



**Department of Legislative Services  
Office of Legislative Audits**

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**Department of Transportation  
State Highway Administration**

Report dated November 15, 2012

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## Department of Legislative Services Office of Legislative Audits

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### Audit Overview

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- The State Highway Administration (SHA) is responsible for planning, construction, improvement, and maintenance and operations of the State highway system. SHA operates numerous facilities throughout the State, including a headquarters in Baltimore City and seven district offices.
- According to the State's accounting records, SHA's fiscal year 2011 expenditures totaled approximately \$1.1 billion.
- The audit report, which covered the period from August 1, 2008 to June 30, 2011, included 10 findings, one of which was repeated from the preceding audit report.
- In November 2011 and June 2011, OLA issued two special reports on SHA in which were noted a number of contract-related issues. OLA's current audit identified certain similar findings.



## Key Audit Issues

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- SHA's policies and procedures for architectural and engineering (A&E) contracts did not provide the necessary safeguards to ensure compliance with certain State procurement regulations and Maryland Department of Transportation (MDOT) guidelines. These included the lack of documentation for the basis of the maximum value of contracts, the use of contract funds to pay for work outside the contract's scope and the extension of contract expiration dates without proper approval.
  - Contract procurement and monitoring deficiencies were noted with respect to SHA's Maryland SafeZones Program (that is, the automated speed monitoring program for highway work zones).
  - Proper procedures and/or controls were deficient in several areas including information systems and compliance with State ethics law and MDOT administrative leave policy.
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## Architectural and Engineering (A&E) Contracts

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### Background:

- SHA contracted with multiple A&E firms to provide consultant services for SHA projects.
  - According to SHA records, during the period August 2008 through June 2011, there were approximately 152 awarded contracts with 73 firms and contract awards totaled approximately \$503 million. During the same period, payments to A&E contractors totaled approximately \$431 million.
  - In November 2011 and June 2011, OLA issued two special review reports on SHA in which OLA noted a number of A&E contract issues; specifically, those related to construction inspection services, which is a type of A&E contract. OLA's current audit covered all types of A&E contracts and identified some similar findings among a broader range of A&E contract types. During this audit's fieldwork, OLA noted that although SHA, in response to those reports, agreed to implement necessary corrective actions, such actions had not been completed.
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## A&E Contracts (continued)

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SHA had not documented the basis for the maximum values of A&E contracts submitted to the Board of Public Works (BPW) for approval, as required by MDOT guidelines. (**Finding 1**)

- SHA management advised us that the value of these contracts were estimates based on the amounts expended in prior contracts and an increase in firm labor costs. SHA also advised that it did not have support for the projected labor costs and OLA testing of 4 contracts totaling \$17.5 million confirmed this.
  - The lack of documentation is important because as noted in **Finding 2**, SHA used available funding authorizations in certain A&E contracts to cover over-expenditures in other contracts.
  - A similar comment was included in our Special Review of Construction Inspection Services Contracts report dated November 2011, where OLA's review of several contracts disclosed no consistent, discernible basis for estimating contract values.
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## A&E Contracts (continued)

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SHA used unexpended balances from various A&E contracts to pay for work that was outside the scope of those contracts. This process circumvented State procurement regulations that require a formal contract modification and BPW approval for significant changes in contract scope. **(Finding 2)**

- In response to a similar finding in our November 2011 special review report, SHA performed a survey to identify all A&E contract costs incurred for unrelated work. As of August 2012, the survey had not been completed; however, the preliminary results identified services costing \$21.7 million charged to 105 contracts that were for purposes outside the scope of those contracts.
  - For example, OLA noted SHA, without obtaining required BPW approval, used \$1.3 million of a \$14 million pre-construction services contract on post-construction services that were outside the scope of the contract, because SHA had depleted its post-construction services funds.
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## A&E Contracts (continued)

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SHA extended contract expiration dates without BPW approval, enabling SHA to retain unspent contract authorizations on contracts that otherwise would have expired. **(Finding 3)**

- According to a report produced by SHA, during the period August 2008 through June 2011, SHA processed 291 contract extensions, related to 204 contracts totaling approximately \$449 million.
  - OLA's review of 10 extensions for contracts originally valued at \$136 million found extension periods from a year to 18 months, with a total \$14.5 million unexpended balance at the time of their extensions.
  - A similar condition was noted in OLA's November 2011 special report. In May 2012, SHA submitted contract extensions for 391 A&E contracts (including the aforementioned 204 contracts) totaling \$783 million to BPW for retroactive approval, which was granted on May 23, 2012.
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## A&E Contracts (continued)

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Although SHA had established a post-audit process for determining the propriety of A&E contractor billings for direct labor costs, which accounted for the majority of A&E contractual payments, only a limited number of contractors were selected for audit. **(Finding 4)**

- Since SHA was responsible for reimbursing the firm's actual labor costs, these audits provide a control to detect whether the labor charges billed to SHA corresponded to the firm's payroll records, in terms of labor rates and hours of services provided.
  - During FY 2011, SHA made payments to approximately 150 A&E firms totaling \$134 million (primarily for labor and associated overhead); however, only 5 of these firms had been audited during FY 2011.
  - A similar condition was commented upon in OLA's preceding audit report.
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## **Maryland SafeZones Program**

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### **Background**

- The 2009 General Assembly Session authorized the use of automated speed monitoring systems in highway work zones, effective October 1, 2009.
  - In August 2009, SHA established the Maryland SafeZones pilot program through an intergovernmental cooperative purchasing agreement with a local jurisdiction. SHA agreed to pay the contractor a monthly rate of \$112,221 to operate 2 mobile speed cameras for the period October 2009 through June 2010.
  - In October 2009, SHA issued a Request for Proposal (RFP) to operate the Program after the end of the pilot period. SHA awarded a contract in June 2010 for the period of July 2010 through June 2012, with a not to exceed cost of \$8.1 million. The contract provided for 3 additional one-year renewal periods which, if executed, would bring the total contract cost to approximately \$21 million.
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## Maryland SafeZones Program (continued)

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SHA did not ensure that contractor performance benchmarks were established for the SafeZones pilot program. **(Finding 5)**

- SHA's contract for the pilot program called for benchmarks to be established to evaluate contractor performance; however, no benchmarks were established even though the contract required the contractor to provide a system capable of accurately measuring speeds and collecting readable license plates under various conditions.
  - An example of a useful benchmark that was not established was the reliability and readability of the photographed violations. OLA's review of the pilot program records disclosed that the contractor's cameras captured 133,620 speed violations from October 2009 through June 2010; however, only 44% of those photographed were actually issued a citation because the remaining 56% were deemed unacceptable by SHA due to reliability and readability issues.
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## Maryland SafeZones Program (continued)

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SHA awarded a contract for operating the current SafeZones program even though the contractor's proposal, which was the sole bid, did not comply with certain requirements. **(Finding 6)**

- The specific speed detection equipment listed in the contractor's proposal, and ultimately used, did not conform to certain industry standards, as required.
- The RFP required a legible image of a violator's license plate 95% of the time, but this was reduced to 90% during the bid evaluation, because per SHA the contractor asserted it could not meet the 95% measure.
- A consultant hired to conduct tests of the contractor's equipment prior to the award did not conduct the tests in accordance with SHA's requirements.

SHA did not consider these issues major deviations from the RFP. There is a question, however, as to whether these factors could have impacted the lack of other bids, thus possibly justifying the need for a new solicitation.

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## Maryland SafeZones Program (continued)

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SHA did not have procedures to verify that the SafeZones contractor met a key performance measure and that the equipment's independent calibration was checked timely. **(Finding 7)**

- SHA did not verify that the contractor accurately reported instances of speed violations that did not result in the issuance of a citation. As noted there was a requirement that citations be issued for at least 90% of the violations captured, after excluding rejections resulting from uncontrollable events (e.g., a speeding vehicle's tag obstructed by another vehicle). In FY 2011, the contractor reported it had achieved a 93% performance rate; however, this was after excluding 20% of the violations captured (or 152,800) because of uncontrollable events. SHA did not conduct a formal review of the related images to verify the propriety of excluding them.
  - The system equipment did not undergo a calibration check by an independent laboratory until 9 months after implementation.
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## Other Findings

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- Certain monitoring controls over computer mainframe production files needed improvement. **(Finding 8)**
  - A management employee and the employee's subordinates participated in the monitoring of a consulting services contract totaling \$5 million with a firm where the employee's spouse was a senior executive, which is a potential violation of State ethics laws. **(Finding 9)**
  - SHA did not adhere to MDOT's policy for administrative leave that was granted to two employees. Specifically, the policy provides for administrative leave while investigating allegations that may result in employee termination. However, our review disclosed that two SHA employees remained on administrative leave for extended periods of time (approximately a year or longer) and SHA paid the employees \$215,000 after the investigations were completed and the allegations were substantiated. **(Finding 10)**
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### Conclusion

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SHA should:

- Establish procedures to ensure compliance with State procurement regulations and MDOT policies, such as ensuring contracts are only used as authorized and submitting contract modifications and extensions for BPW approval.
  - Increase the number of A&E contracts subject to audit.
  - Improve its contract monitoring by ensuring that procurement and contract terms are complied with.
  - Activate certain information system security settings and perform documented reviews of certain file accesses.
  - Refer the aforementioned issue to the State Ethics Commission and establish procedures to address potential conflicts of interest.
  - Comply with MDOT policy when granting administrative leave to employees.
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