

Missouri Department of Transportation
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September 6, 2016

Dear Proposers:

The Missouri Highways and Transportation Commission requests proposals from qualified organizations—potentially private contractors, consultants, universities, or research organizations—to develop and implement a pilot project demonstrating that interstate travelways can become a platform to generate revenue through the collection and transmission of technology and data services.

We anticipate the process will consist of the following phases; an Initial Proposal, confidential meetings to refine the proposal, submittal of Final Proposal, selection and contract execution.

Proposals will be evaluated based on best value by the selection committee. MoDOT's financial participation will be limited to a maximum of the equivalent facility cost. A cost breakdown shall be included with the proposal submissions.

Please deliver Initial Proposals to the project sponsor in accordance with the attached Request for Proposals.

Brian Kidwell, P.E.
Project Sponsor



SMART HIGHWAYS RFP

Introduction and Background:

Over a year ago, the Road To Tomorrow initiative was started. This initiative sought ideas that fell into two areas. The first was innovative technology. This is technology that is currently not being used by our highway systems, but will be in the near future. MoDOT is providing a laboratory to test these ideas. In addition to the innovative technology, MoDOT is seeking innovative funding streams. It is believed that the technology of the future will not only provide safety and comfort in our daily drives, but there is the potential that revenue could be generated.

After a year of looking into these two areas, MoDOT believes that there is the potential for a pilot project to be set up in order to test these two ideas. MoDOT is offering our roadways as a laboratory for innovation, actively seeking innovations that support this goal of generating revenue. In order to enable this vision, there will be a pilot project to specify, design, build and test a small-scale installation of the envisioned interstate system to determine if the concept is sound and could support the intended use.

Objectives:

The objective of this pilot project is to demonstrate that interstate infrastructure can become a platform for technology and data services. Specifically, MoDOT desires to demonstrate the capability of this infrastructure to provide marketable services that, on a larger scale, have the potential to become a significant source of revenue.

The successful Proposer will be involved with management, design, construction, quality control of the project and also the testing, or ‘proof of concept’ of the pilot project.

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Procurement Process:

This Request for Proposals (RFP) process will rely on the Proposers' creativity and initiative to facilitate a multi-phased discussion process. Through this discussion process the majority of the technical requirements and innovative solutions will be developed. MoDOT reserves the right to terminate the relationship with the Proposer at any point in the procurement process. The anticipated phases of the RFP process will be:

- Initial Proposal – Proposers will submit their Initial Proposals including their team composition and previous work experience, a description of the innovation to be implemented, expected costs and benefits, anticipated timeline for implementation and testing and the proposed test location.
- Technical Discussions – After receiving Initial Proposals, MoDOT will participate in a series of confidential meetings with each Proposer to discuss and further develop their innovative concepts and any proposed alternate standards or design exceptions that may be required. The parties will discuss information to be presented in the Final Proposal and how it aligns with the desires of MoDOT on this Project. During the discussion phase absolutely no information shall be shared from one Proposer to another. It is to the Proposers' advantage to provide detailed technical concepts during these confidential meetings in order to receive feedback, leading to the highest quality Final Proposal possible. To the greatest extent possible, MoDOT will provide feedback to the Proposers on whether the technical concepts presented achieve or exceed the project goals and will discuss perceived weaknesses or deficiencies so improvements may be made by the Proposer. MoDOT will maintain a minimal core presence at the Proposal discussion meetings, but may include technical experts for specific relevant discussions.
- Final Proposal– MoDOT will evaluate Final Proposals to determine the apparent best value. Final Proposals will be evaluated by an owner team with knowledge and backgrounds in relevant areas for this project.
- Contract Selection/Award – MoDOT anticipates awarding a contract to the Proposer with the apparent best value, least perceived risk proposal. Selection of the successful Proposer will be based on the following areas in priority order:
 - Ability to generate future revenue. (50%)
 - Scalability of the pilot project
 - Validation of concept from industry experts
 - Completeness of overall plan and financial model
 - Risk (25%)
 - Location is beneficial to MoDOT – Currently programmed project in the [STIP](#) is preferred
 - Low impact to traffic during construction and testing phases

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- Contracting method – MoDOT awarded project or let by others?
- Durability
- Compatibility with future technology

- Team (15%)
 - Qualifications of key personnel and major participants
 - Past performance using AASHTO design criteria
 - Past performance delivering heavy highway construction projects

- Cost (10%)
 - Ability to minimize MoDOT’s financial participation

After selection, the Contract/Agreement/Permit will be negotiated to incorporate modifications, if any, and subsequently executed. MoDOT and the successful proposer, each reserve the right to terminate negotiations at any time prior to contract execution without cause, penalty or obligation.

- Procurement Schedule – Deadlines for submitting RFP questions and the Final Proposal are shown below. This schedule is subject to revision by addenda to this RFP.

Item	Schedule
Issue Request for Proposals (RFP)	September 6, 2016
Initial Proposals Due	October 31, 2016
Initial Technical Proposal Discussions	November – December 16, 2016
Final Proposal and Price Allocation Due	January 16, 2017, 4:00 PM CST
Selection of Apparent Best Value	February 2017
Negotiations with Apparent Best Value Proposer and Execute Contract	March 2017

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Proposal Requirements:

This section describes specific information that must be included in the Proposal:

- The Proposal minimum font size is 11 points. Three (3) printed and bound hard copies shall be provided, and one electronic (PDF) copy in a single file deliverable on a flash drive.
- The Proposal shall identify the lead organization and roles and responsibilities of primary members of the team. Primary members should include design firms, construction firms or any other participants.
- Any proposed design work or construction on MoDOT right-of-way shall meet industry standards, MoDOT, FHWA, and AASHTO requirements unless additional standards are proposed and accepted by MoDOT. The Proposers are encouraged to propose alternative technical concepts that meet the objectives of the project for MoDOT review prior to submittal.
- The Proposal shall make commitments of specific technology, services or capability that will be incorporated into travelways for testing to meet the objectives of the project. This should also include a summary of performance measures proposed to evaluate the technology. This section shall not exceed twenty (20) pages.
- The Proposal shall include a total project cost as well as a breakdown of such cost, specific funding sources, and relate to a work plan and milestone dates. The prices submitted shall be fixed prices. MoDOT's desired payment availability is limited to a maximum of the equivalent facility cost. At its sole discretion, additional funds may be made available during the final contract negotiation process, if MoDOT determines that additional funding is in its best interest.
- The Proposal shall include milestone dates. Included in the schedule shall be the following:
 - Kick-off meeting date. Upon execution of the contract MoDOT will host a meeting with the successful proposer to discuss project requirements and deliverables.
 - Date(s) of update meetings. Update meetings related to work accomplished shall be scheduled at least quarterly during the course of the project.
 - Design Schedule (including review and approval periods)
 - Permitting, if any.
 - Date(s) of anticipated traffic impact(s).

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- Date any new infrastructure constructed will be complete and operational.
- Test period timeline and date the test period will be complete.
- Date final report will be submitted. A final report will be required and must have the standard documentation form completed and should have sections consistent with the typical research report. For report templates and a standard form see www.modot.org/services/OR/orTemplates.htm
- Date of final presentation. A presentation will be required where the Proposer will present the results, recommendations and implementation ideas to MoDOT and other stakeholders. MoDOT and stakeholders will provide feedback to the Proposer especially related to implementation.
- The Proposers shall identify their specific approach to the following items (not included in the technology portion):
 - Define the project limits, including a high level graphic plot of the Project Plan and profile views at 1" = 200' scale.
 - The methods and standards used in pavement design. The location of proposed pavement types.
 - Define the design speed of any pavements to be constructed/reconstructed
 - Specify what materials will be used for drainage pipes in various applications (i.e. under mainlines, under local roads, on bridges, etc.).
 - The methods and standards used to design and construct Traffic Management Systems.
 - The method used to determine super elevation rates.
 - The methods and standards used to design and implement erosion control devices.
 - The methods and standards for guardrail/guard-cable and type/height of median barrier for mainline.
 - The methods and standards for designing and constructing MSE/retaining walls
 - A description of the Proposers construction staging and phasing plan for the Project.
 - Describe the typical section, minimum lane widths, shoulder widths, lane shifts/tapers and design speed to be used during construction.

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Project Deliverables:

This section describes specific information that will be a deliverable at the conclusion of the research project:

- Final signed and sealed as-built plans by a registered professional engineer licensed to practice in the state of Missouri for the project including plan and profile sheets and any other necessary sheets to define the project.
- Smart Roadway. This includes construction of all elements expressly defined in the proposal. At the conclusion of the testing phase all elements will be commission retained, unless expressly defined as proposer retained in the proposal.
- Final report. The report shall include how each of the elements or services performed based on the performance measures included in the Proposal. The final report should also include any final recommendations.

Contact Information:

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