



STATE OF TENNESSEE
TRANSPORTATION

REQUEST FOR PROPOSALS # 40100-51056 AMENDMENT # 3 FOR VIDEO ANALYTICS

DATE: May 24, 2024

RFP # 40100-51056 IS AMENDED AS FOLLOWS:

1. This RFP Schedule of Events updates and confirms scheduled RFP dates. Any event, time, or date containing revised or new text is highlighted.

EVENT	TIME (central time zone)	DATE
1. RFP Issued		March 15, 2024
2. Disability Accommodation Request Deadline	2:00 p.m.	March 20, 2024
3. Pre-response Conference	10:00 a.m.	March 22, 2024
4. Notice of Intent to Respond Deadline	2:00 p.m.	March 25, 2024
5. Written "Questions & Comments" Deadline	2:00 p.m.	April 12, 2024
6. State Response to Written "Questions & Comments"		May 24, 2024
7. Response Deadline	2:00 p.m.	June 18, 2024
8. State Completion of Technical Response Evaluations		June 28, 2024
9. State Schedules Respondent Oral Presentation(s)		July 1, 2024
10. Respondent Oral Presentation(s)		July 8 - 9, 2024
11. State Opening & Scoring of Cost Proposals	2:00 p.m.	July 11, 2024
12. Cost Negotiations (Optional)		July 12 – 15, 2024
13. State Notice of Intent to Award Released <u>and</u> RFP Files Opened for Public Inspection	2:00 p.m.	July 17, 2024
14. End of Open File Period		July 24, 2024

15. State sends contract to Contractor for signature		July 25, 2024
16. Contractor Signature Deadline	2:00 p.m.	July 31, 2024

2. State responses to questions and comments in the table below amend and clarify this RFP.

Any restatement of RFP text in the Question/Comment column shall NOT be construed as a change in the actual wording of the RFP document.

RFP SECTION	PAGE #	QUESTION / COMMENT	STATE RESPONSE
General	N/A	1. Is the intent for the servers' graphic cards and other devices to be physically installed at the facility close to where video streams are received?	No. This is a hosted solution with no on-premises hardware.
General	N/A	2. Is the intent for the cloud server to be the user interface for system management?	Yes. All services provided in this RFP are to be hosted and managed by the successful Contractor as a service.
General	N/A	3. Is there a requirement for the contractor staff to have security clearance? for example Confidential/ Secret ... a. Security clearance to enter the facility for installation? b. security clearance to enter the facility for maintenance? c. security clearance to operate the cloud interface?	No. However, the State System Administrator will provide access to the State Systems as required. a. Yes. As part of our security protocol, visitors to State facilities are required to present their ID to onsite security and be accompanied by a State employee during their visit. b. Yes. Visitors to State facilities are required to present their ID to onsite security and be accompanied by a State employee. c. No.
RFP Attachment 6.6, Pro Forma Contract, Section A.3.a.2	Pg. 43	4. There is a requirement for alert speed, is the speed measured from the second we received the video stream? a. The cloud interface might have a longer delay reflecting the alert while the alert is already being received locally by operation. Is the speed requirement for the cloud interface as well?	Yes, the speed is measured from the second the selected contractor receives the video stream. a. Yes. The speed requirement would apply to both.
RFP Section 1.1	Pg. 2	5. Does TDOT have a target Go Live date for the system?	No. The State prefers to have a Video Analytics System fully implemented within one hundred and twenty (120) days after the contract is signed. Please see revised RFP Section 1.1. and Contract Section A.5. for more information.
RFP Section 3.1.1.2	Pg. 7	6. Does the 12-point font requirement include text in	Yes.

RFP SECTION	PAGE #	QUESTION / COMMENT	STATE RESPONSE
		graphics and tables? (Section 3.1.1.2, pg. 8)	
RFP Attachment 6.2, Section A, A.5	Pg. 21	7. There are two requirements listed as A.5. Should we address them both as A.5 in our submittal? (RFP Attachment 6.2, Section A/pg. 22)	This is a clerical error. RFP Attachment 6.2, Section A has been revised to reflect the correct number sequence.
General Question	N/A	8. Are original signatures required on the hard copy of the proposal, or will digital signatures be acceptable?	Digital signatures are acceptable.
RFP Section 3.2, Response Delivery	Pg. 8	9. Will you consider accepting proposals submitted via email in lieu of a hard copy?	No. Please see RFP Section 3.2 – Response Delivery for the appropriate response delivery method.
General Question	N/A	10. Where should we include the tables for Sections A-C in our submittal? (RFP Attachment 6.2, Sections A-C/pgs. 21-28)	Responses to Sections A through C should be included in the respondent's technical response.
RFP Attachment 6.2, Section A	Pg. 20 - 21	11. Where should we include our bank reference documentation in our submittal? (RFP Attachment 6.2, Section A-Item A6/pg.22)	This requirement should be included in your technical response as part of RFP Attachment 6.2 - Section A as your answer to A.6.
RFP Attachment 6.2, Section A	Pg. 20 - 21	12. Where should we include our U.S. entity documentation in our submittal? (RFP Attachment 6.2, Section A-Item A5/pg.22)	This requirement should be included in your technical response as part of RFP Attachment 6.2 - Section A as your answer to A.5.
General Question	N/A	13. Can you provide any further details on the cameras, such as any unique native capabilities?	All cameras are high-definition with AM and PM presets. We have 4 CCTV thermal cameras for detection in bad weather and night vision. The cameras' models are RISE 4220HD , Axis Q6075-E , Axis P5655-E and Axis Q8752-E .
General Question	N/A	14. Can you give us details on how the video feeds are stored and share the specs about the data format, how long video is stored (for training models), and how the historical video feeds can be accessed?	Video feeds are not stored or saved.
General Question	N/A	15. Does processing of events occur at the camera location or in a central hub? What sort of edge compute is available with the cameras? (A.3.b.2)	The processing of events occurs in a central hub. The State cameras do not do edge computing.
RFP Attachment 6.6, Pro Forma Contract	Pg. 43, 48	16. Please share info about the ATMS system to send / receive alerts, what info is desired and how is the delivery of the 5 to 60 second video clip as part of the alert to be handled (i.e. attachment or link)?	Please see Contract Section A.6.b., Phase 2, for info related to integration to our ATMS. Please see Contract Section A.3.a.2. for list of alert types. Alerts should be delivered as a link. Please see revised Contract Section A.3.b.4.

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General Question	N/A	17. Does connectivity vary greatly across cameras, what should we assume with respect to bandwidth and connectivity (we are seeking an in general and a at a minimum sort of bandwidth statement)?	Bandwidth should stay consistent since the camera feeds are pulled from the Skyline datacenter not from local servers
RFP Section 3.3, Response & Respondent Prohibitions	Pg. 9	18. Would offering a custom-built system turned over to TDOT to run versus delivering a commercial system with licensing and maintenance be considered an alternate response and be rejected (Section 3.3?)	Yes, please see RFP Section 3.3, provision 3.3.3.
RFP Attachment 6.2, Section C, C.4	Pg. 26	19. How are adverse weather conditions in C.4 defined?	Adverse weather conditions including but not limited to those that affect visibility such as fog or heavy rain or those that affect pavement conditions as snow, ice, rain. The intent of C.4 is to determine if vendors have dealt with this before, and if their detections only work under certain (ideal) conditions or not.
RFP Attachment 6.6, Pro Forma Contract, A.3.a.2	Pg. 43	20. What false positives would TDOT like to ignore and not have generate alerts – for example construction vehicles parked near where road work is occurring? Same with non-vehicle objects such as barriers and cones? (A.3.a.2)	Abandoned vehicles and construction vehicles parked near road work are examples that should be ignored. Any events not listed in Section A.3.a.2. should be ignored, especially if detected multiple times.
General Question	N/A	21. What sort of historical video data would be made available to train and validate models? In what format is the data stored and how many target observations are available?	The live videos are available and can be used for training and validation. Video is not currently recorded nor stored.
General Question	N/A	22. Would it be sufficient to generate one alert per event or would multiple alerts per event be desired (please elaborate)?	One (1) alert per event would be sufficient if everyone in the system gets that alert. The State does not desire to receive multiple alerts for the same event.
RFP Attachment 6.6, Pro Forma Contract, A.3.a.2	Pg. 43	23. Requests alert types: Is there a pre-determined list of alert types already developed? (A.6.b.)	Yes, please see Contract Section A.3.a.2.
General Question	N/A	24. A.6.e. specifies a BI dashboard – is there a desired technology for the dashboard? (A.6.e.)	The State standard for reporting is Power BI, but Power BI is not required for the BI dashboard. Please see response to Question #119.
RFP Attachment 6.6, Pro Forma Contract, Attachment C	Pg. 75	25. The data guidelines reference metadata and data definitions. Is there a data catalog or documentation tool in place? (attachment C)	Attachment C has been revised. Please see revised language.

RFP SECTION	PAGE #	QUESTION / COMMENT	STATE RESPONSE
General Question	N/A	26. What defines traffic incidents beyond crashes - Aggressive or road rage driving, Reckless driving/swerving? Other? (A.3.a.2)	Refer to the U.S. Department of Transportation Federal Highway Administration definition of traffic incidents. The State is interested in learning other alert types such as aggressive driving, hard braking, swerving, etc., are possible and if the respondent has experience in this area to provide information on this capability.
General Question	N/A	27. What defines slow traffic and congestion - Is there an average speed below speed limit or number of vehicles in a queue in frame that would define it? When measuring the speed of vehicles in our video analysis, what level of precision is expected? (A.3.a.2)	a. Refer to the U.S. Department of Transportation Federal Highway Administration definition of traffic congestion. b. Respondent is expected to provide a level of precision which is in accordance with generally accepted traffic industry practices. The State is interested to learn the level of precision is available in the respondent solution.
General Question	N/A	28. Which reporting software will be used for the reports? (A.4)	The reports will be downloaded to standard Microsoft Office Suite applications or Adobe PDF. Please see response to question 24 above.
General Question	N/A	29. Is there a specific data dictionary and data modelling tool in place and to be used for data governance purposes? (Data Guidelines)	No.
General Question	N/A	30. Do the CCTV cameras in use have consistent characteristics such as Frames-Per-Second, Resolution, Aspect Ratio, etc.?	Yes.
General Question	N/A	31. As the estimated compute power to make real-time video predictions will scale with the number of incoming streams, is there a predefined limitation to what resources will be allocated?	The State would expect one stream per camera.
General Question	N/A	32. Cameras are placed at variable mount heights and different angles. Will metadata such as the mount height, level of zoom, and pan / tilt angles measured in degrees be provided along with the mentioned geographical CCTV camera placement? (A.3.b.2)	All available as built data will be provided to the selected contractor upon execution of the contract. The type of metadata may vary by Region.
General Question	N/A	33. When detecting debris / non-vehicle objects in the road, are there different levels of importance such as a plastic bag being less important in detecting than a tire in the road?	Defining the levels of importance is not a concern; detecting debris or objects impeding traffic flow on the roads is a requirement. The State is interested to learn the respondent methodology for detecting debris/non-vehicle objects on the roadway.

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General Question	N/A	34. Due to the large number of different environments and camera settings the model is expected to see, does TDOT have existing labeled data the contractor can use to train a computer vision model or is the contractor expected to do all data labeling? a. If TDOT is providing labeled data, roughly how many samples / video clips from each class (event) can be expected?	The State will not provide labeled or data labeling. We expect the contractor solution to advise the State what types should be captured.
General Question	N/A	35. When returning the area of the incident (that should be different from the CCTV camera), what level of precision is expected?	Nearest 0.1 mile marker is preferred.
RFP Attachment 6.6, Pro Forma Contract, Section A.3.b.3	Pg. 45	36. A.3.b.3 mentions the two preset views events should, at the minimum, be detected for. Is it possible for an incident to occur in the Northbound view while the camera is facing Southbound, causing the incident to be missed? (A.3.b.3)	Yes, it is possible. The solution is only expected to capture events visible within the camera view.
General Question	N/A	37. RFP Reference: A.3.a.2 - System to generate real-time alerts by integrating with State's existing CCTV Question: Could you clarify if the current infrastructure supports advanced streaming protocols like RTSP with Low Latency extensions or MPEG-DASH with CMAF for chunked transfer, which are critical for minimizing latency in real-time alert systems? Moreover, how does the State's system handle protocol fallback or redundancy to maintain alert integrity during network fluctuations or data spikes?	The State adheres to the World Wide Web Consortium (W3C) stream format . The State CCTV video handling provider is responsible for the quality of the video feeds. The selected contractor is not responsible for alert integrity during network fluctuations or data spikes if issues outside their responsibility impact them.
RFP Attachment 6.6, Pro Forma Contract, Section A.3.a.5	Pg. 44	38. RFP Reference: A.3.a.5 - System accuracy for event detection Question: How does the State define the 80% accuracy requirement for event detections in terms of specific environmental variables such as rain, snow, or low light conditions? Are there priority traffic events, like pedestrian movements or quick-stopping vehicles, that require distinct detection accuracy benchmarks within this overall threshold?	The expectation to meet 80% minimum over a typical quarter. We do not define priority events or specific environmental variables or distinct accuracy benchmarks.

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RFP Attachment 6.6, Pro Forma Contract, Section A.3.f	Pg. 47	<p>39. RFP Reference: A.3.a.6 - User access levels to the system Question: Could the State specify if the system's administrative controls need to support detailed audit trail functionalities, such as tracking logins, configuration changes, and access to sensitive data, to comply with security and oversight policies? Are there requirements for real-time alerts or notifications to be integrated within these controls for specific high-risk or unusual activities by users?.</p>	<p>Yes. The system's administrative controls shall support audit trail functionality as required in Contract Section A.3. f. Alerts on sensitive changes are nice to have but not a requirement.</p>
RFP Attachment 6.6, Pro Forma Contract, Section A.3.a.8	Pg. 44	<p>40. RFP Reference: A.3.a.8 - Online trouble ticket system Question: Could the State provide details on whether there is an existing customer service management tool, such as ServiceNow or Zendesk, that the online trouble ticket system should integrate with? Are there specific features or capabilities within these platforms, like automated ticket routing or escalation, real-time status updates, or analytics, that are critical for the system to streamline the support and maintenance processes effectively?</p>	<p>No, we cannot provide information regarding an existing customer service management tool. Respondent to provide the trouble ticket system per Section A.3.a.8. No integration is required for the trouble ticket system.</p>
General Question	N/A	<p>41. RFP Reference: A.3.a.12 - System's capability to detect and notify potential malicious attacks Question: Could the State specify if there is a requirement for the video analytics system to integrate with specific third-party security services or platforms to enhance its capability for detecting and responding to potential malicious attacks? For instance, are there preferred partners such as IBM Security, Palo Alto Networks, or others that the system should be compatible with?</p>	<p>Respondent to handle as they see fit. The solution should be protected pursuant to contract requirements, but no integrations are required.</p>
RFP Attachment 6.6, Pro Forma Contract,	Pg. 45	<p>42. RFP Reference: A.3.b.1 - Alert configuration and data source management Question: Could the State specify whether there is a need for dynamic adjustment</p>	<p>Dynamic adjustments are not required. Only manual configurations/rules as described in A.3.b.1. The State is interested to learn the respondent solution detection capabilities.</p>

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Section A.3.b.1		<p>of alert configuration parameters, such as the sensitivity of object detection algorithms, in response to varying conditions like traffic density, time of day, or specific weather scenarios? For instance, should the system automatically modify detection thresholds for reduced visibility conditions such as fog or heavy rain, or during peak traffic hours to prevent false alarms?</p>	
RFP Attachment 6.6, Pro Forma Contract, Section A.3.b.3	Pg. 45	<p>43. RFP Reference: A.3.b.3 - System-generated alerts for CCTV views Question: Could the State clarify whether the video analytics system should possess the capability to automatically recalibrate detection parameters when changing views on individual CCTVs, or is manual configuration preferred? This feature could involve adjusting for variations in view angle, zoom level, and other environmental factors.</p>	Yes. Dynamic configuration is highly preferred.
RFP Attachment 6.6, Pro Forma Contract, Section A.3.a.1	Pg. 43	<p>44. RFP Reference: A.3.c.2 - Hybrid user model for system security Question: Could the State specify any required compliance standards for data access and audit trails in the hybrid user model that utilizes AD and AAD for SSO? Are there particular regulations, such as GDPR, CCPA, or others that are pertinent, even if they are typically associated with jurisdictions outside the usual scope of State regulations?</p>	Respondents' solutions must meet or exceed the State information security policy referenced in Section A.3.a.1. of the Contract.
RFP Attachment 6.6, Pro Forma Contract, Section A.6.e	Pg. 49	<p>45. RFP Reference: A.4 - Monthly reporting requirements Question: Could the State specify if the monthly reports on system alerts and outages need to be integrated with any existing management tools or dashboards, such as Microsoft Power BI, Tableau, or other BI platforms? Are there specific formats or templates for these reports that align with the State's current data visualization and analysis practices?</p>	<p>a. Please see Contract Section A.6.e. b. Specific report templates and integration into current Power BI formats will be provided to the selected contractor.</p>

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RFP Attachment 6.6, Pro Forma Contract, Section A.6. b	Pg. 48	<p>46. RFP Reference: A.6.b - Integration with State ATMS</p> <p>Question: Could the State provide details on any preferred methods or existing API documentation for integrating the video analytics system with the State's Advanced Traffic Management System (ATMS)? Are there specific protocols, data formats, or interface standards that should be adhered to for seamless connectivity and optimal data flow?.</p>	The State expectation is for the selected Contractor to cooperate by providing the video analytics data when the Phase 2 integration with ATMS occurs, Section A.6.b. has been revised. Please review the revised language.
RFP Attachment 6.6, Pro Forma Contract, Section A.6.c	Pg. 49	<p>47. RFP Reference: A.6.c - Interface development for event detection</p> <p>Question: Could the State specify if there are preferred machine learning frameworks or libraries, such as TensorFlow or PyTorch, that should be utilized in developing the interfaces for event detection? Are there certain characteristics or capabilities within these frameworks—such as real-time processing, model training efficiency, or particular neural network architectures—that are considered critical for meeting the system's performance requirements?.</p>	The State does not have a preference.
RFP Attachment 6.6, Pro Forma Contract, Section A.7.a	Pg. 49	<p>48. RFP Reference: A.7.a - Comprehensive test plan including internal and user acceptance testing</p> <p>Question: Could the State clarify if there are specific testing frameworks or tools that are preferred for conducting the comprehensive end-to-end and user acceptance tests? For example, are tools like Selenium for automated web testing, JMeter for performance testing, or perhaps a specialized tool for video analytics performance expected to be utilized to ensure alignment with the State's existing technology stack? Are there any particular testing protocols or scenarios that the State requires to be included in the testing plan to</p>	<p>No, there are no specific frameworks.</p> <p>The State is interested to learn the respondent testing framework, tools, protocols, etc.</p>

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		<p>validate the robustness and effectiveness of the video analytics system under varied operational conditions?</p>	
RFP Attachment 6.6, Pro Forma Contract, Section A.7.b	Pg.49	<p>49. RFP Reference: A.7.b - Test environment and internal test procedures</p> <p>Question: Could the State clarify whether the test environment is expected to mirror the production environment in all key aspects, such as data volume, data variety, and operational configurations, to ensure comprehensive and realistic testing? Are there specific elements or scenarios that must be included in this environment to adequately stress-test the system under expected real-world conditions?</p>	<p>The test environment should mirror the production environment in data volume, data variety and operational configurations.</p>
RFP Attachment 6.6, Pro Forma Contract, Section A.8	Pg. 49	<p>50. RFP Reference: A.8 - User interface and accessibility</p> <p>Question: Could the State clarify whether there are specific user experience (UX) principles or standards that the user interface of the new video analytics system should adhere to? Are there existing state applications or systems that the new interface should be designed to align with to ensure consistency and intuitiveness across all state-operated platforms? Information on any required design frameworks, style guides, or interaction patterns would be beneficial to ensure that the system is both user-friendly and cohesive with the State's technology ecosystem.</p>	<p>The Video analytics interface to match other State user interfaces or the SWCS user interface would be preferred but not required. The State will rely on the expertise of the contractor to present the best possible user interface that meets the requirements of Section A.8. of the contract.</p> <p>The State is interested to learn the respondent solution user interface and capabilities.</p>
RFP Attachment 6.6, Pro Forma Contract, Section A.12, E.3	Pg. 50, 68	<p>51. RFP Reference: A.12 - Change Orders and additional services</p> <p>Question: Could the State provide guidance on how change orders for unforeseen technological needs should be handled during the contract term? Specifically, are there expectations for including advancements in technology that may arise, and what are</p>	<p>Depending on the nature of the change, the processes described in Section A.12 and Section E.3. may accommodate the changes. Substantial changes to the contract will require an amendment and budget approval from the legislature.</p>

RFP SECTION	PAGE #	QUESTION / COMMENT	STATE RESPONSE
		the protocols for pricing and evaluating these changes?	
RFP Section 3.3	Pg. 9	52. Question: In our continuous effort to deliver the most effective and forward-thinking learning solutions, we've identified several advanced features that could further enhance the learning experience, operational efficiency, and accessibility of the proposed Appointment Management Platform. These features, driven by the latest AI and machine learning technologies, offer potential benefits well beyond the current scope outlined in the RFP. Would the TDOT be interested in exploring these additional capabilities? If so, may we include them as "additional options" in our proposal?	The state is interested in learning about advanced features, including AI capabilities. However, the respondent shall not provide pricing for those additional features or alter the cost proposal. Please refer to RFP Section 3.3.
General Question	N/A	53. A.3 Functional and System Requirements. The Contractor shall be responsible for providing the underlying system software, infrastructure, bandwidth, cloud services for hosting, deployment, and support of the Video Analytics System. Are we required to bring an internet service provider, or will TDOT provide outgoing bandwidth?	This will be hosted by the successful contractor and bandwidth will be their responsibility.
General Question	N/A	54. The Contractor shall provide a System that generates real-time alerts by integrating with the State's existing closed-circuit television cameras. The Contractor shall provide an easy-to-use interface for the State staff to receive alerts within 30 seconds of an event detection. The traffic alerts shall utilize machine learning object detection, or an analogous process, to detect a variety of changes in traffic conditions. At a minimum, the System shall be able to detect the following events in real-time: Can the video be requested via real time streaming protocol? What is the resolution of the video?	Standard State camera feeds, consumed, from the Skyline data center, can be offered at 240p @ 192 kB/s and 15 frames per second. The State is interested to learn the minimum stream resolution that the respondent solution can support.

RFP SECTION	PAGE #	QUESTION / COMMENT	STATE RESPONSE
RFP Attachment 6.6, Pro Forma Contract, Section A.7	Pg.49	<p>55. A.7 Test Plan. The Contractor shall generate and deliver a comprehensive test plan covering internal testing prior to testing at a mutually agreeable date after the contract is awarded. End-to-end interface testing, and user acceptance test, to be reviewed and approved by the appropriate State subject matter experts.</p> <p>a. The Contractor shall establish and maintain a complete and separate test environment that mirrors the production environment. The test environment shall be accessible to the State Users and the Contractor. The test environment shall be utilized for all acceptance testing prior to release of any module functionality, new features, bug fixes and enhancements.</p> <p>b. The Contractor shall have an internal test procedure approved by the State prior to testing at a mutually agreeable date after the contract is awarded. The internal test procedure shall include a requirements matrix for all developed processes, including</p> <p>Does the contractor have to maintain two identical cloud instances with all the cameras configured? What is the anticipated number of cameras that will require video analytics?</p>	<p>a. The requirement in Contract Section A.7, "maintain a complete and separate test environment that mirrors the production environment" was intended to mirror the IT infrastructure (such as database version, frameworks, and other dependencies). It was not intended to have all of the same CCTVs configured. Only a smaller sample of the CCTVs should be integrated into the test environment. One of each CCTV model should suffice.</p> <p>b. Yes, please see the response to "a" above.</p> <p>c. Per RFP Section 1.1.2, the State currently has approximately six hundred and seventy (670) cameras statewide.</p>
General Question	N/A	<p>56. The Contractor's System shall be designed and developed to leverage cloud characteristics such as elasticity, redundancy, and must be able to handle occasional hardware failures without any downtime. The System shall be designed for a real-time and always-on environment. The alerts generated from the System are critical to traffic operations where seconds and minutes can impact successful response and mitigation. We'd like to understand a few questions related to this paragraph</p> <p>1- Does the state have a preference between a cloud deployment, or on-premises deployment?</p>	<ol style="list-style-type: none"> 1. The State is seeking a cloud-hosted solution with no on-premises hardware. 2. See response to "1" above. 3. See response to "1" above.

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		<p>2- If the state is looking for an on-premises deployment, can the state provides a rack space for server deployment? If yes, what is the rack size?</p> <p>3 - If the state is looking for an on-premises deployment but will not provide a rack space, can the vendor deploy the server in a 3rd party data center? If yes, will the state provide connectivity from the data center to the project cameras?</p>	
General Question	N/A	<p>57. The Contractor shall show proof of at least an 80% System accuracy for detection of events. Failed events include both false positives and missed detections. The 80% threshold shall be considered a minimum, with over 90% being preferred. Acceptable proof includes comprehensive quarterly reports or validation from unbiased, independent third-party sources, detailing the System's performance across various traffic conditions and event types. The documentation shall specify the methodologies used for testing, the types of events included in the evaluation, and any conditions or limitations of the testing. To help calculate the percentage. Can the state elaborate on the region of interest required to achieve at least 80% system accuracy?</p>	<p>The State is unsure what the respondent meant by the word "region". 80% accuracy should be accomplished across all four State Region TMCs, all event types, and all environmental conditions. If "region" means an area in the camera view shed, 80% accuracy should be accomplished for the entire that the camera can see.</p>
General Question	N/A	<p>58. General user access: view-only. View feeds and alerts without the ability to change any settings or controls. Will the dashboard be hosted locally or can it be hosted on the cloud? Approximately, can you provide a range of how many general users will have a view-only access to the dashboard?</p>	<p>The entire solution is to be cloud hosted. 84 users will have view only access.</p>
General Question	N/A	<p>59. Admin user access: Full system access and control, camera management, system configuration, user role management and reports. Are admin users required to have full system access on a local dashboard level or cloud level?</p>	<p>The entire solution is to be cloud hosted.</p>

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General Question	N/A	60. The System shall generate accurate alerts for at least two (2) preset CCTV "views" for each individual CCTV (eg. "Northbound mainline" and "Southbound mainline"). What will be the region of interest? Can the region of interest be defined by pixel/feet?	Accurate alerts should be accomplished across all four Region TMCs, all event types, and all environmental conditions. If "region" is intended to mean an area in the camera view shed, the view includes everything that the camera can see.
General Question	N/A	61. Contractor Tennessee Edison Registration ID #. Where and how do you register for TEID#?	Please visit the link below to learn how to do business with the State of Tennessee and register as a Supplier. https://www.tn.gov/generalservices/procurement/central-procurement-office--cpo-/supplier-information.html
RFP Attachment 6.6, Pro Forma Contract, Section D.32	Pg. 64	62. Will an Umbrella policy with the \$ 10,000,000.00 be sufficient to meet the requirements for Technology Professional Liability (Errors & Omissions)/ Cyber Liability Insurance	No. A primary policy is the main insurance coverage that provides the first layer of protection, including standard limits for losses. An umbrella policy is additional coverage that extends beyond the limits of your primary policy. The umbrella policy can cover more types of losses and is triggered when the primary policy's limits are exhausted or if a claim is not covered by the primary policy.
General Question	N/A	63. Can the State provide list of authorized Insurance companies that are acceptable	Contractor should contact the Tennessee Department of Commerce & Insurance for a comprehensive listings of all companies authorized to do business in the State of Tennessee.
RFP Attachment 6.6, Pro Forma Contract, Section D.32.e	Pg. 67	64. Can the Crime Insurance be removed from this RFP due to the required coverage for Section D.32.d ? Is a redundant type of policy.	The State will not agree to negotiate the removal of the Crime Liability insurance requirement.
General Question	N/A	65. Due to the extent of needed information for responding to this RFP and questions won't be responded to until April 26, 2024, can the State please extend the Response Deadline by a minimum of 1 week ? needing more time for the insurance piece to speak to approved list of vendors that will aswered in s previous section	Please see the revised schedule of events. Please note, the State may update the schedule of events at any time. Please review amendments posted to the State website regularly to ensure you are working off the correct schedule. Below is a link to the State's website. https://www.tn.gov/content/tn/generalservices/procurement/central-procurement-office--cpo-/supplier-information/request-for-proposals--rfp--opportunities1.html
General Question	N/A	66. What is the Engineers Estimate for this Project?	There is no Engineer's Estimate available; however, the agency anticipates their budget for the contract to be approximately \$2.5 million.
General Question	N/A	67. Are their Federal Funds being used on this Project?	Yes.
General Quesiton	N/A	68. Are there any "Buy America" requirements on this Project?	The State does not anticipate "Buy America" will apply since no manufactured goods will be purchased as a result of this RFP. Refer to the link below for more information.

RFP SECTION	PAGE #	QUESTION / COMMENT	STATE RESPONSE
			Buy America - Construction Program Guide - Contract Administration - Construction - Federal Highway Administration (dot.gov)
General Question	N/A	69. What is TDOT's ATMS provider?	Southwest Research Institute (SWRI)
General Question	N/A	70. Will this be done with a TDOT CCTV camera or another camera stream	TDOT CCTV camera.
General Question	N/A	71. Will the cameras be for highways, intersections/arterials, or a combination of the two?	Primarily highways, but there is a possibility of adding intersection/arterial cameras in the future.
General Question	N/A	72. Are federal funds being used on this project?	Yes.
RFP Attachment 6.4	Pg. 34	73. Many state DOT employees are prohibited from providing written references. Will you allow the option to call a reference instead? If you will allow a phone call reference, how should we complete, or have our reference, complete the reference form?	No. References should be submitted pursuant to RFP Attachment 6.4.
General Question	N/A	74. Can the Respondent include a Cover Letter/Executive Summary or an Additional Information Section to further explain our qualifications and capabilities to the State?	Yes.
RFP Attachment 6.2, Section D, Oral Presentations	Pg. 28	75. Can the State clarify if the Respondent must answer Section D - Oral Presentation Items in our Proposal submission, or if this is being provided so the Respondent can fully prepare if invited to the Interview/Oral Presentation Stage?	No, Section D – Oral Presentations should not be answered in the respondent's technical response. Please see RFP Section 5.2.2 for information regarding oral presentations.
General Question	N/A	76. Can you provide detailed specifications of your existing closed-circuit television camera infrastructure?	The State video handling is managed off premises by Skyline. These video feeds are accessible directly from Skyline. The successful contractor will be the responsible for the bandwidth needed to get the video from Skyline.
General Question	N/A	77. Do you have a preference/requirements for distributed vs. central deployment architecture?	The solution is to be cloud-hosted by the vendor.
General Question	N/A	78. What is the existing Video Management System?	The State video handling is managed off-premises by Skyline. We use Vero and Claris provided by Skyline Technology Solutions.
General Question	N/A	79. Can you provide a representative sample of your PTZ cameras' preset Field of Views?	Yes, please see Exhibit 1 for a couple of image samples.

RFP SECTION	PAGE #	QUESTION / COMMENT	STATE RESPONSE
General Question	N/A	80. Are the PTZ cameras preset views following a schedule, or will the operators' dynamically change presets? If the preset views follow a schedule, can we be provided with a sample schedule?	AM and PM presets happen at noon and midnight. AM view is on inbound traffic while the PM view is on outbound traffic. TMC Technicians can also change the presets if needed.
General Question	N/A	81. What is the existing ATMS system?	Active ITS, named Smart Way Central Software (SWCS) by the State, developed by Southwest Research Institute (SWRI)
RFP Attachment 6.6, Pro Forma Contract, Section A.3.b.2	Pg. 45	82. Does the state expect analytics when the PTZ has moved from its preset positions?	Yes, please see Contract Section A.3.b.2.
General Question	N/A	83. Could you provide more details on your organization's specific cloud infrastructure and requirements to ensure compatibility with our proposed cloud-based solution?	The State primary cloud provider is Azure.
General Question	N/A	84. Are there any specific cloud providers or platforms that your organization prefers or requires us to use?	No.
General Question	N/A	85. How do you currently monitor the performance of your existing traffic management systems?	We use metrics such as safety, travel time reliability, throughput, system around uptime and system availability.
RFP Section 1.1	Pg. 2	86. What are your anticipated growth projections or changes in traffic management needs over the next few years?	Please see RFP Section 1.1. for more information.
RFP Attachment 6.6., Pro Forma Contract, Section A.2, A.3.e	Pg. 42, 47	87. How do you define "System Errors". Payment for Deliverable 4 will not be made until the system has 60 days of no System Errors but does not define System Errors.	Please see Contract Sections A.2. and A.3.e..
General Question	N/A	88. Clarification on payment terms – no defined payment terms in this section (for deliverables, licenses or 3 year maintenance contract). When can we expect payment from submittal of invoice?	The State works on a Net 45 payment term from submission of invoice. Please see Tenn. Code Ann. § 12-4-701 for more information.
General Question	N/A	89. Can crime insurance requirements be negotiated?	The State will not agree to negotiate insurance contract requirements.
RFP Section 1.1.2	Pg. 2	90. Please provide details on the existing traffic management infrastructure with which the new system must integrate.	Per RFP Section 1.1.2, TDOT currently has approximately six hundred and seventy (670) cameras statewide and anticipates an unknown amount of additional cameras. In addition to cameras, the traffic management infrastructure includes Dynamic Message Signs, Radar Detection Sensors, Safety Service Patrol

RFP SECTION	PAGE #	QUESTION / COMMENT	STATE RESPONSE
			vehicles, Road Weather Information Systems, Highway Advisory Radio, etc.
General Question	N/A	91. What are the minimum requirements for camera resolution and frame rate that the system must support?	Standard State camera feeds, consumed, from the Skyline data center, can be offered at 240p @ 192 kB/s and 15 frames per second.
RFP Attachment 6.6., Pro Forma Contract, Section A.3.a.2	Pg. 42	92. Could you specify the types of analytics (e.g., vehicle classification, congestion detection) that are prioritized?	Please see Contract Section A.3.a.2 for a list of required alerts.
General Question	N/A	93. Are there plans to integrate this system with other smart city initiatives?	Not at this time.
RFP Attachment 6.6., Pro Forma Contract, Section A.4	Pg. 47	94. What are the requirements for data storage duration, retrieval capabilities, and data security measures?	The State Video is not recorded or stored. Please see Contract Section A.4. for the data storage retention, and retrieval requirements for all data analytics produced through the system, such as reports, and see Contract Section A.3.d. and Attachment C for data security requirements and guidelines.
General Question	N/A	95. Could you provide details on privacy concerns, especially in relation to surveillance and data handling?	The State does not anticipate any privacy concerns.
General Question	N/A	96. Are there any constraints on work hours or access to locations where equipment will be installed?	No, if proper notification is provided. Since this is intended to be a cloud-hosted solution with no on-premise hardware, access to the premises will not be required.
RFP Attachment 6.6., Pro Forma Contract, Section A.3.a.4-5	Pg 43, 44	97. What specific performance metrics does the Department wish to track and monitor through the system?	See Contract Section A.3.a.4 and Section A.3.a.5.
General Question	N/A	98. Based on the RFI Questions sent will the State provide a one (1) week extension? This is being requested due to the State's responses to the Written "Questions & Comments" not being received back until April 26, which leaves less than ten (10) business days to provide a printed, responsive, responsible bid.	Please see the revised schedule of events. Please note, the State may update the schedule of events at any time. Please review amendments posted to the State website regularly to ensure you are working off the correct schedule. Below is a link to the State's website. https://www.tn.gov/content/tn/generalservices/procurement/central-procurement-office--cpo-/supplier-information/request-for-proposals--rfp--opportunities1.html
General Question	N/A	99. Will the State consider another round of RFI's should the answers from RFI round 1 need further clarification?	Currently, the State does not have a second round of questions and comments scheduled. Should the State entertain a second round of questions and comments, the Schedule of Events shall be updated.
RFP Attachment 6.2, Section A, A.5	Pg. 21	100. Is there specific documentation that the DOT would like to see as proof that the Respondent is a legal	Please see the revised RFP Attachment 6.2, Section A.5 from Release #2 of the RFP.

RFP SECTION	PAGE #	QUESTION / COMMENT	STATE RESPONSE
		entity based in the United States of America? For example, would a W9 or copy of a business license suffice?	
RFP Attachment 6.2, Section B, B.15	Pg. 23	101. Are there specific requirements TDOT is seeking to accomplish via the use of a DBE?	There are no specific requirements the State is seeking to accomplish regarding B.15. A respondent's answer to B.15 will be scored wholistically with all RFP Attachment 6.2 – Section B requirements.
RFP Attachment 6.6, Pro Forma Contract, A.5	Pg. 48	102. The state's project schedule is referred to in each. Please provide the state's Project Schedule for this Contract.	The State's project schedule will be mutually defined in the project plan. See Section A.5. The State preferred go-live date for this solution is within 120 days of contract signing, and is reflected in the revision of RFP Section 1.1.
RFP Attachment 6.6, Pro Forma Contract, A.3.a.4	Pg. 43	103. How does TDOT anticipate holding the successful bidder accountable. Does the demarcation for "uptime" end with notification to the TDOT maintenance team?	Please see revised Section A.3.a.4. This is a cloud-hosted solution. The uptime requirement will begin when the State first notifies the vendor and end when the vendor notifies the State it is resolved.
RFP Section 1.1	Pg. 2	104. Does TDOT have a forecast suggesting addition of new devices onto the platform?	Please see RFP Section 1.1. for more information.
General Question	N/A	105. Does TDOT have any indications on the number of users provided the various access rights?	The State currently has 84 authorized staff positions in the four Region TMCs. Some level of access will need to be provided to all of them.
RFP Attachment 6.6, Pro Forma Contract, A.3.a.2	Pg. 43	106. Does TDOT have any suggestions on levels of alerts they are proposing or is this to be determined by RFP respondent?	See section A.3.a.2 for a list of required alerts.
General Question	N/A	107. Does TDOT have existing infrastructure at rest area parking? Please define.	No.
RFP Attachment 6.6, Pro Forma Contract, A.6.b	Pg. 48	108. Can TDOT provide what other systems they anticipate it being tied into?	See Section A.6.b. Other than future integration into ATMS, no other systems are anticipated for integration.
RFP Attachment 6.6, Pro Forma Contract, E.7.a.3	Pg. 69	109. Regarding NIST SP 800, some of the technical requirements are already covered with the use of Azure AD, AWS CloudWatch, etc. But do we need to identify a certification organization and get a price estimate?	We do not require 3rd party certification. The selected Contractor is expected to adhere to the State SOC audit requirements. Please see Section E.7.a.(3) for more information.
General Question	N/A	110. Please define "non-vehicle objects on the roadway"?	Any object that could potentially have an adverse impact on traffic mobility or safety. Debris is one example.
General Question	N/A	111. What events are included under "traffic incidents"?	The State adheres to the Federal Highway Administration definition that an incident is any unplanned roadway event that affects or impedes the normal flow of traffic.

RFP SECTION	PAGE #	QUESTION / COMMENT	STATE RESPONSE
			The State is interested to learn the respondent solution capability for detecting events under "traffic incidents" description.
General Question	N/A	112. Who will be monitoring the devices? Will it be a centralized location or does the information need to be shared to each regional TMC? Both?	Cameras are monitored at each of the four Region TMCs. The information will need to be shared at each regional TMC.
General Question	N/A	113. Elaboration of multi-factor VPN access - is this a requirement for the web-accessible or on-prem solution?	Yes, If all access will be via the web then using the State identity provider will cover this requirement.
RFP Attachment 6.6, Pro Forma Contract,		114. "The Contractor shall provide unlimited users with the following minimum levels of access to the System". Since software service and license pricing often depends on the number of expected users, can the DOT provide tiers that broadly define ranges for the number of users?	The State anticipates 100 users RFP Section 1.1. The State currently has 84 authorized staff positions in the four Region TMCs. Some level of access will need to be provided to all of them.
RFP Attachment 6.6, Pro Forma Contract, A.3.b.1	Pg. 45	115. Is it possible to elaborate on "Control over basic rules powering alerts": Is it possible to provide a summary of incidents and events the system is expected to handle?	<ul style="list-style-type: none"> a. The solution should be flexible and configurable; see Section A.3.b.1 b. Please refer to Federal Highway Administration definition of incidents and see section A.3.a.2 for a list of events the system shall be able to detect.
RFP Attachment 6.6, Pro Forma Contract, A.3.a.5	Pg. 44	116. Does the requirement in A.3.b.2 to generate alerts from all camera angles and zoom levels apply only to the two preset views mentioned in A.3.b.3, or does it extend to any camera position and zoom level beyond these presets?	The requirement to generate alerts applies to any camera position and zoom level, the 80% accuracy called for in Section A.3.a.5 only applies to presets.
General Question	N/A	117. How long will TDOT require for data to be stored? Please define a term of data storage?	The State Video is not recorded, the video analytics data should be stored for 5 years.
General Question	N/A	118. Please identify the proposed ATMS system to be integrated with.	Active ITS, named Smart Way Central Software (SWCS) by the State of Tennessee Department of Transportation, developed by Southwest Research Institute (SWRI)
General Question	N/A	119. Will TDOT allow a reasonable alternative for Power Bi?	Yes.
General Question	N/A	120. Is there additional feature development planned beyond the defined scope of the project?	Not at this time.
RFP Attachment 6.6., Pro Forma Contract,	Pg. 66	121. Would TDOT consider lowering the amount of Cyber Liability Insurance?	Yes, please see Release #2 of the RFP for the new limits.

RFP SECTION	PAGE #	QUESTION / COMMENT	STATE RESPONSE
Section D.32.d			
RFP Attachment 6.6., Pro Forma Contract, Attachment C	Pg. 75	122. "Database - All the applications shall be able to work with Oracle backend database and certified to run on the most current major release of 64-bit Oracle enterprise RAC database". What role and function does the DOTS's Oracle database have in the proposed architecture? Can the DOT please confirm that the Respondent's architecture can include SQL and NoSQL databases other than Oracle?	This guideline does not apply as this is entirely cloud hosted. Attachment C has been revised. Please review revised language.
General Question	N/A	123. Are hosted solutions required to run directly on the specified standards (e.g., Oracle RAC, OGC geospatial standards) or is it acceptable if they can export or feed data into these standards, ensuring compatibility? In other words, can alternative systems be used as long as they offer secure and effective integration with the specified standards through data exchange mechanisms?	This guideline does not apply as this is entirely cloud hosted.

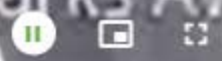
3. **Delete RFP # 40100-51056, in its entirety, and replace it with RFP # 40100-51043, Release # 2, attached to this amendment.** Revisions of the original RFP document are emphasized within the new release. **Any sentence or paragraph containing revised or new text is highlighted.**
4. **RFP Amendment Effective Date.** The revisions set forth herein shall be effective upon release. All other terms and conditions of this RFP not expressly amended herein shall remain in full force and effect.

465



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