

**REQUEST FOR INFORMATION
REGARDING DATA GATHERING SENSORS FOR ADAPTIVE LIGHTING
CONTROL SYSTEMS**

ILLINOIS DEPARTMENT OF TRANSPORTATION

Request for Information Title: **Request for Information (RFI) – Data Gathering Sensors for Adaptive Lighting Control Systems**
RFI Issuance Date: **January 3, 2020**
RFI Questions Deadline: **January 24, 2020**
Information Due Date: **February 3, 2020**
Information Due Time: **2:00 p.m. (Central time)**
Reference No.: **2020-25**
Official Procurement Site Bulletin:
<https://webapps.dot.illinois.gov/WCTB/ConstructionSupportProcurementRequest/BulletinItems>

<p>QUESTIONS: Questions regarding general RFI procedures should be directed to:</p> <p>Illinois Department of Transportation Business Services, Attn: Crystal Blakeman 2300 S Dirksen Parkway, Room 009 Springfield, Illinois 62764 Telephone: (217)782-3061</p> <p>Crystal.Blakeman@illinois.gov</p>	<p>SUBMITTALS: Send RFI response by the above due date and time electronically to: Crystal.Blakeman@illinois.gov</p> <p>Only submittals sent to the above e-mail address will be considered.</p> <p>If requesting a one-on-one meeting, send one hard copy and email of the RFI One-on- One Meeting Request Form to:</p> <p>Illinois Department of Transportation Business Services, Attn: Crystal Blakeman 2300 S Dirksen Parkway, Room 009 Springfield, Illinois 62764</p>
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1. INTRODUCTION

A. Overview

This Request for Information (RFI) is to gain a further understanding of the various data gathering sensors from manufacturers or their representatives that can be incorporated into Adaptive Lighting Control Systems (ALCS) with the intent of identifying which sensors can be of benefit to the Illinois Department of Transportation (IDOT) and the State.

IDOT's primary goals in this area are to:

- 1) Operate and maintain a highway network that provides safe and efficient movement of people and goods across the State.
- 2) Improve system operations and adopt technologies to provide for an efficient and safe network, and accommodate future technologies implemented by system users and transportation partners.
- 3) Maximize the use of State assets to benefit and improve the quality of life for the State populace.

Objective:

The objectives of this RFI are to gain knowledge of “smart” infrastructure technologies regarding various sensors (Internet of Things) compatible with ALCSs that have capabilities such as gathering data for traffic counting, crash detection, traffic movement including cueing, air quality monitoring, noise monitoring, roadway icing, bridge deterioration, and roadway icing. This list is not all inclusive, so it is hoped that through this RFI, more devices and technologies can be identified.

Also, IDOT hopes to learn more about future possibilities that will aid with autonomous vehicles for movement of passengers and roadway freight hauling.

B. Purpose

The purpose of this RFI is to obtain information from interested parties that will assist IDOT with identifying compatible sensing devices with ALCSs for the benefit of IDOT and the State.

Before a Request for Proposal (RFP), Invitation for Bid (IFB), or any other type procurement document pertaining to future projects, IDOT has determined it would be advantageous to gather input from industry, including manufacturers or their vendors experienced in this technology.

This RFI does not constitute a Request for Qualification (RFQ), RFP, IFB or other solicitations, nor does it constitute the commencement of any other type of procurement process for lighting maintenance or upgrades. Moreover, it does not represent a commitment to issue an RFQ, RFP, or IFB or to otherwise commence any other type of procurement process for highway lighting proposals in the future. Therefore, those choosing to respond to this RFI will not be deemed “bidders” and no such respondent will have any preference, special designation, advantage, or disadvantage whatsoever in any subsequent procurement process related to ALCSs or upgrades. This RFI is for information and

planning purposes only.

C. Who Should Respond to this RFI

IDOT seeks input from companies focused on smart infrastructure technologies and other entities familiar with smart technologies. The respondents should be actively involved and knowledgeable with systems capable of collecting data of various types for use in evaluating traffic and environmental issues that are of concern to IDOT.

Also, it would be helpful if the respondents were involved in smart technologies that will enable the connected and autonomous vehicle ecosystem. Pursuant to this, IDOT requests input from the respondents as to the present state and future of these technologies.

D. Next Steps

Following close of date of the RFI, certain respondents to this RFI, as determined by IDOT, may be invited to participate in subsequent one-on-one meetings. Please complete the attached form and submit it to the address on Page 1 on or before **February 3, 2020** if you would like to participate in a one-on-one meeting. Holding the one-on-one meetings is at the sole direction of IDOT and at a date to be determined later. The purpose of the meetings is to allow IDOT to ask follow-up and clarifying questions to the responses.

E. Form of Response

Written responses should be no longer than 15 pages double sided including the one-on-one meeting request form (excluding the cover page), with a font no smaller than 12 points. Marketing materials are not to be submitted as part of a written response. Please respond to the questions contained in the attached RFI Questionnaire in numerical order, clearly identifying the question numbers. Respondents are not obligated to answer all questions and may respond only to questions of interest to them. Respondents may also include additional comments or suggestions at the end of their response. If you elect not to respond to a question in the RFI Questionnaire, please note the question number and state “No response.”

F. Confidentiality/Public Records Law

Respondents are advised that all written materials submitted by a respondent to IDOT in response to this RFI or in a one-on-one meeting are public records subject to the Illinois Freedom of Information Act, 5 ILCS 140/1 *et seq.* (the “**Illinois FOIA**”).

Under Section 7 of the Illinois FOIA, certain public records may be exempt from disclosure under the Illinois FOIA. This includes information which, if it were disclosed, would frustrate a procurement or give an advantage to any proposer. (See Section 7(1)(h) of the Illinois FOIA.) Generally, however, responses to RFIs and information documented in the procurement file are subject to disclosure once an award is made or the procurement is otherwise concluded. IDOT does not intend to invoke Section 7(1)(g) of the Illinois FOIA as grounds for withholding information provided by respondents to IDOT pursuant to this RFI. Accordingly, respondents are advised not to include in RFI responses any information that the respondent considers trade secrets or commercial or financial information that is proprietary, privileged or confidential or that would cause competitive harm if disclosed.

A person whose request for public records is denied by IDOT, on the grounds of exemption under Section 7 or otherwise, has the right to request a review of such denial by the Public Access Counselor established in the Office of the Illinois Attorney General, in accordance with Sections 9 and 9.5 of the Illinois FOIA. A person whose request for public records is denied also has a right to judicial review of such denial pursuant to Section 11 of the Illinois FOIA.

Respondents are encouraged to familiarize themselves with the Illinois FOIA and any other laws and regulations applicable to the disclosure of documents submitted with this RFI and to the issue of confidentiality and public information (collectively, the “**Public Records Laws**”).

IDOT will not advise a respondent as to the nature or content of documents entitled to protection from disclosure under the Public Records Laws or as to the interpretation of such laws. Each respondent shall be solely responsible for all determinations made by it under applicable laws. Each respondent is advised to contact its own legal counsel concerning the effect of Public Record Laws on that respondent’s own circumstances.

In the event of any proceeding or litigation concerning the disclosure of any response or portion thereof, or any other documents submitted by a respondent to IDOT, the respondent shall be responsible for prosecuting or defending any action concerning the materials at its sole expense and risk; provided, however, that IDOT reserves the right, in its discretion, to intervene or participate in the litigation in such manner as it deems necessary or desirable. All costs and fees (including attorneys’ fees and costs) incurred by IDOT in connection with any litigation, proceeding, or request for disclosure shall be reimbursed and paid by the respondent whose response or other documentation is the subject thereof.

Nothing contained in this RFI shall modify or change IDOT’s obligations under the Illinois FOIA or other applicable law.

2. THE PROJECT

IDOT believes incorporating ALCSs with other smart technologies to the State highway lighting assets will benefit the residents of Illinois by providing a safer, more efficient, and accessible highway system, while also improving the quality of life. Additionally, smart technologies may present opportunities to improve public safety, monitor system congestion and asset conditions, collect and disseminate data through V2I and V2X technologies, improve network connectivity across the State, and potentially provide revenue as CAVs are deployed.

The anticipated scope of work of the Project is to select an assortment of various intelligent sensors for incorporation with an existing ALCSs at several lighting projects at multiple locations across the State.

Considering these objectives, please provide your answers to RFI Questionnaire.

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RFI QUESTIONNAIRE

Completed by:

Association/Organization Name (if applicable)

Association/Organization Representative Name (or individual's name if no affiliation)

Address

City, State, Zip

Phone Number / Email Address

Association/Organization Representative Signature (or individual's signature if no affiliation)

Please respond to the following list of questions to the extent relevant to your organization's experience.

General

- 1) Describe your company or organization's primary business activity or purpose.
- 2) What is your company or organization's experience in designing, installing, maintaining, or operating sensors used to collect data for roadway applications? Is your company or organization involved in highway lighting, LED luminaires, smart technologies and components, "internet of things" (IoT) applications, and/or communications networks?
- 3) Describe any specific project experience your company or organization has related to the design, installation, maintenance, or operation of intelligent lighting and data collection using various sensor technologies that involved highway lighting, LED luminaires, or smart technologies. Include any details related to the project scope(s) and contracting mechanisms that were used in the aforementioned projects.
- 4) What aspect of an ALCS, data collection, and/or highway lighting projects would your company or organization be interested in?

Project Scoping and Smart Technology Considerations

- 5) What are the key value drivers and considerations for IDOT in developing the Project?
- 6) How can IDOT achieve its primary goals of collecting and using roadway data in conjunction with ALCS systems within reasonable funding levels?
- 7) What are the potential advantages and disadvantages of an ALCS with intelligent sensing devices from the same or different providers?
- 8) What opportunities may be available for IDOT to generate additional revenue from the collection of roadway data through and ALCS?
- 9) What are potential Project scope elements for IDOT to consider, and what are the advantages and disadvantages of each?
- 10) How can IDOT achieve the best possible long-term performance from sensors installed on an ALCS? What is a typical term for warranties and/or performance guarantees in the current market?
- 11) What is the best way to pilot existing sensor technology in association with an ALCS to acquire key roadway data?
- 12) Are there specific new technologies that should be used that would be beneficial to this type of project? If so, please describe in detail.
- 13) What additional information not provided in this RFI would you need before submitting a proposal?

- 14) What potential smart technologies in addition to the types of sensors already mentioned should IDOT consider relative to the highway lighting network (e.g.: DSRC, small cell, 4G LTE, possible 5G as well as IoT sensors and nodes)?
- 15) Describe any cyber security/data security challenges and recommendations related to sensors and data collection through an ALCS that IDOT should be considering.
- 16) How would your company or organization leverage or use an ALCS to deploy roadway sensors?
- 17) Would there be interest from your company or organization in establishing its own backhaul network in lieu of using an ALCS to collect and deliver the data? If so, how would this network positively or negatively affect the Project?
- 18) Please describe what data would be collected and exchanged between IDOT and your company or organization
- 19) Please indicate your company or organization's approach and willingness to share Application Programming Interfaces (APIs) with IDOT.

One-on-one meeting

Please indicate on the attached form with your RFI submittal if you would like to participate in a one-on-one meeting and provide contact information on or before **February 3, 2020**.

Question Submission

Please submit all questions concerning the RFI to IDOT at Crystal.Blakeman@illinois.gov by **January 24, 2020**. All questions received by the deadline indicated below will be answered and posted to the Illinois Procurement Bulletin:
<https://webapps.dot.illinois.gov/WCTB/ConstructionSupportProcurementRequest/BulletinItems>

Only responses sent to **Crystal.Blakeman@illinois.gov** mailbox will be accepted.

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RFI ONE-ON-ONE MEETING REQUEST

If you will be responding to this RFI and would like to participate in a one-on-one meeting, please complete the information below and submit by 2:00 p.m. (Central time) on February 3, 2020 via email to: Crystal.Blakeman@illinois.gov

Completed by:

Association/Organization Name (if applicable)

Association/Organization Representative Name (or individual's name if no affiliation)

Address

City, State, Zip

Phone Number / Email Address

Association/Organization Representative Signature (or individual's signature if no affiliation)