

March 1, 2023

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 **TR202219** entitled, “**HFST Review.**” 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 by **April 26, 2023 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



Background

MoDOT began using High Friction Surface Treatments (HFST) in 2013. Since then, over 200 individual HFST sites have been constructed. HFSTs are an effective safety improvement, increasing the driving surface friction of pavements. They are costly to install and, in some situations, have begun to deteriorate quickly. This project will look at the large number of HFSTs placed over the years to see how they are performing. It should be noted that past research has shown if a treatment starts having signs of deterioration, it can continue to provide good friction values. HFST is strictly a safety improvement and not a maintenance treatment, therefore the condition of the pavement prior to installation of the treatment is important and will be reviewed as part of this project.

Objectives

The safety of the traveling public is a primary goal. Areas having high incidents are continuously being reviewed to make these locations safer. The use of HFST has shown to improve safety conditions, however placing these treatments on deteriorating pavements results in decreased life expectancy of the treatment and is then no longer cost-effective.

MoDOT's objective is to evaluate and rate the pavement (asphalt and concrete) conditions prior to installation of HFST and assess how they are holding up over time to determine at what pavement condition level prior to treatment results in premature deterioration.

It is anticipated this project will be performed by evaluating pavement conditions utilizing ARAN video, Google Earth, or other methods determined by researchers.

The selected Research Team will need to be approved for use of a MoDOT virtual machine and agree to background check to access the MoDOT network.

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 surrounding DOTs to see how they determine if their pavements are sound enough for a HFST.

Task 3: Produce Rating Scale for Pavements

The Research Team will propose a rating scale for determining pavement condition prior to HFST treatment, this scale shall include pictures for reference. This scale shall be presented to MoDOT for approval prior to moving forward. This presentation can be either in-person or virtual.

Task 4: Pavement Rating

MoDOT will provide a spreadsheet of treatments along with a Google kmz file of locations to selected research team. The researcher shall build off this information to develop pavement rating over time for locations. The researcher shall propose how many locations they will evaluate over time. The researcher shall work with MoDOT to choose locations. This task should look for areas where premature failure is occurring and find correlations. Early failure could be due to poor pavement condition prior to treatment or other reasons such as construction failure, rainfall close to placement, weather extremes during placement, and freeze/thaw cycles during the life of the treatment. The research team should propose their plan for this task.

Task 5: Draft Report and Research Summary

The Research Team will develop and submit draft report and research summary for MoDOT's review.

Task 6: Final Report, Research Summary and Final Presentation

The Research Team will submit the final report, research summary and data collected. The Final Presentation shall include recommendations for implementation.

Project Deliverables

Templates and forms for reports and plans are located at, <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 data management 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 of Proposed Rating Scale

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](#).

Final Presentation

A final presentation may be required. 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 Team, especially related to implementation.

Task-Specific Deliverables

Task	Deliverables
1	Schedule and conduct kickoff meeting. Submit work plan. Kickoff meeting minutes.
2	None (literature search).
3	Produce rating scale with presentation.
4	Selection of pavement locations. Pavement rating spreadsheet.
5	Draft report, research summary.
6	Final report, research summary and final presentation.

Project Schedule

The following is an estimate of the project timeline and information on key dates within the project, presuming the project starts **June 1, 2023**. 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. If the Research Team believes the project can be completed sooner, please include a revised schedule with the proposal. 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
6/15/2023	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.
12/14/2023	Suggested pavement rating scale and presentation.
4/13/2024	Selection of pavement locations. Pavement rating spreadsheet.
9/19/2024	Draft final report, draft summary report, and pavement rating spreadsheet are due. The draft documents shall be submitted to MoDOT approximately two months prior to the final report.

Date	Milestone
11/21/2024	Final report, summary report, presentations, and pavement rating spreadsheet 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.
12/19/2024	Final invoice due.
12/19/2024	Contract ends.

Special Notes

Project budget is not to exceed **\$200,000**. 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 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. Contacting MoDOT employees via other methods is prohibited. Not adhering to this rule is cause for disqualification of the proposal.

RFP Requirements

- "Contracting Documents" provide further details and links to the required forms. They are available at <https://www.modot.org/information-researchers>.
 - **Contractor'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.
 - **Contractor'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, Contractor's Project Experience, Team Member Experience, Contractor'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 and project schedule); 4) Contractor’s Project Experience; 5) Team Member Experience; and 6) Contractor’s Client References.

- Proposals in response to this RFP must include all required information for the 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 Contractor will be based on the Contractor’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 Contractor **risks an automatic 10 point deduction (out of 100 total points)** when points are awarded during the Proposal Evaluation Process.

RFP Schedule

This document constitutes an RFP from qualified organizations to conduct the **TR202219, “HFST Review”** 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 (CST) 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
3/1/2023	MoDOT posts RFP to the website at https://www.modot.org/research-requests-proposal .
3/22/2023 4:00 PM (CST)	Written comments or questions must be submitted to MoDOTResearchRFP@modot.mo.gov . 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.
4/5/2023	MoDOT will post written responses publicly on the website at https://www.modot.org/research-requests-proposal .

Date	Action
4/26/2023 10:00 AM (CST)	Written proposals must be submitted to MoDOTResearchRFP@modot.mo.gov . Do not consider your proposal submitted until you receive notification of receipt. A notification should be sent by noon of the same day.
5/17/2023	MoDOT will notify submitters about project selection, or if needed about interviews to finalize selection.

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>.

Proposal Submission

Submission Deadline

Proposals must be emailed by **10:00 AM (CST)** 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. 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 (CST)** on the day of the deadline, please contact us at MoDOTResearchRFP@modot.mo.gov as soon as possible. Your submission should not be considered received until you have received your email confirmation.