

Financial Management Practices Audit Report

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Howard County Public School System

October 2016

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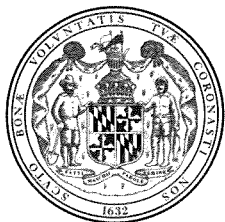
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MARYLAND GENERAL ASSEMBLY

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DEPARTMENT OF LEGISLATIVE SERVICES  
OFFICE OF LEGISLATIVE AUDITS  
MARYLAND GENERAL ASSEMBLY

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October 17, 2016

Senator Guy J. Guzzone, Co-Chair, Joint Audit Committee  
Delegate C. William Frick, Co-Chair, Joint Audit Committee  
Members of Joint Audit Committee  
Annapolis, Maryland

Ladies and Gentlemen:

We conducted an audit of the financial management practices of the Howard County Public School System (HCPSS) in accordance with the requirements of the State Government Article, Section 2-1220(e) of the Annotated Code of Maryland. The objectives of this audit were to evaluate whether HCPSS procedures and controls were effective in accounting for and safeguarding its assets and whether its policies provided for the efficient use of financial resources.

Our audit disclosed that HCPSS needs to maximize its use of competitive procurement procedures rather than relying on sole source contracting processes to select vendors. HCPSS management advised us that it selected vendors that it believed were in the best interest of the school system. We identified 15 contracts totaling \$12.6 million that were not procured through a competitive procurement process. Rather, these contracts were awarded by senior management employees as sole source contracts without sufficient justifications. In each instance, there appeared to be other vendors capable of supplying the desired services or products. We also noted fees associated with services provided by certain construction management firms were based on negotiations rather than competitive bids as required by law. Consequently, HCPSS lacked assurance it awarded contracts to the most qualified vendors at the best value.

HCPSS also needs to improve security and controls over its computer network and information systems. HCPSS did not use any form of intrusion detection prevention system to protect its network and network firewall rules were not properly configured to secure certain connections from untrusted sources. Workstations and servers were not sufficiently protected from malware and

many computers we tested were running outdated operating systems which increased their vulnerability to exploitation.

Finally, HCPSS needs to enhance internal controls and accountability for a number of its other financial operations including payroll processing, transportation services, and equipment inventory. For example, certain critical user functions on the payroll system, such as the ability to change an employees' salary, were not properly restricted, thereby increasing the risk of improper transactions being processed without detection.

HCPSS's response to this audit, including the Board Chair's letter prefacing the responses to the individual recommendations, and our overall assessment of the response and comments regarding the disagreements expressed by HCPSS are included in the appendix to the report.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "TJ Barnickel III". The signature is written in a cursive, flowing style.

Thomas J. Barnickel III, CPA  
Legislative Auditor

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\* Denotes item repeated in full or part from preceding audit report

# Background Information

## Statistical Overview

According to student enrollment records compiled by the Maryland State Department of Education (MSDE), Howard County Public School System (HCPSS) ranks 6<sup>th</sup> in student enrollment among the 24 public school systems in Maryland. Fiscal year 2015 total full-time student population was 53,685 students. HCPSS has 76 schools, consisting of 41 elementary schools, 20 middle schools, 12 high schools, and 3 special schools.

According to HCPSS' audited financial statements, fiscal year 2015 revenues were \$938 million and expenditures were \$942 million. The largest expenditure category was salaries and wages, including benefits, which accounted for 68 percent of total operating expenditures during fiscal year 2015. According to MSDE records, during the 2014-2015 school year, HCPSS had 7,953 full-time equivalent positions which consisted of 6,053 instructional and 1,900 non-instructional employees.

## Oversight

HCPSS is governed by a local school board, consisting of seven elected members and one student member with partial voting rights. The State and the Howard County government provide the majority of HCPSS funding. In addition, MSDE exercises considerable oversight through the establishment and monitoring of various financial and academic policies and regulations, in accordance with certain provisions of the Annotated Code of Maryland. MSDE also works with HCPSS to comply with the requirements and mandates of federal law. Howard County government exercises authority over HCPSS, primarily through review and approval of HCPSS' annual operating and capital budgets.

## External and Internal Audits

HCPSS engages a certified public accounting firm to independently audit its annual financial statements. Additionally, the auditor conducts what is referred to as a Single Audit of HCPSS federal grant programs (as required by federal regulations). We reviewed the resulting financial statement and Single Audit reports for fiscal years 2013, 2014, and 2015, and examined the related work papers for the fiscal year 2014 audits, which were the latest work papers available when we began our field work.



Due to similarities between the work of the independent certified public accounting firm that audited HCPSS' financial statements and conducted the Single Audit, and the risks and scope of our audit in certain areas, we relied on the results of the independent audits to reduce the scope of our audit work related to certain revenues and federal grant activity. In addition, we relied on the results of the work performed by the HCPSS internal auditors related to school activity funds.

### **Status of Findings From Preceding Audit Report**

Based on our assessment of significance and risk to our audit objectives, our audit included a review to determine the status of 18 of the 33 findings contained in our preceding audit report dated October 23, 2009. We determined that HCPSS satisfactorily addressed 12 of these findings. The remaining 6 findings are repeated in this report.

## Findings and Recommendations

### Revenue and Billing Cycle

#### Background

Howard County Public School System (HCPSS) revenues consist primarily of funds received from Howard County, the State, and the federal government. According to the HCPSS audited financial statements, revenues from all sources totaled \$938 million during fiscal year 2015. In addition, schools also collect funds for various purposes, such as for student activities, clubs, and school publications. Because they are not considered school revenue, these school activity funds are accounted for separately by each school and are reported in summary in the audited financial statements. Although this revenue is raised through student-related activities, HCPSS has a fiduciary duty to safeguard these funds. For fiscal year 2015, school activity fund collections totaled \$12.1 million and the June 30, 2015 balance was \$4.9 million.

#### External Audits

Due to the similarities between the work of the independent certified public accounting firm that audited the HCPSS financial statements and our objectives in this area, we placed reliance on the results of the firm's audit for certain revenues (funding from the federal, state, and county governments), for which the auditor's procedural reviews and testing disclosed no material weaknesses.

#### Internal Auditor Audits School Activity Funds

The HCPSS internal auditor conducts audits of all school activity funds on a rotating basis and reports its findings to the school principals and central administrative staff. The internal auditor's review of internal controls and tests of the school activity fund transactions at HCPSS schools identified some control weaknesses at certain schools that were addressed by school management. Our review of selected reports disclosed that the internal auditor's testing did not identify any improprieties or prevalent internal control weaknesses.

**Finding 1**

Adequate control had not been established over summer school receipts, as checks were not restrictively endorsed upon receipt, and collections were not subject to independent deposit verification.

**Analysis**

Controls over HCPSS summer school receipts, which totaled \$430,000 in fiscal year 2014, were not adequate. Collections were recorded in receipt books but were not restrictively endorsed at the schools where they were received. Rather, the collections were endorsed once they were transferred to the Finance Office. Additionally, independent verifications that the collections as recorded in the receipt books were deposited were not performed by the Finance Office. Furthermore, collections received were only forwarded to the Finance Office for deposit on a weekly basis. The lack of timely deposit of summer school collections was commented upon in our preceding audit report.

**Recommendation 1**

We recommend that HCPSS ensure

- a. collections are restrictively endorsed immediately upon receipt,
- b. employees independent of the cash receipts processes verify that collections as initially recorded were deposited, and
- c. collections are deposited in a timely manner (repeat).

**Federal Funds****Background**

HCPSS receives funds pertaining to federal government programs that are generally restricted for use in a specified program (such as the School Lunch Program or Special Education). According to the audited Schedule of Expenditures of Federal Awards, fiscal year 2015 expenditures of federal award funds totaled \$25.9 million.

**Single Audit Reports Disclosed Some Significant Deficiencies But No Material Weaknesses Regarding Federal Grant Management**

Due to work performed by the independent certified public accounting firm that conducted the Single Audits of HCPSS' federal grants for fiscal years 2013 through 2015 and the objectives of our audit in this area, we relied on the auditor's work and results. Besides expressing an opinion on HCPSS compliance with the terms of several grant programs, the auditor also considered the existing internal control structure's impact on compliance and audited the required Schedule of Expenditures of Federal Awards for fiscal

years 2013 through 2015. The related reports stated that HCPSS complied, in all material respects, with the requirements applicable to its major federal programs. With respect to internal controls over compliance with, and the operation of, major federal programs, the auditor identified several significant deficiencies that were not considered material weaknesses for fiscal year 2015. HCPSS generally agreed to take corrective actions to correct these deficiencies such as ensuring employee time charged to federal grants was properly recorded in the payroll system.

## **Procurement and Disbursement Cycle**

### **Background**

According to HCPSS records, non-payroll disbursements totaled \$300 million during fiscal year 2015. HCPSS uses an automated system for purchasing and disbursements. Requisitions entered by departments are subject to departmental and purchasing office approval. Approved requisitions are then converted to purchase orders by the purchasing office, which also generally handles the solicitation, bid evaluation, and establishment of contracts. Similar to State regulations, HCPSS procurement policies generally require that purchases over \$25,000 be formally bid. The receipt of goods and services is entered into the automated system by the receiving school or department and payments are then processed by the Finance Office. Vendor payments are processed using the automated system.

HCPSS had established adequate controls over its automated purchasing and invoice processing systems. Specifically, electronic approvals were established over purchase requisitions and invoice payments to prevent one individual from creating and approving purchases and paying the related invoices. In addition, HCPSS had written policies and procedures for the procurement of goods and services and the disbursement of funds.

Our audit disclosed that the majority of the procurements for goods and services we selected for testing were processed by the purchasing office and were handled appropriately. Specifically, the purchasing office had publically solicited bids, selected the lowest priced bid or best qualified firm, and maintained documentation to support the award decision and the overall integrity of the process.

**Finding 2**

**A number of contracts were awarded without competitive bids. We identified 15 contracts totaling \$12.6 million that had been awarded by senior management employees as sole source contracts, without adequate justification to support a sole source procurement.**

**Analysis**

A number of contracts were not competitively bid; rather, the contracts were procured through the sole source procurement method without an adequately documented justification as to why competitive procurement methods were not used. Specifically, we noted 15 contracts that had been awarded totaling \$12.6 million that were generally selected by senior management employees that had oversight responsibility without the purchasing office's involvement. These contracts were identified as sole source contracts but lacked adequate justification to support a sole source procurement. We identified other vendors that could perform these services or provide the acquired products.

Generally, HCPSS management advised us that it selected vendors that it believed were in the best interest of the school system. Although there were certain indications that management had evaluated vendors and options, such procedures were not performed as part of a competitive procurement. Competitive procurements provide increased confidence in the integrity of the procurement process and help ensure the fair and equitable treatment of firms dealing with the system. Furthermore, without competition, HCPSS lacked assurance that these contracts were executed with the most qualified firms and represented the best value to HCPSS.

Our tests of procurements disclosed the following examples of contracts that were awarded as sole source procurements but which lacked an adequate justification to support such a procurement:

- HCPSS executed a contract for \$8.1 million for the purchase of software for an automated personnel, payroll, and accounting system without the use of a competitive procurement. The presentation to the Board for the purchase of the software license did not indicate why the software chosen was the only option that HCPSS should consider, and HCPSS was unable to provide us with any written analysis documenting why other vendors' software packages would not be suitable.

HCPSS management advised us that the contract was a cooperative procurement contract (a "piggyback" contract). However, such arrangements are generally subject to the provisions related to intergovernmental cooperative purchasing agreements (ICPA) as specified

in State law.<sup>1</sup> This law, which specifically states it is applicable to local education agencies, allows the use of ICPAs only after the using entity has determined the use of such arrangements will provide cost benefits, promote administrative efficiencies, or further other policy goals. No written determination of the benefits of using this procurement method was prepared for this contract. Furthermore, HCPSS purchased different software modules than the other school system that used this vendor and the fee structure also differed. Without the aforementioned written determination of the ICPAs benefits, this procurement had the appearance of a sole source procurement that lacked any documented basis as to why competitive procurement methods were not used.

- HCPSS selected a different vendor to install the automated personnel, payroll, and accounting system for \$2.4 million and stated the vendor was selected by the sole source procurement method even though there are, according to the software vendor's website, numerous firms that can install the software. Although not through a formal solicitation process, HCPSS indicated that it had obtained a quote from another firm but the other firm's price was higher than the selected vendor.

HCPSS justified not considering other vendors because those companies were too large and did not exclusively focus on the system HCPSS was installing. HCPSS also indicated other vendors were not selected because their published hourly rates were excessive. Without a formal procurement process, HCPSS could be making unreliable assumptions about vendor interest, capability, and pricing.

- A contract for \$426,300 that was issued in June 2013 for a vendor to perform a survey of HCPSS employees. HCPSS management personnel advised us that the contract was a sole source procurement but a written justification had not been prepared as to why other firms could not perform the service. Moreover, it appears that the service provided by this firm could have been provided by other firms. After the firm was awarded the initial contract, HCPSS entered into five other contracts with the same firm for other survey services without competitive procurements. The total cost of these five additional contracts was \$663,600.

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<sup>1</sup> Section 13-110 of the State Finance and Procurement Article of the Annotated Code of Maryland, in part, defines an intergovernmental cooperative purchasing agreement as a contract that is entered into by a least one governmental entity in a manner consistent with the purposes set forth in Section 11-201 of the Article, that is available for use by the governmental entity entering the contract and at least one additional governmental entity, and that is intended to promote efficiency and savings that can result from intergovernmental cooperative purchasing.

- A contract for \$300,000 was issued in June 2014 for a firm to perform a study of the HCPSS special education program. We were again advised that the contract was a sole source procurement but a written justification had not been performed in support of this procurement method. Moreover, it appears that the service provided by this firm could have been provided by other firms. For example, another Maryland school system recently solicited proposals for a firm to study its special education program and received proposals from six firms. After this firm was awarded the initial contract, HCPSS entered into another contract with the same firm to conduct a study of the facilities department without competitive procurements. This additional contract was for \$100,000.

The aforementioned contracts had been approved by the Board. However, for many of the contracts, the only sole source justification presented to the Board related to why a competitive procurement process had not been followed was an excerpt from the HCPSS policy:

"When it is not practical to obtain competitive bids .... purchases may be made without competitive bidding with the approval of the Board as appropriate."

Furthermore, no rationale or explanation was presented to the Board as to why competitive bids were "not practical".

A similar condition regarding sole source procurements was commented upon in our preceding audit report.

### **Recommendation 2**

**We recommend that HCPSS follow its procurement manual and related policies and laws and obtain competitive bids for goods and services unless an adequate and documented justification exists to not use competitive procurements (repeat).**

### **Finding 3**

**HCPSS did not document its comparison of invoices for temporary service employees to timesheets approved at the schools.**

### **Analysis**

HCPSS did not document its comparison of billing amounts from a firm that provided temporary employees to timesheets approved at the schools. HCPSS hires temporary employees through the vendor primarily to provide assistance to special education students. These temporary employees'

timesheets are reviewed and approved by the principal at their school of service. The employee who approved the invoices advised us he compared a sample of charges on the invoices to approved timesheets but did not document this process and had no record of the number of charges that were compared to timesheets, or documentation of any discrepancies. Consequently, there was a lack of assurance that the invoices and related charges were verified prior to payment. Payments to this firm totaled approximately \$1.5 million in fiscal year 2014.

### **Recommendation 3**

**We recommend that HCPSS document its comparison of vendor invoices to appropriate supporting documentation.**

## **Human Resources and Payroll**

### **Background**

Payroll expense represents the largest single cost component in the HCPSS budget. According to HCPSS records, fiscal year 2015 salary, wage, and benefit costs totaled \$642 million. According to Maryland State Department of Education reports, during the 2014 - 2015 school year HCPSS had 7,953 full-time equivalent positions, which consisted of 6,053 instructional positions and 1,900 non-instructional positions.

HCPSS uses an automated integrated human resources and payroll system to maintain human resources information, record employee time, track leave usage, and to process and record payroll transactions. The system generates payroll checks and direct deposit advices. Payroll processing involves both automated processes (such as compiling leave and running edit reports) and manual processes (such as data entry of new employee information).

### **Finding 4**

**Independent reviews of certain personnel and payroll transactions processed, such as adding new employees and salary changes, were lacking, and the access capabilities assigned to users of the automated system were not adequately restricted.**

### **Analysis**

Independent reviews of certain personnel and payroll changes processed were not performed, and certain system users were assigned incompatible capabilities in the automated human resources and payroll system.



- HCPSS lacked an independent review and approval to ensure that certain personnel and payroll transactions were appropriate and accurately processed. For example, new employees added to the system or changes to employee data, including salary changes, were not subject to independent approval. Specifically, transactions were reviewed but the reviews were not independent as the employees reviewing the transactions could also process the transactions.
- HCPSS did not adequately restrict employee capabilities to perform certain critical functions, such as changing employee salary and direct deposit information. Seven employees within the Office of Payroll had been assigned access to personnel and payroll screens in the automated system that provided them with virtually complete control over the payroll process. Although these employees needed access to certain components of the menus to perform their jobs, HCPSS had not developed a process to ensure an adequate separation of functions. We also noted an additional 40 employees that had been assigned access capabilities to perform critical functions that were not required for their job duties. Although our tests did not identify any inappropriate transactions, unnecessary employee access to the system could be used to process unauthorized payroll payments that would not be readily detected.

Subsequent to our audit work in this area, HCPSS moved to a new human capital management system. We were advised that the implementation of the new system was completed in April 2016.

#### **Recommendation 4**

**We recommend that HCPSS**

- a. perform a documented independent review and approval of all personnel and payroll transactions processed,**
- b. eliminate the capability of system users to perform incompatible functions, and**
- c. periodically review the access capabilities assigned to all users and eliminate those capabilities that are not required by those individuals to perform their job duties.**

**Finding 5**

**HCPSS lacked evidence that the salaries for 142 administrative employees, which totaled \$15.3 million in fiscal year 2014, had been approved by the Board as required by State Law.**

**Analysis**

Evidence was lacking that the salaries for certain central office personnel had been approved by the Board as required by State Law. There was no documentation that the Board approved the salary scale that existed as of July 1, 2014, or the individual salaries, for 142 administrative employees, including the Deputy Superintendent and HCPSS Executives, who were not covered by any existing contract (such as union contracts). Additionally, while we were advised that these administrative employees received salary increases commensurate with those negotiated for the unionized employees (for example, a three percent increase effective July 1, 2014), HCPSS was unable to provide evidence that the Board had approved the increases for the administrative employees.

HCPSS personnel advised us that the salaries and salary scale were provided to certain Board members, but this action was not clearly documented and does not comply with the requirement in the law. According to Section 4-103 of the Maryland Education Article of the Annotated Code of Maryland, the Board is required to approve all salaries. Salaries for these 142 positions totaled \$15.3 million in fiscal year 2014.

**Recommendation 5**

**We recommend that HCPSS ensure salaries of administrative employees are approved by the Board as required by State Law.**

**Finding 6**

**Certain executive employees at HCPSS were receiving regular monthly mileage payments for amounts that could not be substantiated and were not authorized or approved by the Board.**

**Analysis**

HCPSS provides a regular monthly payment for mileage to certain executive-level employees without requiring documentation of miles traveled for work. Moreover, HCPSS could not substantiate how these amounts were determined and the payments were not authorized or approved by the Board.

HCPSS management advised that these payments are included as earnings in the employees' annual earnings statements issued by HCPSS. As such, these payments constitute taxable compensation (which should be approved by the Board) and are not reimbursements for specifically identified expenditures.

In fiscal year 2014, 36 employees received mileage payments totaling approximately \$108,000. In fiscal year 2015, 23 employees received mileage payments ranging from \$125 to \$560 per month totaling approximately \$100,000.

#### **Recommendation 6**

**We recommend that HCPSS**

- a. maintain documentation establishing how such payments were determined, and
- b. ensure such compensation arrangements are authorized and approved by the Board.

### **Inventory Control and Accountability**

#### **Background**

According to HCPSS' audited financial statements, as of June 30, 2015, the undepreciated value of its equipment was \$36.1 million. HCPSS uses a centralized fixed asset inventory system to track capital equipment (that is, items with a cost of \$5,000 and greater). Equipment at HCPSS included furniture and equipment items, such as desks, computers, audio and video items, and various other items. Certain individuals were responsible for the equipment at each location (that is, each school or administrative office). In addition, HCPSS also maintains a separate database of sensitive, non-capital computer hardware.

#### **Finding 7**

**HCPSS had not performed a complete inventory of its information technology equipment as approximately 9,600 of the 28,500 items added to the equipment database between 2009 and June 2014 had not been inventoried.**

#### **Analysis**

HCPSS had not inventoried all of its information technology equipment. Due to the sensitive nature of information technology equipment, HCPSS maintains a separate database of such equipment with an acquisition cost below \$5,000. However, as of July 14, 2015, approximately 9,600 of the 28,500 items added to the database between 2009 and June 2014 had not

been inventoried, including 2,850 laptop computers. The maintenance of inventory records for information technology equipment and the periodic physical inventory of such items are required by HCPSS policy, but the policy does not specify cycle counting or otherwise indicate how often physical inventories should be performed.

Our test of 60 pieces of sensitive information technology equipment disclosed that 3 items (2 laptops and a digital camera) could not be located by HCPSS.

#### **Recommendation 7**

**We recommend that HCPSS**

- a. **modify its policy on information technology equipment to specify how often physical inventories should be performed; and**
- b. **periodically inventory all sensitive items in the information technology equipment records, in accordance with the modified HCPSS policy.**

## **Information Technology**

### **Background**

The HCPSS Technology Department maintains and administers the HCPSS computer network, computer operations, and instructional information system applications. HCPSS operates a wide area network, with Internet connectivity, which connects the individual schools' local networks to the computer resources located at HCPSS headquarters. The HCPSS network included two core network firewalls to protect the HCPSS network, and HCPSS operates several significant administrative and academic related applications including the finance application and the student information application. The finance application includes modules for: payroll, human resources, accounts payable, fixed assets, and purchasing.

### **Finding 8**

**Controls over the critical student information and financial management system databases were not sufficient as neither database was configured to log any database security activity, and certain operating system and database software had not been updated for critical security patches.**

### **Analysis**

Controls over the critical student information and financial management system databases were not sufficient.

- Neither database was configured to log any database security activity including privileged operations and changes to database security settings.

This condition could result in unauthorized or inappropriate activities (affecting the integrity of the databases) going undetected by management.

- The operating system software on the server hosting the student information system database and the database software for both the student information system and the financial system were susceptible to numerous known vulnerabilities. In this regard, both the database and operating system software had not been updated for critical security patches. For example, the student information system operating system had not been updated since January 2009, and we identified 111 vulnerabilities that existed on the installed version of this operating system that were addressed in later versions of this software.

Similar conditions were commented upon in our preceding audit report. Best practices identified in the State of Maryland's *Information Security Policy* require that information systems generate audit records for all security-relevant events, including all security and system administrator accesses and that system hardening procedures shall be created and maintained to ensure up-to-date security best practices are deployed at all levels of information technology systems (operating systems, applications, databases, and network devices).

#### **Recommendation 8**

**We recommend that HCPSS**

- a. set the student information and the financial management system databases to log all critical security related events, regularly review these logs, document these reviews, and retain this documentation for future reference (repeat); and**
- b. ensure that all production database and operating system software is patched and updated for all critical security vulnerabilities on a timely basis (repeat).**

#### **Finding 9**

**Network, application, and database account and password controls were not sufficient to properly protect critical resources.**

#### **Analysis**

Network, application, and database account and password controls were not sufficient to properly protect critical resources.

- Account and password controls over network authentication and the student information and financial management system applications did

not meet certain minimum thresholds identified in the aforementioned State of Maryland *Information Security Policy*. For example, network authentication account and password controls were deficient with respect to password length, complexity, history, and account lockout.

- Account and password controls over the student information and financial management system databases did not meet certain minimum thresholds identified in the aforementioned *Information Security Policy*. Specifically, account and password controls were deficient with respect to password length, complexity, maximum age, and account lockout.

#### **Recommendation 9**

**We recommend that HCPSS establish appropriate network, application, and database account and password controls in accordance with the aforementioned best practices noted in the aforementioned *Information Security Policy*.**

#### **Finding 10**

**The HCPSS computer network was not adequately secured as intrusion detection prevention system software was not used to protect the network, and firewall rules allowed insecure and unnecessary connections to several critical network devices.**

#### **Analysis**

The HCPSS computer network was not adequately secured.

- HCPSS did not use any form of intrusion detection prevention system (IDPS) software to protect its network. Specifically, HCPSS did not use a network-based IDPS to protect its entire network from external traffic (both encrypted and unencrypted) and did not use a host-based intrusion prevention system (HIPS) on its servers that processed encrypted traffic. A properly configured IDPS can aid significantly in the detection/prevention of and response to potential network security breaches and attacks. Also, best practices identified in the aforementioned *Information Security Policy* require protection against malicious code and attacks by using IDPS to monitor system events, detect attacks, and identify unauthorized use of information systems and/or confidential information.
- Firewall rules allowed insecure and unnecessary connections to several critical network devices. For example, firewall rules allowed unnecessary Internet access to several critical internal servers. Best practices

prescribed by the aforementioned State of Maryland *Information Security Policy* require that information systems shall be configured to monitor and control communications at the external boundaries of the information systems and at key internal boundaries within the systems.

- HCPSS personnel advised us that they did not review any firewall logs. HCPSS firewalls log a variety of network events and sensitive actions, including malicious activity, as the actions occur, which provides an opportunity for information technology personnel to promptly identify problems and take timely mitigating action.
- Remote administrative connections to the firewalls were not restricted to originating from authorized firewall administrators and insecure connection protocols were used for administrative access to the firewalls. Best practices as per the aforementioned *Information Security Policy* require that system hardening procedures shall be followed for network devices.

#### **Recommendation 10**

**We recommend that HCPSS**

- a. perform a documented review and assessment of its network security risks and identify how IDPS coverage should be best applied to its network and implement this coverage;**
- b. configure its firewall rules to adequately secure connections from untrusted third parties (including the Internet);**
- c. regularly review the firewall logs, document all reviews performed and retain the documentation for future reference; and**
- d. restrict remote administrative connections to the firewalls to only authorized users and use only secure connection protocols for this remote administration.**

#### **Finding 11**

**Workstations and servers were not sufficiently protected against malware.**

#### **Analysis**

Workstations and servers were not sufficiently protected against malware.

- Nine of thirteen workstations tested were improperly configured with users having administrative rights. We were advised by HCPSS management personnel that the user accounts for all faculty and staff workstations were defined with local administrative privileges to lessen information technology support requirements. Administrative rights are the highest

permission level that can be granted and should be restricted to network administrators and select others because these rights allow users to install software and change configuration settings. As a result, if these workstations were infected with malware, the malware would run with administrative rights and expose these workstations to a greater risk of compromise than if the workstations' user accounts operated with only user rights. In addition, users on all workstations tested that had malware protection software installed had the ability to disable the malware protection software on their workstations.

- Eight of sixteen computers tested were running outdated operating system software. Our testing disclosed that as of August 3, 2015, these computers' operating systems had not been updated for periods ranging from three months to over two years. As a result, these computers are exposed to known security risks since updates issued by the vendor to address vulnerabilities had not been installed.
- HCPSS did not have an enterprise wide management tool to administer the malware protection software on its workstations and servers. As a result of this condition, HCPSS could not connect to and manage the malware protection software on its 71,000 workstations and servers. Therefore, HCPSS lacked assurance that these 71,000 computers had a fully operational and up-to-date malware protection software installed. In this regard, our testing disclosed that twelve of sixteen computers tested did not have a current version of the malware protection software installed. Specifically, 11 computers had malware protection software installed that was outdated by at least 11 months and one tested computer did not have malware protection software installed.

Best practices as prescribed by the aforementioned State of Maryland *Information Security Policy* state that agencies, at a minimum, must protect against malicious code (viruses, worms, Trojan horses) by implementing (anti-virus, anti-malware) solutions that, to the extent possible, include a capability for automatic updates.

#### **Recommendation 11**

**We recommend that HCPSS**

- a. ensure that administrative rights on workstations are restricted to network administrators and other select users requiring such rights;**
- b. configure its malware protection software so that users cannot disable the settings which allow users to override and modify default security controls established by management;**



- c. verify that all computers are properly updated, on a timely basis, with operating system updates approved by the agency; and
- d. obtain a vendor supported enterprise-wide management tool to regularly confirm that all workstations and servers are configured with malware protection software that is operating properly, up-to-date, and has current definition files.

## Facilities Construction, Renovation, and Maintenance

### Background

HCPSS employs a staff of approximately 640 employees to maintain its 78 facilities (including schools and other administrative and support offices). According to the fiscal year 2015 Capital Improvement Plan, necessary construction, major renovations, and systemic improvements to HCPSS facilities over the next five years were estimated to cost \$570 million.

### Finding 12

**HCPSS did not select certain construction management firms by competitive bids as required by State Law.**

### Analysis

Construction management firms used to oversee construction projects were not selected by competitive bids as required by State Law. Periodically, approximately every five years, HCPSS develops lists of approved construction management firms. HCPSS solicits construction management firms to submit applications that detail their qualifications and experience. An HCPSS committee then evaluates the firms that apply and selects firms for the approved list. When HCPSS needs a construction management firm, the director of school construction and his staff selects a firm from the list of approved firms and negotiates the firm's fee.

The procurement process used to select construction managers is not in compliance with Section 5-112 of the Education Article of the Annotated Code of Maryland. This law requires the solicitation of competitive bids and that the related contracts be awarded to the lowest responsive bidder when the value of the contract for any school building or improvement exceeds \$25,000. We were advised by legal counsel to the General Assembly that this law applies to construction management firms.

During fiscal years 2013 and 2014, HCPSS entered into 12 contracts with 5 construction management firms totaling \$9.3 million.

## **Recommendation 12**

**We recommend that HCPSS use a competitive procurement process to select construction management firms as required by State Law.**

## **Transportation Services**

### **Background**

HCPSS had approximately 40,300 students eligible to receive student transportation services during fiscal year 2015. These students were transported 5.3 million route miles during the 2014-2015 school year using 448 vendor-owned buses. According to MSDE records, fiscal year 2015 transportation costs totaled approximately \$36.4 million, which included \$580,000 to transport students to 5 of the County's 85 non-public schools.

### **Finding 13**

**Bus vendor payment information was not independently reviewed, and user access capabilities for the automated bus vendor payment system were not adequately controlled.**

### **Analysis**

Internal controls over the bus vendor payment process were not adequate in that vendor payment information was not independently reviewed and user access capabilities for the automated bus vendor payment system were not adequately controlled. Consequently, improper payments could be processed without detection, although our tests did not disclose any payment improprieties.

The payment information generated from the bus vendor payment system, which is forwarded to the Finance Office in summary format for final processing and disbursement to the 49 transportation vendors, was not independently reviewed by Transportation department personnel before being transmitted to the Finance Office. During fiscal year 2014, payments to bus contractors totaled \$34.7 million. A similar condition was commented upon in our preceding audit report.

In addition, access to the automated bus vendor payment system was not adequately controlled. Specifically, we noted three unassigned user accounts that had been used when the system was originally tested were still active. Access to these unassigned accounts could allow a user to inappropriately modify data used in the calculation upon which the subsequent payment is based. Also, one individual had been assigned critical system capabilities,

such as editing contractor rates and processing payments, which were not necessary for that individual's job responsibilities.

**Recommendation 13**

**We recommend that HCPSS improve internal controls over the bus vendor payment process by**

- a. **ensuring that payment information is independently reviewed by Transportation department personnel before transmission to the Finance Office for payment (repeat), and**
- b. **removing unnecessary system access capabilities.**

**Finding 14**

**HCPSS was not fully using its automated routing software to plan bus routes, and many HCPSS bus routes were operating below ridership goals.**

**Analysis**

HCPSS did not fully use its automated routing software to plan bus routes on a system-wide basis and, as a result, may be operating more buses or bus routes than is necessary. Specifically, while HCPSS used the routing software to modify existing individual bus routes, it did not use the software to perform a system-wide analysis to improve overall efficiency. More efficient route planning with a focus on more fully utilizing the capacity of buses may contribute to decreased transportation costs.

Many of HCPSS bus routes were operating below ridership capacity goals which ranged from a low of 35 high school students to a high of 50 elementary school students. Our analysis disclosed that 292 of the 459 bus routes operated with ridership below the applicable ridership goals. Eighty-six of the bus routes had ridership of 25 students or less. A similar situation was commented upon in our preceding audit report.

**Recommendation 14**

**We recommend that HCPSS fully use its automated routing software to more efficiently plan bus routes on a system-wide basis in an effort to achieve ridership goals (repeat).**

## **Food Services**

### **Background**

HCPSS operates 11 cooking cafeterias that provide meals to 76 schools. Food and supplies are received at the 11 cooking cafeterias, processed, and then delivered to the schools. Meals are then further processed and served by the schools. During fiscal year 2014, HCPSS had 188-full time equivalent employees. During the 2013-2014 school year, HCPSS served approximately 2,712,000 lunches and 719,000 breakfasts. For fiscal year 2014, HCPSS's food service operations had revenues of approximately \$12,011,000 and expenditures of \$12,923,000, for a deficit of \$912,000. HCPSS assesses its food service expenditures, staffing levels, and other operational data. Performance goals have been set and measured to help improve cost effectiveness.

### **Cash Handling Procedures for Cafeteria Sales Were Adequate**

HCPSS has implemented procedures and controls designed to ensure that cafeteria receipts were properly accounted for, processed, and deposited. Collections are independently reconciled against sales recorded in an automated point-of-sale system and deposited on a daily basis by the various schools. Subsequently, a food services central office employee independently verifies deposits to sales reports generated from the system.

## **School Board Oversight**

### **Background**

HCPSS' Board of Education is currently composed of seven elected voting members and one student representative with partial voting rights. In its oversight responsibilities, the Board contracted with a certified public accounting firm for independent audits of the HCPSS financial statements and federal programs.

### **HCPSS Adopted an Ethics Policy that Met the Current Requirements of State Law**

The Board has adopted a detailed ethics policy that conforms to State Law and includes provisions for conflicts of interest and financial disclosure and was approved by the State Ethics Commission. Provisions of this policy are applicable to Board members as well as all HCPSS employees. HCPSS established an Ethics Panel consisting of five members who are appointed by the Board of Education. The Panel acts as an advisory body to the Board and interprets the ethics code and provides advisory opinions. The Panel also reviews and rules on any reported complaints of ethics violations. According

to the ethics policy, annual financial disclosure statements are required to be filed by Board members, the Superintendent, Assistant Superintendents, and a number of other administrators (such as school principals and department heads) by April 30<sup>th</sup> of each year. Our test of the records for employees required to submit financial disclosure forms for calendar year 2014, disclosed that forms were generally submitted as required.

## **Other Financial Controls**

### **Healthcare Background**

HCPSS is self-insured and utilizes a third-party administrator to oversee and administer its employee and retiree healthcare plan. HCPSS employs a verification process in its enrollment procedures whereby employees must submit adequate documentation (such as, birth certificates) for any individuals the employee wants added as a dependent to their health plan. The third-party administrator performs similar verification procedures to ensure the eligibility of dependents. HCPSS' healthcare claim expenditures totaled approximately \$100 million during fiscal year 2014.

### **Finding 15**

**HCPSS did not ensure the propriety of certain claim payments for employee and retiree health care costs.**

### **Analysis**

HCPSS lacked procedures and controls to ensure that certain amounts paid to the third-party administrator were proper. Specifically, HCPSS did not audit the propriety of the claims paid on its behalf by the program administrator to ensure that the services were actually provided, were covered by the health plans, and were appropriately priced. A similar condition regarding the need to ensure the propriety of healthcare costs was commented upon in our preceding audit report.

The State of Maryland contracts with a private firm to audit the third-party administrators of the State's health insurance, prescription drug, dental benefit, and mental health benefit plans, which includes conducting reviews to ensure the propriety of claims paid. These reviews, which are provided for in the State's contracts with the third-party administrators, allow for the statistical projection of error rates to total claims paid, allowing the State to recoup the projected amount of erroneous claims. According to the Office, improper payments from these reviews have consistently exceeded the cost of the reviews.

**Recommendation 15**

**We recommend that HCPSS establish procedures to verify the amounts paid for health insurance (repeat).**

## Audit Scope, Objectives, and Methodology

We conducted a performance audit to evaluate the effectiveness and efficiency of the financial management practices of the Howard County Public School System (HCPSS). We conducted this audit under the authority of the State Government Article, Section 2-1220(e) of the Annotated Code of Maryland, and performed it in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We had two broad audit objectives:

1. To evaluate whether the HCPSS procedures and controls were effective in accounting for and safeguarding its assets
2. To evaluate whether the HCPSS policies provided for the efficient use of financial resources

In planning and conducting our audit of HCPSS, we focused on 11 major financial-related areas of operations as approved on September 14, 2004 by the Joint Audit Committee of the Maryland General Assembly in accordance with the enabling legislation. The scope of the work performed in each of these areas was based on our assessments of significance and risk. Therefore, our follow-up on the status of findings included in our preceding audit report on HCPSS dated October 23, 2009, was limited to those findings that were applicable to the current audit scope for each of the 11 areas.

The audit objectives excluded reviewing and assessing student achievement, curriculum, teacher performance, and other academic-related areas and functions. Also, we did not evaluate the HCPSS Comprehensive Education Master Plan or related updates, and we did not review the activities, financial or other, of any parent teacher association, group, or funds not under the local board of education's direct control or management.

To accomplish our objectives, we reviewed applicable State laws and regulations pertaining to public elementary and secondary education, as well as policies and procedures issued and established by HCPSS. We also interviewed personnel at HCPSS, the Maryland State Department of Education (MSDE), and staff at other local school systems in Maryland (as appropriate). Our audit procedures included inspections of documents and records, and

observations of HCPSS operations. We also tested transactions and performed other auditing procedures that we considered necessary to achieve our objectives, generally for the period from July 1, 2013 through December 31, 2014. Generally, transactions were selected for testing based on auditor judgment which primarily considers risk. Unless otherwise specifically indicated, neither statistical or non-statistical audit sampling was used to select the transactions tested. Therefore, the results of the tests cannot be used to project those results to the entire population from which the test items were selected. For certain areas within the scope of the audit, we relied on the work performed by the independent accounting firm that annually audits HCPSS' financial statements and conducts the federal Single Audit.

We used certain statistical data – including financial and operational – compiled by MSDE from various informational reports submitted by the Maryland local school systems. This information was used in this audit report for background or informational purposes, and was deemed reasonable.

We also extracted data from HCPSS' automated finance management system for the purpose of testing expenditure, inventory, and payroll transactions. We performed various audit procedures on the relevant data and determined the data were sufficiently reliable for the purposes the data were used during the audit.

HCPSS' management is responsible for establishing and maintaining effective internal control. Internal control is a process designed to provide reasonable assurance that objectives pertaining to the reliability of financial records, effectiveness and efficiency of operations including safeguarding of assets, and compliance with applicable laws, rules, and regulations are achieved.

Because of inherent limitations in internal control, errors or fraud may nevertheless occur and not be detected. Also, projections of any evaluation of internal control to future periods are subject to the risk that conditions may change or compliance with policies and procedures may deteriorate. In addition to the conditions included in this report, other less significant findings were communicated to HCPSS that did not warrant inclusion in this report.

We conducted our fieldwork from January 2015 to September 2015. HCPSS' response to our findings and recommendations is included as an appendix to this report. As prescribed in the State Government Article, Section 2-1224 of the Annotated Code of Maryland, we will advise HCPSS regarding the results of our review of its response.

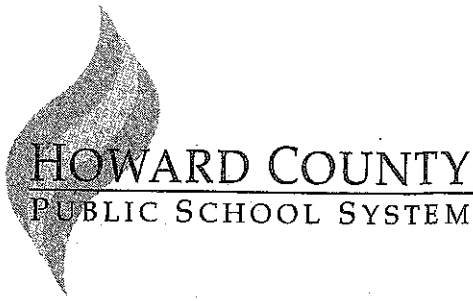


## APPENDIX

### **Auditor's Overall Comments on the Howard County Public School System's Response**

The pages following contain HCPSS's response to the audit report, which includes the Board Chair's letter followed by the responses to the detailed recommendations. HCPSS disagreed with a number of our findings and recommendations. Comments clarifying our position with respect to the essence of the disagreements are included within HCPSS detailed responses. In accordance with State law, all areas of disagreement will be addressed through separate correspondence between this Office and HCPSS.

The Board Chair's letter is highly critical of our audit. Contrary to the Chair's assertions, the audit team was led and supervised by experienced auditors, who performed their work with integrity and objectivity. To a great extent, the alleged excessive personnel costs to assist us during the audit could have been avoided with better cooperation. The issues raised in our report cover letter provide an overview of the audit findings for which corrective actions are needed. We continue to believe the report findings are valid.



**Board of Education  
of Howard County**

Christine E. O'Connor  
*Chairman*

Ellen Flynn Giles  
*Vice Chairman*

Bess Altwerger, Ed.D.

Ann De Lacy

Sandra H. French

Janet Siddiqui, M.D.

Cynthia L. Vaillancourt

Griffin Diven  
*Student Member*

Renee A. Foose, Ed.D.  
*Superintendent  
Secretary/Treasurer*

September 30, 2016

Thomas J. Barnickel III, CPA  
Legislative Auditor  
Office of Legislative Audits  
301 West Preston Street, Room 1202  
Baltimore, MD 21201

Dear Mr. Barnickel:

I am responding to your letter dated September 15, 2016, transmitting a draft cover letter and draft audit report on the Howard County Public School System (HCPSS).

We believe auditing can be an important part of the accountability process and an effective tool for helping us meet our Vision 2018 goal of becoming a world class education system. However, we take strong exception to the performance of much of the Office of Legislative Audits (OLA) audit and many of its findings and recommendations, and do not believe the audit provided benefits commensurate with the approximately \$200,000 in staff time we estimated it took to comply with the audit. In particular, we believe OLA:

- Staffed the audit with inexperienced staff who were both inadequately supervised and appeared not to understand Maryland law and financial management best practices and criteria as they apply to school systems.
- Spent considerable time auditing legacy systems and operations no longer in use at the time of the audit.
- Failed to understand or acknowledge numerous efforts and steps we have taken over the past 2 years since OLA began its audit to strengthen our financial systems and operations.
- Stubbornly resisted acknowledging the sound business practices we use.
- Appeared to have a predetermined bias to certain findings and recommendations based on staff's personal preferences and audit findings at other school systems without sufficient audit testing or evidence to support those findings and recommendations as they relate to HCPSS.

On the whole, we believe the audit delivered limited value at best; diverted attention away from meaningful and important school system initiatives and operations; and overall was a disservice to the state and HCPSS in our joint efforts to ensure accountability and improve performance. It is for these reasons that we joined many other public school systems in supporting repeal of the legislative mandate for the OLA audit. Our specific comments on the draft cover letter and draft audit report are as follows.

Draft Cover Letter

We strongly disagree with both the substance and tone of the draft cover letter, and believe it is not only unbalanced and unduly critical, but lacks recognition of best practices and sound business practices we use. The letter is deliberately misleading, and appears to serve a political purpose for OLA rather than provide an independent and objective assessment of our business practices.

The cover letter states OLA staff identified \$12.6 million in sole source contracts and that we need to maximize our use of competitive bidding. This is an odd comment considering that we competitively bid more than 97 percent of the hundreds of millions of dollars of contracts during the time period OLA reviewed. The statement appears to reflect a misguided and thinly veiled view that we should competitively bid 100 percent of our contracts. That view is a contravention of state law and HCPSS policy which permit sole source contracts in certain circumstances. We explained to your staff our basis for the few sole source contracts we have awarded; and pointed out that all such contracts were almost always unanimously approved by our Board of Education, effectively supported our operations, and represented best value. We acknowledged to your staff that there is always an opportunity to further document the bases of such contracts, and said we would consider whether doing so would better serve the Board and the public.

The cover letter states there appeared to be other unnamed vendors capable of supplying the desired services and products for our sole source contracts. Your staff did virtually no work to evaluate the capability of other vendors, and the little work that was done was for the most part outdated, incomplete, and incorrect. On the other hand, our senior staff, with extensive expertise and experience, did a tremendous amount of research and analysis for all of our contracts; and we are confident that other vendors were not capable of providing the desired services and products for our sole source contracts.

The cover letter suggests state law requires us to competitively bid for fees paid construction management firms. The law you cited does not apply to construction management firms under the construction management-agency method we use. We recommend OLA correct its interpretation of the law as it applies that method.

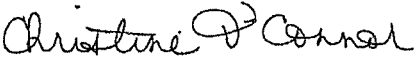
The cover letter states we need to improve security and controls over our computer network and information systems. The OLA audit recommendations validated our recent investments in new systems and actions we have already taken to further strengthen our systems. There is only one OLA recommendation that addresses a step we have not yet taken.

Lastly, the cover letter discusses several specific steps we should take to enhance internal controls, including certain critical user functions on the payroll system. OLA is well aware that we implemented a new payroll system several months ago and the user functions cited by OLA are no longer applicable. We question the value of testing processes that no longer exist and making recommendations for actions we have already taken.

Draft Audit Report

Our comments on the draft audit report are embedded in the report.<sup>1</sup>

Sincerely,

  
Christine E. O'Connor  
Chairman  
Board of Education of Howard County

cc: Board of Education Members ✓  
Renee A. Foose, Ed.D.

<sup>1</sup>Auditor's Comment: In accordance with the policy on agency responses, as approved by the Joint Audit Committee, HCPSS's response is not embedded in the body of our report, but is included in this Appendix.

## Revenue and Billing Cycle

### Finding 1

Adequate control had not been established over summer school receipts, as checks were not restrictively endorsed upon receipt, and collections were not subject to independent deposit verification.

### Recommendation 1

We recommend that HCPSS ensure

- a. collections are restrictively endorsed immediately upon receipt,
- b. employees independent of the cash receipts processes verify that collections as initially recorded were deposited, and
- c. collections are deposited in a timely manner (repeat).

### HCPSS Response

We disagree with the finding and the recommendations. We restrictively endorse collections within 1 day after receiving them with an automated device rather than having the initial recipient endorse the collections immediately with a hand stamp. We believe the automated device provides greater control than a hand stamp. We will consider verifying deposits with the receipt books maintained at the schools where collections are received, although we do not necessarily believe that step is a necessary control. We believe that weekly deposits are an adequate control, particularly when taking into account the added cost of making daily versus weekly deposits and the average amount of the deposits.

**Auditor's Comment:** Independent verifications that recorded collections were deposited is a necessary basic control to ensure all funds received are deposited. Controls would be further enhanced by restrictively endorsing checks immediately when received and by depositing collections sooner.

## Procurement and Disbursement Cycle

### Finding 2

A number of contracts were awarded without competitive bids. We identified 15 contracts totaling \$12.6 million that had been awarded by senior management employees as sole source contracts, without adequate justification to support a sole source procurement.

### Recommendation 2

We recommend that HCPSS follow its procurement manual and related policies and laws and obtain competitive bids for goods and services unless an adequate and documented justification exists to not use competitive procurements (repeat).

### HCPSS Response

We do not agree with the finding and recommendation and disagree this is a repeat recommendation. Sole source contracting is an acceptable business practice consistent with Board Policy 4050, Procurement of Goods and/or Services, and consistent with related laws. All the contracts discussed by OLA were obtained in a manner consistent with Board policy and law. We do sole source contracting on a limited basis – approximately 3 percent of our contracts are sole source – and we fully discuss the contracts with the Board before they are approved. We acknowledged to your staff that there is always an opportunity to further document the bases of such contracts, and said we would consider whether doing so would better serve the Board and the public.

**Auditor's Comment:** Competitive procurements should be used to the extent practical to select vendors because competition promotes increased confidence in the integrity of the procurement process and helps ensure the fair and equitable treatment of vendors. Accordingly, using sole source contracts, although necessary under certain conditions, should be avoided when multiple vendors are available to provide the desired products and services.

With regard to the first bullet: The contract was a cooperative procurement contract based on a competitive contract obtained by another school system. OLA did not obtain the other school system's contract or our piggyback contract before OLA issued its preliminary findings. We obtained and reviewed the other school system's contract and fee structure in detail before we awarded our contract. Purchasing additional modules and using a different fee structure did not disqualify us from using a cooperative procurement contract. Further, the law requires a determination of applicability, but does not spell out the extent to which the determination should be made in writing. We acknowledged to your staff that

there is always an opportunity to further document the bases of contract decisions, and said we would consider whether doing so would better serve the Board and the public. Lastly, we believe this procurement avoids redundant and repetitive administrative tasks and saved us a significant amount of time and money. We would also note the Maryland state government uses the vendor's time and attendance module, and two other Maryland school systems are working with us to obtain our favorable pricing model from the vendor.

**Auditor's Comment:** Regarding cooperative purchasing contracts, State Law clearly requires participating units to determine the benefits of such arrangements in writing and a written determination was not prepared for the cooperative procurement contract mentioned in the audit report.

With regard to the second bullet: At the time of procurement, there were only about 10 firms that were certified implementation partners in both human capital management and finance that could perform the necessary configurations for us. OLA stated in its preliminary findings there were 30 firms that could perform the necessary work. Those firms were certified at a later date, and some of them were service partners rather than implementation partners. Of the 10 firms that were certified implementation partners at the time of procurement, our research indicated most firms' ultimate implementation costs were either too high, or the firms did not specialize in the supplier's product. We obtained price proposals and did three reference checks for the two firms who appeared to be the best able to successfully implement the human capital and finance modules. We also compared the cost for the firm we selected to the cost for the firm for other school systems that hired the firm through a competitive process. There was no reasonable basis to believe firms would necessarily lower their published prices in a competitive bidding process. The final decision to sole source was based upon the highly rapid implementation methodology the selected firm deployed. Further, a competitive bidding process would have been costlier and delayed implementation. It is interesting to note that the University of Maryland University College now uses this firm. Lastly, the Executive Director of Budget and Finance did the bulk of the research for this procurement, but OLA did not discuss this procurement with her before OLA issued its preliminary findings.

With regard to the third bullet: We extensively researched and justified the bases for the contracts, and firmly believed based on that research that we could not have procured different firms for less cost and/or similar or higher quality. OLA did no work to demonstrate that other firms could provide services at less cost and/or similar or better quality. We believe OLA is ignoring the issue of quality and is supplanting its judgment for the judgment of the Superintendent and Board.

With regard to the fourth bullet: We extensively researched and justified the bases for the contracts, and firmly believed based on that research that we could not have procured different firms for less cost and/or similar or higher quality. As above, OLA did not do any work to demonstrate that other firms could provide services at less cost and/or similar or better quality. Further, OLA cited another school system that received six bids for the special education contract, but that contract was for different special education services.

**Auditor's Comment:** Researching vendors may provide helpful information, but may also lead to false assumptions and is not a substitute for using competitive procurement processes. Competitive procurements take advantage of marketplace forces and help ensure the most qualified firms who represent the best value are selected.

### **Finding 3**

**HCPSS did not document its comparison of invoices for temporary service employees to timesheets approved at the schools.**

### **Recommendation 3**

**We recommend that HCPSS document its comparison of vendor invoices to appropriate supporting documentation.**

### **HCPSS Response**

We disagree with the finding and the recommendation. The Accountant Specialist in the Office of Special Education and Student Services received timesheets from schools and compared the timesheets to invoices from the vendor on a risk basis based on the Accountant Specialist's experience with the invoices and timesheets, such as time charged around professional development days, holidays and breaks, and inclement weather. The Accountant Specialist documented his reviews when he found discrepancies, and will document all reviews in the future. We do not believe it is a prudent use of our resources to necessarily review all invoices and timesheets, particularly in light of the fact that OLA did very little testing and did not find any problems with any of the invoices or timesheets.

**Auditor's Comment:** HCPSS provided no documentary evidence to us that timesheets were compared to the vendor's invoices or that any invoice discrepancies were identified and challenged by HCPSS. Our recommendation does not address the extent of such comparisons but they should be sufficient to provide reasonable assurance that the vendor is only billing HCPSS for services actually provided.

## Human Resources and Payroll

### Finding 4

Independent reviews of certain personnel and payroll transactions processed, such as adding new employees and salary changes, were lacking, and the access capabilities assigned to users of the automated system were not adequately restricted.

### Recommendation 4

We recommend that HCPSS

- a. perform a documented independent review and approval of all personnel and payroll transactions processed,
- b. eliminate the capability of system users to perform incompatible functions, and
- c. periodically review the access capabilities assigned to all users and eliminate those capabilities that are not required by those individuals to perform their job duties.

### HCPSS Response

This finding is not relevant to our current operations. We decided before OLA began its audit to move to a new human capital management system which resolves concerns we and OLA had with the prior system. Implementation of the new system was completed in April 2016. We think it is important to note that OLA found no evidence of unauthorized transactions in either its 2009 or 2015 audits. As noted above for Finding 2, our new system is the same system the Maryland state government uses for time and attendance.

**Auditor's Comment:** We audited the payroll system in place during our audit. While that system has subsequently been replaced, the recommendations provide guidance to HCPSS for implementing proper controls under the new system.



**Finding 5**

HCPSS lacked evidence that the salaries for 142 administrative employees, which totaled \$15.3 million in fiscal year 2014, had been approved by the Board as required by State Law.

**Recommendation 5**

We recommend that HCPSS ensure salaries of administrative employees are approved by the Board as required by State Law.

**HCPSS Response**

We disagree with the finding, recommendation and legal interpretation. The Board approved salary scales for Administrative, Management, and Technical (AMT) many years ago. Section 4-103 of the Education Article of the Annotated Code of Maryland does not require the Board to re-approve the scale every year. For fiscal year 2015, the Board approved raises for AMT employees in a Board meeting on July 1, 2015. The minutes of the meeting were approved July 10, 2015.

**Auditor's Comment:** During the audit we made several requests for documentation of Board approval of salaries of administrative employees. HCPSS never provided such documentation. Furthermore, unlike HCPSS, other school systems provide lists of administrative employees' salaries to their boards to comply with State Law.

**Finding 6**

Certain executive employees at HCPSS were receiving regular monthly mileage payments for amounts that could not be substantiated and were not authorized or approved by the Board.

**Recommendation 6**

We recommend that HCPSS

- a. maintain documentation establishing how such payments were determined, and
- b. ensure such compensation arrangements are authorized and approved by the Board.

**HCPSS Response**

We disagree with the finding and the recommendations, specifically OLA's premise that we should not have stipends. We believe the stipends save us both mileage and administrative costs. We will consider periodically reviewing the stipends to ensure they approximate the cost of actual mileage, while also taking

into account the administrative savings of the stipends. The Board is not required to approve expense reimbursements for staff.

**Auditor's Comment:** The finding did not take issue with the use of stipends but rather the lack of any documentation as to how the amounts of the mileage payments were determined. We understand the Board does not need to approve expense reimbursements; however, because HCPSS's payments are not based on actual mileage driven but are a form of employee compensation, they should be approved by the Board.

## Inventory Control and Accountability

### Finding 7

HCPSS had not performed a complete inventory of its information technology equipment as approximately 9,600 of the 28,500 items added to the equipment database between 2009 and June 2014 had not been inventoried.

### Recommendation 7

We recommend that HCPSS

- a. modify its policy on information technology equipment to specify how often physical inventories should be performed; and
- b. periodically inventory all sensitive items in the information technology equipment records, in accordance with the modified HCPSS policy.

### HCPSS Response

We partially agree with the finding and the recommendation. Board Policy 3040 requires technology equipment to be tested periodically so as to identify and resolve the type of discrepancies such as those identified in OLA's testing. The policy does not require full inventories every year. We will consider whether we should modify our policy to specify how often physical inventories should be performed. In addition, we will review our periodic testing procedures to ensure they are effective.

## Information Technology

### Finding 8

Controls over the critical student information and financial management system databases were not sufficient as neither database was configured to log any database security activity, and certain operating system and database software had not been updated for critical security patches.

### Recommendation 8

We recommend that HCPSS

- a. set the student information and the financial management system databases to log all critical security related events, regularly review these logs, document these reviews, and retain this documentation for future reference (repeat); and
- b. ensure that all production database and operating system software is patched and updated for all critical security vulnerabilities on a timely basis (repeat).

### HCPSS Response

This finding is not relevant to our current operations. We replaced the student information and financial management systems with new systems. We implemented logging for all critical security related events and processes and review and document the logs regularly.

### Finding 9

Network, application, and database account and password controls were not sufficient to properly protect critical resources.

### Recommendation 9

We recommend that HCPSS establish appropriate network, application, and database account and password controls in accordance with the aforementioned best practices noted in the aforementioned *Information Security Policy*.

### HCPSS Response

We agree with the finding and recommendation. We implemented a new password policy that aligns with the State of Maryland Information Security Policy.

**Finding 10**

The HCPSS computer network was not adequately secured as intrusion detection prevention system software was not used to protect the network, and firewall rules allowed insecure and unnecessary connections to several critical network devices.

**Recommendation 10**

We recommend that HCPSS

- a. perform a documented review and assessment of its network security risks and identify how IDPS coverage should be best applied to its network and implement this coverage;
- b. configure its firewall rules to adequately secure connections from untrusted third parties (including the Internet);
- c. regularly review the firewall logs, document all reviews performed and retain the documentation for future reference; and
- d. restrict remote administrative connections to the firewalls to only authorized users and use only secure connection protocols for this remote administration.

**HCPSS Response**

We agree with the finding and recommendations. We conducted an independent assessment of our network security and determined how best to apply IDPS coverage. We implemented (1) IDPS and firewall rules to adequately secure connections from untrusted sources, (2) processes to regularly review and document firewall and IDPS logs, and (3) security controls to ensure remote administrative access to the firewalls is only available to individual administrators through secure connections.

**Finding 11**

Workstations and servers were not sufficiently protected against malware.

**Recommendation 11**

We recommend that HCPSS

- a. ensure that administrative rights on workstations are restricted to network administrators and other select users requiring such rights;
- b. configure its malware protection software so that users cannot disable the settings which allow users to override and modify default security controls established by management;
- c. verify that all computers are properly updated, on a timely basis, with operating system updates approved by the agency; and

- d. obtain a vendor supported enterprise-wide management tool to regularly confirm that all workstations and servers are configured with malware protection software that is operating properly, up-to-date, and has current definition files.

#### HCPSS Response

We agree with the finding and recommendations. We implemented security controls to ensure that administrative rights on workstations are restricted to system administrators and select users that require such rights. Further, we implemented processes to ensure operating system software updates are being approved and installed by system administrators on a timely basis. We are implementing an enterprise-wide management tool to confirm the configuration and operation of anti-malware software and ensure users cannot disable default security controls established by the system administrator.

### Facilities Construction, Renovation, and Maintenance

#### Finding 12

HCPSS did not select certain construction management firms by competitive bids as required by State Law.

#### Recommendation 12

We recommend that HCPSS use a competitive procurement process to select construction management firms as required by State Law.

#### HCPSS Response

We disagree with the finding, recommendation, and legal interpretation. We use a competitive procurement process for construction management firms subject to Board Policy 6030, Procurement of Architectural/Engineering and Construction Management Services. Our contracts are construction management-agency contracts rather than construction management at-risk contracts. Section 5-112 of the Education Article of the Annotated Code of Maryland does not apply to construction management-agency contracts. We recommend OLA correct its interpretation of the law as it applies to that method.

**Auditor's Comment:** The finding is based on written interpretations provided to us by legal counsel to the General Assembly. The interpretations advised that Section 5-112 of the Education Article applies to the type of construction management contracts used by HCPSS and that such contracts should be award by competitive

bidding. HCPSS never provided any legal opinion that was contrary to that provided by the legal counsel to the General Assembly.

## Transportation Services

### Finding 13

Bus vendor payment information was not independently reviewed, and user access capabilities for the automated bus vendor payment system were not adequately controlled.

### Recommendation 13

We recommend that HCPSS improve internal controls over the bus vendor payment process by

- a. ensuring that payment information is independently reviewed by Transportation department personnel before transmission to the Finance Office for payment (repeat), and
- b. removing unnecessary system access capabilities.

### HCPSS Response

We generally disagree with the finding and the recommendations and disagree the first recommendation is a repeat recommendation. We designed a decentralized review and payment system for bus vendor payments that does not require review by the Budget and Finance Office. We reassigned a Certified Public Accountant with approximately 10 years of experience overseeing accounts payable from the Budget and Finance Office to the Transportation Department to enter information in the bus vendor payment system. The information is first approved by another manager in the Department, and there are automated flags for any entries that are unusual. The Director of Transportation is furnished with a summary payment report which ensures alignment with budgeted expenditures. In addition, OLA did not note any improper or inaccurate bus vendor payments in its 2009 and 2015 audits. (The Transportation Department has a detailed 38-page manual which explains the bus vendor payment system.) We will consider the cost feasibility of adding an additional level of independent review for bus contractor payments, although we believe OLA's recommended additional control may be costly and unnecessary.

OLA did not talk with the Director of Transportation during the audit about the three unassigned accounts in TOPS, so we will review the accounts to determine whether there are any control weaknesses. The three staff with access mentioned by OLA still actively support the system and still need access to the system. The Director of Transportation had access to certain screens during the transition process to TOPS but no longer has access.

**Auditor's Comment:** The automated flags would only detect unusually large payments. Such automated controls and a comparison of actual expenditures to budgeted expenditures are not an adequate substitute for independent verifications that critical data was properly recorded in a system that processes payments in excess of \$30 million per year.

**Finding 14**

HCPSS was not fully using its automated routing software to plan bus routes, and many HCPSS bus routes were operating significantly below ridership goals.

**Recommendation 14**

We recommend that HCPSS fully use its automated routing software to more efficiently plan bus routes on a system-wide basis in an effort to achieve ridership goals (repeat).

**HCPSS Response**

We partially agree with the finding and the recommendation, but do not believe it is a repeat recommendation. OLA misstated our capacity goals; the goals are a range, not a set number. We continually use our software to plan bus routes to try to achieve maximum efficiency while taking into account a multitude of other critically important factors such as safety, the time and distance of routes, and use of buses for multiple schools to minimize overall bus route costs. We will continue to do so, and will consider other means such as outside studies to help us optimize our transportation planning. For example, the University of Maryland recently studied our bus route planning and found we are close to maximum efficiency when considering all cost and other factors.

**Auditor's Comment:** We have revised our report to address HCPSS's comments regarding its bus capacity goals. The revision does not alter our finding that many HCPSS bus routes were operating below the capacity goals.

## Other Financial Controls

### Finding 15

HCPSS did not ensure the propriety of certain claim payments for employee and retiree health care costs.

### Recommendation 15

We recommend that HCPSS establish procedures to verify the amounts paid for health insurance (repeat).

### HCPSS Response

We disagree with the finding and the recommendation. We perform ongoing dependent eligibility verifications and have a series of automated controls to prevent improper claims payments. In addition, our third party administrators have certain controls and procedures to ensure that claims are paid properly and accurately. We explored the use of claims payment audits in the past, and based on that experience, do not believe additional claims payment audits would be cost effective.

We would appreciate OLA providing us additional information on the Maryland State audits, including more detailed information on the Maryland State government's health benefits programs and operations, how those programs and operations compare to us, and how OLA determined that we would also obtain net savings from the audits.

**Auditor's Comment:** Due to the significant expense represented by employee and retiree health care at the local school systems, a health care claims audit is a reasonable approach for detecting health care billing errors or fraud and ensuring plan administrators only issued claims payments for allowable benefits for eligible participants. A health care claims audit would also determine whether third-party administrators' controls for detecting health care billing errors or fraud are adequate and functioning properly. We were not provided with any evidence of automated controls at HCPSS to prevent improper claim payments. We provided HCPSS information on how the State implements its health care audits, including the use of liquidated damages provisions in the related contracts.



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