State of Florida
Department of Transportation
Central Procurement Office
605 Suwannee Street, Mail Station 20
Tallahassee, Florida 32399-0450

REQUEST FOR INFORMATION

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RFI Number: DOT-RFI-20-9020-CA

Title: Request for Information on Smart Work Zones

Response Due Date & Time (On or Before):

REQUEST FOR INFORMATION (RFI) from the Florida Dept. of Transportation

The Florida Department of Transportation (FDOT) is requesting information from prospective vendors about the commodities and contractual services described below. This is not a formal procurement.

Smart Work Zones for Safety and Mobility on Florida's Roadways

FDOT will leverage the Connected and Automated Vehicle (CAV) Program and technology applications, along with Intelligent Transportation System (ITS) to create Smart Work Zone (SWZ) projects for initial pilots and later full-scale deployments. These projects will be integrated into future interstate and arterial resurfacing, construction, and widening projects. The deployed technologies will be evaluated for their potential benefits, learned lessons, and SWZ applications for deriving safety and mobility benefits. The goal of this RFI is to seek information from industry, and to prepare for SWZ deployments to enhance the safety and mobility of the driving population and the workers in the work zones.

FDOT is interested in acquiring information, knowledge, capabilities and technologies about the SWZ solution providers. FDOT requests the following information about SWZ systems by leveraging CAV applications and ITS equipment.

1. What type of detection does your system utilize to detect vehicles and their classifications that are entering in the work zone?
2. How does your system communicate/broadcast real-time information of existing work zone and who is the end user?
3. What type of communication modes does your system use?
4. How does your system monitor the work zone activities after deploying the SWZ system?
5. Does your system collect and store the historical and real-time data? If yes, what data are collected? Please explain in detail all the data that are being collected along with data types and data storage needs.
6. How frequently are the data collected and for how long the data be retained on a typical work zone project?
7. Explain the data analysis and evaluation process for the data being collected.

8. Does your system allow data sharing? If yes, who can access that data and how many user accesses are simultaneously allowed? Is the user access paid for data access?
9. What CAV and ITS applications does your system provide? Please highlight any safety, mobility, economic and environmental benefits of the proposed applications.
10. Can your system utilize the existing infrastructure for communication purposes? Please specify what devices or infrastructure are necessary for your system to interact with existing system?
11. Please specify the existing and future hardware and the software requirements for your system to perform along with a tiered cost estimate with return on investment justification, if available.
12. Do you have any existing partnerships with other work zone transportation entities and SWZ technology providers?
13. Do you have any experience with SWZ pilot projects or demonstrations? If yes, please provide detailed information.
14. If your product is not already on FDOT's Approved Products List (APL), how soon can you submit your product for testing at the Traffic Engineering Research Laboratory (TERL)?
15. Describe if your system can be integrated with SunGuide interface/software? Describe your approach either way.
16. Does your system require the user to purchase proprietary software and are there recurring licensing and/or other fees associated with your device software?
17. Is your system compatible with the current FDOT specifications or need any changes?
18. Are your products capable of communicating with On-board Units (OBUs), smartphone-based applications, and Roadside Units (RSUs)? If so, please list the make and models of OBUs and RSUs your devices have been tested for compatibility?
19. Is your system capable of being integrated with Regional Transportation Management Center (RTMC) or Traffic Management Center (TMC)? Can you provide an interface for the TMC operators to monitor the live work zone? Does your system provide central control system?
20. Given FDOT's interest in providing SWZ applications, what other value-added features you have that will improve the system?
21. How does your system address lane additions, lane shifts, work zone shifts, speed limit changes, etc. in real time? Also, is there a live mapping solution that allows for map updates and disseminating information to RTMC and/or crowdsource solutions such as Google Maps, Waze, etc. in real time?
22. How does your solution integrate with connected vehicle equipment/applications such as RSUs, OBUs, and Personal Identifiable Information (PII) for worker safety?
23. Can you provide any evaluation studies related to your system application?

FDOT is looking for information and all options regarding practical solutions to carry out the objectives of the SWZ pilot project as described in the information provided above. Based on the results of this Request for Information (RFI), the FDOT will decide how best to pursue the deployment of an engineered solution that includes all equipment and material necessary to install, configure, test, and operate a complete and functional system as well as design, installation, configuration, and technical support services from the system vendor.

Specific Information Requested

FDOT is seeking information in support of a solution to meet the project objectives. Specifically, the Department expects any interested vendors to respond to the following:

1. *Summary of Experience*
   FDOT is interested in a summary that describes your organization's experience with CAV, detection, and traffic control systems pertinent to work zone management. Specifically, provide information on systems that you have designed, integrated, and installed, resulting in improved work zone safety. Provide examples of projects with comparable size and goals that achieved demonstrable success.

2. *Description of Recommended System*
   FDOT is interested in a description of the proposed system that provides the functionality desired by the FDOT, including an operational concept, explanation of key components and technologies, and descriptions of system operation, features, and functions. Include sample scenarios of a work zone to help describe typical operation and functions.

3. *System Block Diagram*
   FDOT is interested in a system block diagram that illustrates all components and connections included and required to create the proposed system. Identify required hardware, software, and power and data connections, as well as protocols used for data exchange between components.

4. *Typical Site Diagrams*
   FDOT is interested in site diagrams that illustrate the recommended placement of devices at a work zone site. Identify the coverage areas that can be achieved using the detection system sensors and the recommended placement shown in the site diagrams.

5. *Hardware Information*
   FDOT is interested in datasheets and technical specifications for components included and required to create the proposed system, including electronic devices, mounting brackets, hardware, and cabling. Indicate the minimum version of firmware and software required on electronic devices.

6. *Software Information*
   The FDOT is interested in information on all software components included and needed to create the proposed system. Identify the required operating systems, applications, and all other software components.

7. *Cost Estimates*
   The FDOT is interested in rough order of magnitude cost estimates to furnish and install the proposed system at a work zone.

8. *Project Approach*
   The FDOT is interested in the approach that your organization would take to deliver the engineered solution desired by the Department, including roles and responsibilities of key personnel (e.g., project management, design, installation, testing, and support). Provide resumes for key personnel identified.

The Department may exercise the choice to **invite each vendor that fully responds to the questions above to meet and discuss the information provided in more detail**. Any information provided via this RFI and during the meetings will be subject to public disclosure.

Please provide one copy of the response to this RFI on CD, DVD, or a flash drive.

Contact for Questions or clarification:

Please email Eugene Jules at **eugene.jules@dot.state.fl.us** with any questions

or comments.

The requested information must be received by 5:00 pm (EST) on Tuesday, August 20, 2019.

Responses should be submitted by mail to the following address:

The Florida Department of Transportation
Attention: Raj Ponnaluri
Subject: Smart Work Zones (SWZ) Pilot Project.
Mail Station 90
Tallahassee, FL 32399

NOTE: Responses to this RFI are public record and will be reviewed by the agency for informational purposes; responses will not be considered as offers to be accepted by the agency to form a binding contract. Advertisement of any subsequent competitive solicitation that may result from this RFI will be posted on the Florida Vendor Bid System.

If the responses this RFI are subject to non-disclosure, then the Proposer must include any materials it asserts to be exempted from public disclosure under Chapter 119, Florida Statutes, in a separate bound document labeled "Confidential Material". The Proposer must identify the specific Statute that authorizes exemption from the Public Records Law. Any claim of confidentiality on materials the Proposer asserts to be exempt from public disclosure and placed elsewhere in the proposal will be considered waived by the Proposer upon submission, effective after opening.