



1401 E Broad St
Richmond, VA 23219

**REQUEST FOR INFORMATION (RFI)
106-FH-12**

< This is NOT a Bid Solicitation >

The Virginia Department of Transportation (VDOT) is seeking information to assist it in developing a procurement strategy for, and implementing an innovative procurement approach to, the operations and maintenance of five (5) Transportation Operations Centers (TOC), related field communications and Intelligent Transportation System (ITS) infrastructure. VDOT's high level goal is to increase TOC interoperability and efficiency, as well as emphasize a performance driven approach for TOC operations.

PROJECT TITLE: VDOT Transportation Operations Center and Advanced Transportation Management Systems Services

ISSUE DATE: January 18, 2012

CONTRACT OFFICER: Frederick Haasch **PHONE:** (804) 786-2764
FAX: (804) 225-4292

RESPONSES DUE: No later than *Friday, February 17, 2012 at 5:00pm ET* To: frederick.haasch@vdot.virginia.gov

Name and Address of Firm:

Name _____ Date _____
Address _____ By _____
Signature In Ink

Print Name and Title

eVA # or DUNS # _____ Phone _____

E-Mail _____ FAX _____

NOTE: This public body does not discriminate against faith-based organizations in accordance with the *Code of Virginia*, § 2.2-4343.1 or against a bidder or offeror because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment.

1. PROJECT OVERVIEW

The Virginia Department of Transportation (VDOT) is exploring a comprehensive approach for Transportation Operations Centers (TOC) operations that effectively leverages private sector innovation, expertise and investment. Currently, VDOT operates five TOCs with different organizational structures and utilizes numerous contracts to manage and provide TOC staff, maintain Intelligent Transportation System (ITS) infrastructure, maintain/operate various software/networks and develop traffic operations software. VDOT uses two different Advanced Transportation Management Systems (ATMS) among the TOCs and various types of field devices and field communications infrastructure.

VDOT is seeking to improve TOC operations through the procurement of multiple integrated services and is considering a public-private partnership (P3) to design, implement and finance a new ATMS platform at five TOCs, and operate and maintain the Commonwealth's five TOCs and field ITS infrastructure.

The services that could be solicited via a P3 procurement include:

- TOC Operations floor staffing – supporting TOC infrastructure as well as performing TOC business operations (i.e. traffic management operations)
- Safety Service Patrol (SSP) staffing
- Intelligent Transportation System field maintenance staffing
- Systems Administrator/Database Administrator staffing
- Development, integration and provisioning of a single state-wide ATMS platform
- Financing of the ATMS development and implementation
- Development of sponsorship opportunities for SSP

Objectives for the Project

ITS technology and systems are rapidly evolving, requiring a highly-trained front line staff, a multi-disciplinary program management team and continuous investments in technology. Some of the proposed outcomes of the Project include:

- Developing, implementing, operating and maintaining a new state-wide ATMS platform across five TOCs that is flexible for future enhancements and includes advanced components such as Integrated Corridor Management, Active Traffic Management and Arterial Signal Management and ensuring that all five TOCs are interoperable (i.e., increased business interoperability across systems, data, and processes);

- Leveraging and standardizing technology to achieve more efficient operations to maximize the availability of real-time, accurate, actionable information for travelers/users;
- Achieving integration across the transportation network, to include freeways and the arterial network.
- Having a single point of contact responsible for the operation and maintenance of all five TOCs;
- Providing a platform for innovation of VDOT's traffic operations and an opportunity for the private sector to test new products and strategies upon prior approval by VDOT;
- Enhancing TOC staff proficiencies/capabilities to ensure statewide consistency, while considering local operational needs;
- Identifying and implementing sponsorship opportunities to offset operating costs in areas such as VDOT's Safety Service Patrol (SSP) program;
- Providing performance-based asset management of all facilities (i.e., protecting and enhancing current asset value/investment); and
- Delivering all of the above, together with the repayments for the cost of developing and implementing the new ATMS, within VDOT's current budget for operating the five TOCs (together, between \$25 million to \$35 million annually). It is expected that this will occur through the delivery of significant operational efficiencies together with potential revenue-generating opportunities.

Purpose of RFI

The purpose of this RFI is to inform potential private sector respondents of this opportunity and solicit private sector interest and innovation in the delivery of the Project. Specifically, the RFI seeks to:

- Provide general background information related to the Project;
- Communicate to potential private sector partners the objectives for the Project;
- Provide an opportunity for potential respondents to articulate their interest in participating; and
- Solicit input from industry on a variety of issues, including scope, procurement, and schedule of the proposed Project.

This RFI is intended to assist VDOT in gathering information on available options related to the management and operations of its TOCs and related services.

This RFI will be used to obtain information on innovative TOC operations and ITS maintenance strategies, innovative technology procurement methodologies, alternative ATMS solutions, including multi-state consortia that allow for shared

software development costs, and methods to finance the upfront cost of developing and implementing the ATMS.

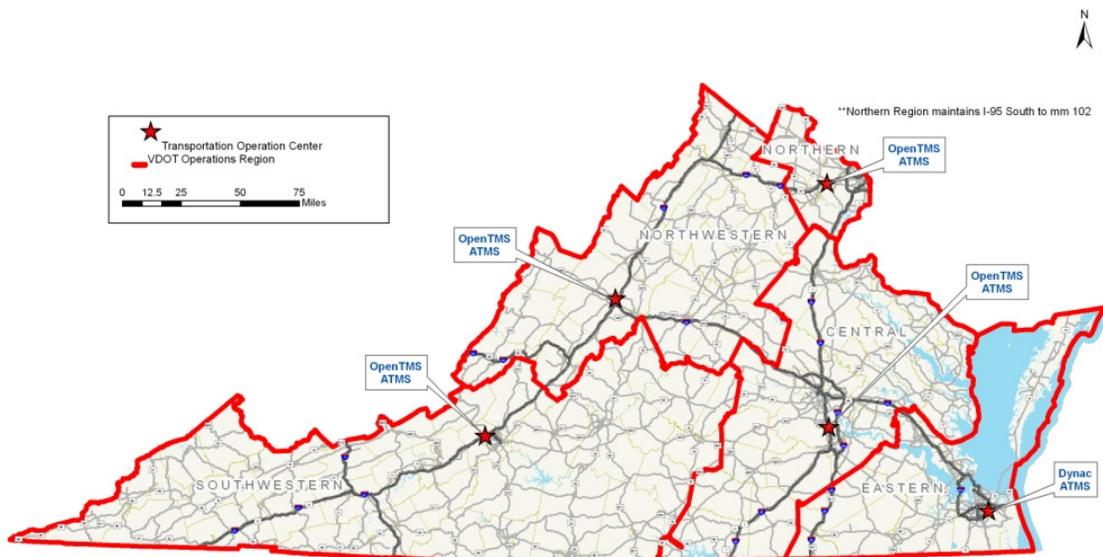
Based on the information gathered from this RFI, VDOT may develop a procurement strategy and initiate a formal procurement for services inclusive of items such as the statewide TOC Operations services, ITS maintenance services, and a single platform ATMS solution, and/or other services that may be combined as part of the final scope

2. ORGANIZATIONAL OVERVIEW

VDOT is the third largest state transportation department in the US and manages 57,867 centerline miles of state-maintained roads comprising:

Interstate:	1,118 miles
Primary:	8,111 miles
Secondary:	48,305 miles
Frontage:	333 miles

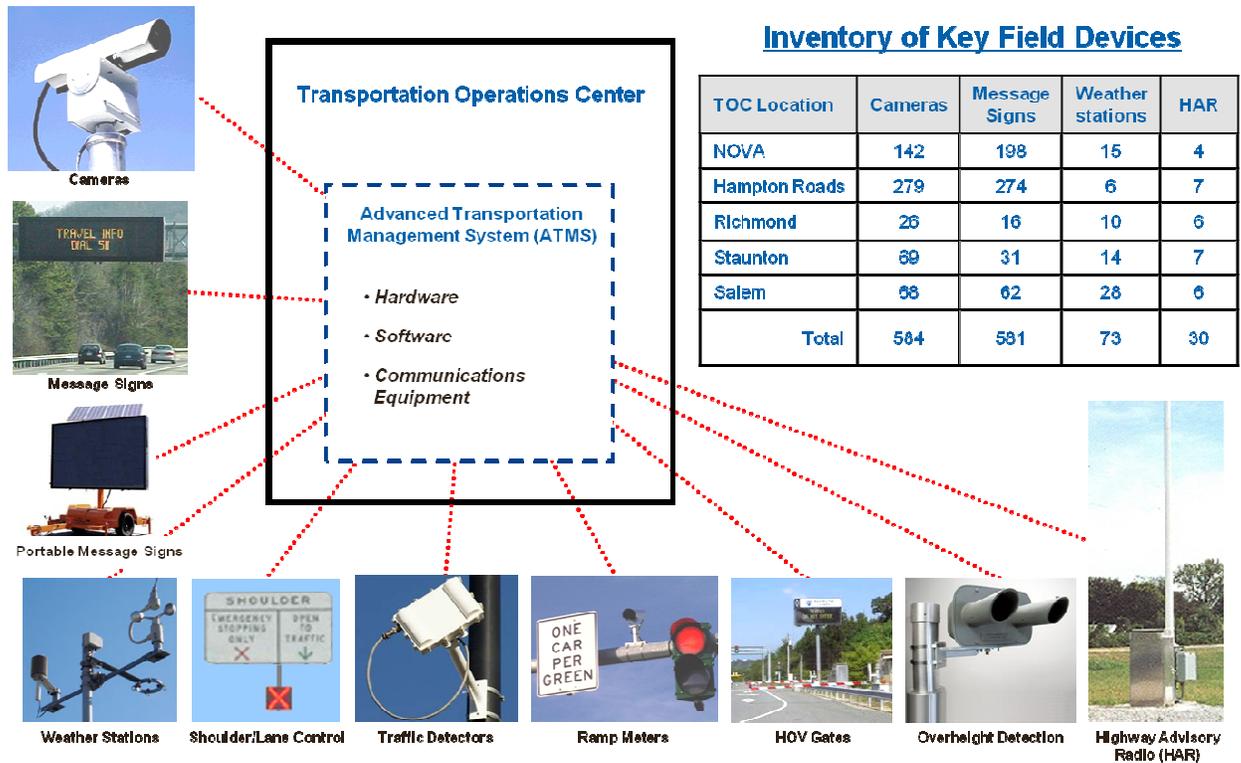
The VDOT roadway network is divided into five traffic operations regions, with each region hosting a 24x7x365 Transportation Operations Center. The TOCs are located in Fairfax, Staunton, Salem, Richmond and Virginia Beach as shown below.



Each TOC serves as VDOT's primary management center for incidents, severe weather response coordination, traffic signal management, hurricane evacuation, traveler information reporting, and congestion management within each region. The TOCs also support other transportation facilities and services, including:

- Underwater crossings in the Hampton Roads area:
 - Midtown and Downtown Elizabeth River tunnels
 - Hampton Roads Bridge-Tunnel on Interstate 64
 - Monitor-Merrimac Memorial Bridge-Tunnel on Interstate 664
- Mountain tunnels on I-77 in Southwest Virginia
 - East River
 - Big Walker
- Toll roads: Powhite Parkway Extension near Richmond
- Toll bridges: George P. Coleman Bridge (which carries Route 17 traffic over the York River)
- Ferry services: Jamestown, Sunnybank, Merry Point, Hatton (seasonal)

Below is a high level inventory of VDOT field assets that support transportation operations.



Although there are minor regional variations, all TOCs generally provide the services listed below as part of TOC Operations:

- **TOC, SSP and ATMS System Administration**
 - Regional traffic monitoring and management - monitor traffic flow, identify incidents, dispatch SSP and other transportation resources, coordinate with other organizations such as Virginia State Police (VSP), operate High Occupancy Vehicle (HOV) lanes, and operate devices such as Closed Circuit Television (CCTV) cameras, Dynamic Message Signs (DMS), and Highway Advisory Radio (HAR) transmitters;
 - Regional congestion management – utilize ramp metering, manage signal operations, and operate Active Traffic Management (ATM) systems;
 - Incident management – detect and verify incidents, initiate and coordinate response, document clearance times and disseminate incident information;

- Manage and staff SSP Program – dispatch SSP units to detect incidents and disruptions in traffic, minimize incident duration, clear obstructions and debris from the roadway, establish temporary traffic control for emergency responders and provide scene assistance;
 - Emergency operations/severe weather operations – provide staff support during severe weather and emergency events;
 - ITS device monitoring – monitor operational status of devices to ensure optimal surveillance and response capabilities;
 - Traveler information/511 dissemination – distribute traffic information and video, and post planned and unplanned events to the 511 Virginia web site, HAR transmitters and DMS;
 - Report generation - develop daily, weekly, monthly, quarterly, annual and ad hoc reports documenting system activity, control room operations activity, equipment outages, and incident identification and recovery actions;
 - Provide operational services and staffing for the Advanced Transportation Management System on a 24x7x365 basis;
 - Provide staffing to perform various traffic analysis, network-wide analysis and traffic simulation to support TOC operations;
 - Provide initial and recurring training for all operations, SSP and Systems Administration staff;
 - Issue, administer, and maintain, where applicable, service contracts for the TOC.
- **ITS Infrastructure and Field Communications Maintenance**
 - Utilize and/or implement an Automated Maintenance Management System (AMMS) to provide corrective and preventive maintenance services support for all systems, subsystems and components related to TOC operations including facility, field devices, infrastructure, communications / networks, fleet assets and other associated elements;
 - Perform preventive maintenance - planned maintenance performed to keep the systems operating including but not limited to testing, cleaning, lubrication, change-out of consumable parts and verification of integrity and functionality of all components and subsystems;
 - Perform responsive maintenance - initiated by a fault, trouble report or other problem identified within the system. These kinds of repairs usually require in-kind replacement of parts or components that restore system functionality. Repairs due to general equipment failure, storm, vandalism, accident or weather damage, and

miscellaneous malfunctions are generally considered responsive maintenance;

- Perform emergency maintenance - generally associated with situations that could affect the safety of the traveling public or may result in loss of equipment. These include events such as HOV gate failures, crashes causing damage to ITS equipment, certain failed message signs, and failed lane control signs;
- Perform elective maintenance, upgrades and installation - includes installation or upgrade services and small to medium-scale system upgrades or installations. (Elective maintenance can be used for life-cycle upgrades, technology upgrades, and similar functional changes, but is not intended for large-scale new installations). This type of maintenance is accomplished as additional/optional services and generally requires issuance of a task order. Parts can be either vendor supplied or furnished by VDOT;
- Provide required equipment for lane and shoulder closures, bucket trucks, safety equipment, etc.

3. PROJECT CONCEPT

The overall intent of this Project is to contract with a firm, or team of firms, that will provide VDOT with a statewide service that includes:

- Financing, development, implementation and operations of the ATMS platform and related functions
- Operations of the TOC facilities and SSP Program
- ITS field device maintenance
- Field communications systems maintenance

VDOT will retain core staff at each TOC to provide project oversight and management; however, the private sector partner will be responsible for providing qualified, experienced staff for the day-to-day traffic operations and related services.

The term of the contract is currently under consideration, the working assumption is approximately 10 years.

Depending on the final scope of the procurement, the total initial build of the ATMS is estimated to cost approximately \$10M. The chosen private sector provider would recover any associated investment and services costs via annual service fees paid in twelve agreed-upon monthly installments each year of the contract term by VDOT.

The agreed upon monthly service fees will be subject to deductions for failure to meet stated performance goals and service level commitments.

ATMS High Level Concept: VDOT is currently developing functional requirements for the development and provisioning of a single statewide ATMS platform. For more information please see the attached draft Statewide ATMS Operating Platform: Concept of Operations (Appendix A). The graphic below provides a high level view of the inputs, systems, and outputs that will be required when the ATMS is fully developed.

STATEWIDE ATMS OPERATING PLATFORM



4. VENDOR RESPONSE

VDOT is requesting information and suggestions from industry to assist in the development of a formal procurement initiative. When responding to this RFI, please provide a response to each question below. If you elect not to answer a question, please indicate “No response provided.” As part of your response to this RFI, please feel free to include any additional comments or suggestions that you feel would be helpful to VDOT. Keep in mind that VDOT seeks to maximize innovation and creativity from the private sector, while at the same time obtaining the best value.

QUESTIONS

Procurement & Finance:

1. Provide a brief description of major relevant services offered by your firm (limited to one page).
2. What technical, operational or other information will be needed regarding VDOT's TOCs, data and systems to adequately respond to a formal procurement that would bundle the services described in this RFI and allow the private sector to respond to the Request for Proposal (RFP) with a committed price?
3. What outsourcing initiatives are you familiar with that are similar to the initiative contemplated by this Project?
4. What are the most significant challenges you anticipate with provisioning the services described in this RFI as a public-private partnership?
5. What contract term do you envision would provide the best value to VDOT while ensuring adequate cost recovery for the chosen private sector provider?
6. What type of service level agreements and associated service level program could be implemented to cover the entire mix of services described in this RFI in such a way as to best protect VDOT and the provider (as appropriate) through the duration of the contract term?
7. Provide your comments/recommendations for the suggested project schedule (Section 6 of the RFI).
8. Provide your views on the financing tools that you would propose to utilize for the Project and the amount of time you believe would be required to reach financial close after award. Based on your anticipated financing structure, what impediments, if any, would prevent you from reaching financial close in a timely manner and how would you propose to overcome these impediments?
9. Provide your views on whether execution of the contract and financing can occur in the second half of 2012.
10. This project contemplates that a single respondent will be selected to operate all five TOCs and that VDOT will transition to a single ATMS platform. Describe any potential efficiencies that may be gained with considerations for concepts such as using alternative delivery models during non-peak hours, developing a centralized training program, centralizing software support, utilizing cloud-based infrastructure (IaaS) or software, increasing standardization of ITS field devices, and utilizing state-wide ITS asset management. Identify any other increased efficiencies and describe their potential cost savings.
11. In two of the five TOCs, VDOT has approximately 30 (combined) front line operations and SSP staff. Please indicate your anticipated position with regard to leveraging these resources as full or part-time employees in the future-state delivery model. In addition, please identify any potential impacts if these resources were not made available to the chosen provider.

Technical:

12. As related to the services defined in this RFI, how much time would be required to implement a smooth transition of TOC operations, ATMS software, and ITS maintenance from issuance of notice to proceed? How long would VDOT need to keep its existing contracts in place?
13. Currently, VDOT develops software on a “task order” basis with two vendors. VDOT maintains full control of the software functionality. What efficiencies can VDOT expect to be gained by:
 - a. Providing the ATMS as a service;
 - b. Working directly with a single vendor; and/or
 - c. Using vendor-supplied software.
14. What are the risks and which party (VDOT or vendor) owns those risks for each of the following? (Note: Please provide justification for risk assessment/assignment determination)
 - a. Providing the ATMS solution as a service;
 - b. Working directly with a single vendor, and / or
 - c. Using vendor-supplied software.
15. Because the ATMS software in a TOC environment is constantly evolving, what benefits or concerns do you foresee with VDOT moving towards managing the software as a service? Under such a scenario, what would be the proposed approach for handling VDOT-requested functional modifications to the software? Under such a scenario would you envision other (i.e. non-VDOT) potential users of the software?
16. VDOT will have a \$33.5M I-66 Active Traffic Management project under construction in October 2012. What near term steps could be taken to integrate this system into the current and future-state delivery solution so as to immediately leverage the value of this new system?
17. Several other DOT's, (e.g., Florida, Texas, Maryland) may allow VDOT to have access to their ATMS source code (with stipulations). Some of these DOTs have invested as much as \$40M in developing a core system. Describe any benefits to VDOT from using these “open source” systems and how the availability of such an option might impact your proposed approach.
18. For the question above, briefly describe your approach for addressing potential intellectual property issues.
19. How might VDOT effectively include tunnel traffic management systems in TOC operations and ATMS?
20. In the next three to five years, what technology or industry trends do you anticipate most impacting this TOC operations and technology services contract?
21. In the next three to five years, what technology or industry trends do you anticipate most impacting this consolidated approach to operations and maintenance service? Have you been involved with any other transportation or non-transportation government agencies that are pursuing similar initiatives for platform and process consolidation? Can you describe the business model and provide lessons learned or key considerations?

5. RFI CONFERENCE / WEBINAR CONFERENCE

VDOT will entertain clarification questions to this RFI through **January 27, 2012 at 5:00pm ET**. VDOT will review all questions submitted prior to this deadline, and will select questions and topics to be discussed at the RFI conference.

Those interested in submitting questions must submit the following information via email to frederick.haasch@VDOT.virginia.gov by **January 27, 2012 at 5:00pm ET**:

- Name
- Organization
- Email address
- Telephone number
- Detailed question for discussion

VDOT will conduct a webinar (i.e., internet based meeting) on **February 6, 2012 at 2:00pm ET**. The purpose of this webinar is to provide clarifications on any portion of the RFI. Respondents will have the opportunity to pose additional questions and participants from VDOT will provide clarifications. If a given question cannot be fully addressed during the webinar, VDOT may choose to release an addendum to the RFI prior to the response due date.

Those interested in participating in the webinar must submit the following information via email to frederick.haasch@VDOT.virginia.gov by **February 2, 2012 at 5:00pm ET**:

- Name
- Organization
- Email address
- Telephone number

VDOT will email specific instructions for joining the webinar to those who provide the information requested above.

Participation in the web conference is not required to submit a response to this RFI.

Please note that responses to this RFI are due no later than Friday, February 17, 2012 at 5:00 pm ET.

6. Proposed Project Schedule

The following represents VDOT's current estimated schedule for the project:

Activity / Key Milestone	Date / Timeline
Issue the RFI document	January 18, 2012
Conduct webinar with prospective respondents	February 6, 2012 (2:00 pm ET)
Responses due for RFI	February 17, 2012 (5:00 pm ET)
Issue the RFP document	March 19, 2012
Conduct a pre-bid conference	April 20, 2012 (2:00 pm ET)
Responses due for RFP	May 31, 2012 (5:00 pm ET)
Select a preferred bidder(s)	June 29, 2012
Contract award	August 10, 2012

VDOT reserves the right to alter the project schedule as conditions warrant without prior notice.

7. SUBMITTAL INSTRUCTIONS

Respondents to this RFI should adhere to the following instructions:

- Responses to this RFI should be submitted electronically in MS Word or .pdf format to the address shown on the front of this RFI.
- Respondents to this RFI are encouraged to submit answers to the questions posed in Section 4, as well as any other information that VDOT should consider when preparing the RFP/P3 package.
- RFI responses are limited to 50 single-sided (or 25 double-sided), typed 8½ x 11” pages (larger pages are allowed for figures or tables, but they must be folded into the overall response and used sparingly). No font size smaller than 12 point is allowed.
- The above documentation may be provided on Compact Disk(s) or DVD(s), other electronic means or bound or contained in a single volume where practical. If submitting a hard copy, return the response to:

Virginia Department of Transportation
Central Office Mail Center-Loading Dock Entrance
1401 E Broad Street
Richmond VA, 23219-2000
Attention: Frederick Haasch

- All documentation provided to VDOT in response to this RFI shall become the property of the Commonwealth.

8. DISCLAIMER

This RFI is issued solely for information and planning purposes and does not constitute a solicitation. All information provided in response to this RFI is subject to the disclosure requirements of the Virginia Freedom of Information Act (VFOIA) (Section 2.2--3700 et seq.).

Information which you desire to make available to VDOT but which you believe constitutes a trade secret, proprietary information, or other confidential information exempted from disclosure, should clearly be identified and designated as such, stating in writing why protection of that information is needed. The Respondent should make a written request to VDOT's contact listed in Section 5 of this RFI. The written request shall:

1. Invoke such exemption upon the submission of the materials for which protection is sought;
2. Identify specifically and conspicuously the data or other materials for which the protection is sought;
3. State the reasons why protection is necessary; and
4. Indicate that a similar process with the appropriate officials of the affected local jurisdictions has or will be conducted. Failure to take such precautions prior to submission of a proposal may subject confidential information to disclosure under the VFOIA.

Responses to the RFI will not be returned. In accordance with Code of Virginia §2.2-4300, also known as the Virginia Public Procurement Act, responses to this notice are not offers and cannot be accepted by the Commonwealth of Virginia or VDOT to form a binding contract. Respondents are solely responsible for all expenses associated with responding to this RFI.

9. GENERAL TERMS AND CONDITIONS

The Commonwealth of Virginia General Terms and Conditions are hereby incorporated into this RFI by reference. A copy of these General Terms and Conditions may be obtained by contacting the Purchase Officer whose name appears on the front of this RFI, or by visiting www.eva.virginia.gov.