Performance of these activities are achieved in a wide variety of weather and traffic conditions. MoDOT's goal for this research project is to prevent safety incidents (worker injuries and fatalities along with equipment and/or property damage) in work zones, construction projects and maintenance operations by eliminating their root causes. MoDOT has multiple programs in place to train new and existing staff for preventative measures for workplace injuries and proper equipment operation. The MoDOT hired contractor, workers and its general operations are also regulated by OSHA on each project site. MoDOT has additional safety protocols, required by the contract specifications, that the contractor shall also adhere. The observable factors of an incident may not always be only contributing factor of the incident. Determining all contributing factors is necessary to further prevent injuries, fatalities, and damage of equipment and property to workers and the traveling public.

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## Objectives

The safety of our employees, contractor workforce and the traveling public is the highest priority to MoDOT. While these incidents can be very costly to MoDOT, the primary objective is for everyone to go home safe each day.

The objective of this project is to identify contributing factors leading to safety related incidents (injuries, fatalities, equipment and property damage) on highway related construction projects and maintenance operations and to examine employee perception of MoDOT's safety program and safety culture.

Determine leading safety indicators most efficient in eliminating incidents.

Implementation of leading safety indicators and promote further application and reinforcement of safety indicators.

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## Project Requirements

### Task 1: Project Management

The Research Team will facilitate a kick-off meeting with MoDOT to review the work plan, scope and schedule; and establish a protocol for regular ongoing communications and coordination with the team. The Research Team will also develop minutes for the kick-off meeting and any other status meetings that may be held during the project.

The finalized work plan will detail implementation of the following tasks as well as the resources and schedule to carry them out.

## **Task 2: Literature Search**

The Research Team will perform a literature search of past and current research of safety incidents involving worker injury, fatality, equipment and property damage on Missouri roadways.

Items of interest from the literature search shall include where data was gathered.

## **Task 3: Review of Safety Incidents**

The Research Team will review data of safety related incidents that occurred on Missouri roadways. Possible resources for Task 3 could include OSHA (Occupational Safety and Health Administration), BLS (U.S. Bureau of Labor Statistics), NHSTA (National Highway Traffic Safety Administration), RiskMaster (MoDOT) and other sources for gathering data of safety incidents on Missouri roadways.

MoDOT utilizes its own database (RiskMaster) for documentation of safety incidents. The RiskMaster data will be included in the project but the analysis kept separate from other data.

## **Task 4: Survey Contractors**

The Research Team will survey contractor workforce and management actively working on MoDOT roadway projects to capture their perspective and needs towards MoDOT's safety and enforcement on jobsites, including the contract requirements and specifications, MoDOT's internal protocols and practices for safety management, and enforcement. The contractor management survey should also include what safety performance measures are tracked.

Surveys must be reviewed and approved by MoDOT prior to sending to contractors.

## **Task 5: Survey and Review of MoDOT**

The Research Team will create, administer, analyze, and report results of a quantitative safety perception survey of MoDOT staff from all 7 Districts involved in safety sensitive positions at various levels. The purpose of the survey is to reveal employee perceptions about current safety culture, policies, and procedures as well as offering an opportunity to share their recommendations for improvement and signal areas that may need corrective action. The survey may be physical, electronic, or a combination.

Based on the research the Research Team will review MoDOT's Safety Policies compared to other DOT's and industry standards.

The proposer should give recommendation of the number of surveys they plan to administer. Survey must be reviewed and approved by MoDOT prior to sending to MoDOT staff.

## **Task 6: Analysis and Presentation to MoDOT**

Recommend an action plan with results of research. It is anticipated the action plan would include a monitoring plan, proposed changes to MoDOT's policies and procedures, or other measures that MoDOT can utilize moving forward for determining contributing factors.

The Research Team will present findings to MoDOT.

## **Task 7: Draft Report and Research Summary**

Develop and submit draft report and research summary for MoDOT's review.

## **Task 8: Final Report and Research Summary**

The Contractor will submit final report and research summary of the research and data collected.

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## **Project Deliverables**

For templates and forms for reports and plans, visit <https://www.modot.org/information-researchers>.

### **Email Communications**

E-mail and phone communications between the Principal Investigator(s) and MoDOT contacts as necessary are required to provide on-going updates of progress throughout the project

### **Data Management Plan**

The plan is a formal document that describes the data that is acquired, created or produced during the project, specifies who owns it and who can access it as well as information on how it will be described, managed, analyzed, stored, shared and preserved during and after the project is over. Please refer to templates on the [website](#).

### **Quarterly Reports**

Quarterly reports should be submitted throughout the project on the last day of March, June, September and December. The quarterly reports are not intended to replace any additional correspondence between the research team and MoDOT needed to keep the project moving. Please refer to template on the [website](#).

### **Interim Presentation**

An interim presentation shall be scheduled near the mid-point of the project to update MoDOT on the progress and the direction of the project. The purpose of the interim presentation is to evaluate the progress and determine if any mid-project corrections are necessary.

### **Draft Final Report and Research Summary**

These drafts should be final products except for revisions based on MoDOT's review. A final report must include a completed Technical Report Documentation page. Please refer to **Publication Guidelines** and summary template on the [website](#).

## Final Report and Final Research Summary

After MoDOT's review is complete and documents have been edited to MoDOT's satisfaction, final documents should be submitted as Word documents (unless otherwise instructed). Please refer to **Publication Guidelines** and summary template on the [website](#).

## Other Deliverables

Examples include construction reports, interim reports, surveys, annual reports, maps, brochures, include descriptions, criteria, and frequency.

## Presentation of Project Findings Prior to Final Report

The Research Team will present the results, recommendations, and implementation ideas to MoDOT and other stakeholders. The Research Team will coordinate location, date, and meeting fees with MoDOT. For stakeholder and agency participants, any travel and lodging fees are to be covered by individual attendees or their firms. MoDOT and stakeholders will provide feedback to the Research Team, especially related to implementation.

## Task-Specific Deliverables

Task	Deliverables
1	Schedule and conduct kickoff meeting. Kickoff meeting minutes. Draft and final work plans. Quarterly project status meetings.
2	None (Literature Search)
3	Review of data to explore contributing factors of incidents and compile findings and present findings to MoDOT prior to moving forward.
4	Draft of survey questions to be approved by MoDOT.
5	Draft of survey questions to be approved by MoDOT.
6	Presentation for MoDOT staff summarizing findings and recommendations.
7	Draft report and research summary.
8	Final report and research summary. Final project meeting.

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## Project Schedule

The following is an estimate of the project timeline or information on key dates within the project, presuming the project starts **April 26, 2022**. Proposals need to include a work plan with a proposed timeline. For a sample of a work plan template, see link below. Changes to our estimated project timeline below will be considered, however, timeline extensions cannot be guaranteed. The project timeline will be discussed and finalized during the kickoff meeting.

For report templates and forms, visit <https://www.modot.org/information-researchers>.

Date	Milestone
5/3/2022	A kick off meeting with MoDOT will be scheduled to discuss project requirements and deliverables. The dates of key milestones and deliverables will be determined from this meeting.
3/1/2023	Interim presentation must be done by this date.
11/1/2023	Draft final report, draft summary report, other deliverables are due. The draft documents shall be submitted to MoDOT approximately two months prior to the final report.
1/2/2024	Final report, final summary report, presentations, recommendations, and other deliverables are due. The final documents shall be due approximately one month before the end of the contract. This is to allow all billing to be completed prior to the end of the project.
2/6/2024	Final invoice due.
2/6/2024	Contract ends.

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## Special Notes

Project budget is not to exceed **\$250,000**. A budget is not to be included in the proposal, but will be required for the contract and must be within this limit. For a sample Budget template, report templates and forms, see <https://www.modot.org/information-researchers>.

All questions, information, data and/or manual requests regarding any aspect of the RFP details or process for submissions should be submitted to [MoDOTResearchRFP@modot.mo.gov](mailto:MoDOTResearchRFP@modot.mo.gov) by the date and time listed in the "RFP Schedule" section of the RFP. This is the only acceptable method for contact regarding the RFP and contacting MoDOT employees via other methods is prohibited. Not adhering to this rule is cause for disqualification of the proposal.

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## RFP Requirements

- “Contracting Documents” provide further details and links to the required forms. They are available at <https://www.modot.org/information-researchers>.
  - **Organization’s Project Experience:** The proposal must clearly identify the Organization’s experience in offering the services requested in this RFP during the past three (3) years. The description should include a list of the agencies which your organization has served during this time period or currently serves. Please highlight any work you have done with other state agencies or local governments.
  - **Team Member Experience:** Please list all team members (including subcontractors) proposed to work on the project. Attach licenses, certifications and resumes for key personnel.
  - **Organization’s Client References:** Proposals should indicate the name, title, and telephone number of at least three clients within the past three years.
- Proposals must be no more than 10 pages in length with a font size no less than 11 points. This length limit **does not include** the Proposal Submission Form, Organization’s Project Experience, Team Member Experience, Organization’s Client References and optional cover letter (if included, one page maximum).
- Proposals must be submitted as one combined PDF document. The submission should **only include the required documents** organized in the following order: 1) Proposal Submission Form; 2) Cover Letter (Optional; 1 page maximum); 3) Body of Proposal (including work plan); 4) Organization’s Project Experience; 5) Team Member Experience; and 6) Organization’s Client References.
- The Offeror must respond to this RFP by submitting all the information required herein for its proposal to be evaluated and considered for award. Failure to submit all the required information shall be deemed sufficient cause for disqualification of a proposal from consideration.
- Proposals will be evaluated by an agency and stakeholder team with knowledge and backgrounds in relevant areas for this project. Selection of the successful Offeror will be based on the Offeror’s demonstrated knowledge in the required areas, the merit of the proposed methods and approach in achieving the desired goals, the experience and qualifications of the team, the plan for ensuring implementation of results, and the adequacy and availability of team members to complete the work in a timely manner.
  - Correct proposal submission is one of the evaluation criteria. If submission instructions in this section are not followed, the **Offeror risks an automatic 10 point deduction (out of 100 total points)** when points are awarded during the Proposal Evaluation Process.

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## RFP Schedule

This document constitutes an RFP from qualified organizations to conduct the **TR202212, Mitigating and Preventing MoDOT Safety-Related Incidents through Root-Cause Elimination and Utilization of Leading Safety Indicators** study for the MHTC and Missouri Department of Transportation (MoDOT). MHTC reserves the right to reject any and all proposals for any reason whatsoever.

The following RFP Schedule of Events represents MoDOT's best estimate of the schedule that shall be followed. The time of day for the following events shall be between 7:30 am and 4:00 pm, Central Standard Time unless otherwise noted. MoDOT reserves the right at its sole discretion to expand this schedule, as it deems necessary, without any notification except for the deadline date for submitting a proposal. Time is of the essence for responding to the RFP within the submission deadlines.

The following timeline must be met for a proposal to be accepted.

Date	Action
2/10/2022	MoDOT posts RFP to the website at <a href="https://www.modot.org/research-requests-proposal">https://www.modot.org/research-requests-proposal</a> .
3/1/2022 4:00 PM (CST)	Written comments or questions must be submitted to <a href="mailto:MoDOTResearchRFP@modot.mo.gov">MoDOTResearchRFP@modot.mo.gov</a> .  This is the only acceptable method for contact regarding the RFP and contacting MoDOT employees via other methods is prohibited. Not adhering to this rule is cause for disqualification of the proposal. This includes all requests for information, data, and manuals.
3/15/2022	MoDOT will post written responses publicly on the website at <a href="https://www.modot.org/research-requests-proposal">https://www.modot.org/research-requests-proposal</a> .
3/29/2022 10:00 AM (CST)	Written proposals must be submitted to <a href="mailto:MoDOTResearchRFP@modot.mo.gov">MoDOTResearchRFP@modot.mo.gov</a> . Do not consider your proposal submitted until you receive notification of receipt. A notification should be sent by noon of the same day.
4/19/2022	MoDOT will notify submitters about project selection, or if needed about interviews to finalize selection.

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## Contracting Requirements

The successful team will be required to complete additional documentation and enter into a contract such as a "Standard Research Agreement" or "Task Order." Applicants should be aware of these additional needs so contracting can proceed in a timely manner.

As part of the eAgreements process, MoDOT uses an electronic signature tool, DocuSign, for signing agreements electronically. All parties of the agreement must agree to sign electronically in order to utilize the electronic signature option. If your proposal is selected, you will be informed about how to obtain your credentials for electronic signatures (including how to become a MoDOT vendor if you are not already).

Standard contracts, forms, attachment templates and additional information are available from the website at <https://www.modot.org/information-researchers>.

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## Proposal Submission

### Submission Deadline

Proposals must be emailed by **10:00 AM (Central Standard Time)** according to email time stamp by the submission date in the RFP Schedule to the Research Director's attention (Jen Harper) at: [MoDOTResearchRFP@modot.mo.gov](mailto:MoDOTResearchRFP@modot.mo.gov). Please reference the project title since more than one RFP may be due at one time. Electronic proposals are required.

### Submission Confirmation

You will receive an email confirmation after your proposal has been received. If you do not receive such a confirmation by **12 noon (Central Standard Time)** on the day of the deadline, please contact us at [MoDOTResearchRFP@modot.mo.gov](mailto:MoDOTResearchRFP@modot.mo.gov) as soon as possible. Your submission should not be considered received until you have received your email confirmation.