

NEW YORK STATE  
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STATE OF NEW YORK  
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January 5, 2007

Dr. James D. Mapes  
District Superintendent  
Nassau BOCES  
Regional Information Center  
71 Clinton Road  
Garden City, NY 11530

Report Number: 2006M-122

Dear District Superintendent:

The State Comptroller is statutorily required to audit all school districts, BOCES and charter schools in the State by March 31, 2010. The school district audits, done in conformance with generally accepted government auditing standards, often require us to contact a BOCES Regional Information Center to gather information about a school district's financial management system and information technology infrastructure. Since it would be burdensome for you to have multiple audit teams visit the Nassau BOCES Regional Information Center (RIC) to gather the same or similar information, we assigned one group of examiners to gather the needed information for the audits.

This examination was conducted pursuant to the State Comptroller's authority as set forth in Article V, Section 1 of the State Constitution, and Article 3 of the General Municipal Law. Based upon inquiries made during this examination of the financial software packages and technology infrastructure services provided to component (or cross-contracting) school districts by the RIC, we noted the following conditions that we would like to bring to your attention:

- The RIC's written disaster recovery plan covers only its in-house financial software application but does not cover services provided to school districts. A Disaster Recovery Plan (DRP) – sometimes referred to as a Business Continuity Plan (BCP) or Business Process Contingency Plan (BPCP) – describes how an organization is to deal with potential disasters. A plan consists of the precautions taken so that the effects of a disaster will be minimized, and the organization will be able to either maintain or quickly resume mission-critical functions. Typically, disaster recovery planning involves an analysis of business processes and continuity needs; it may also include a significant focus on disaster prevention.
- RIC personnel print checks for several school districts using signature disks stored at the network operations center. There is no requirement that the treasurer from the school district oversee the printing of the checks. Signature disks should remain under the control of the school district treasurer at all times.

We hope that this information will help you identify areas where you can improve your operations. In order to keep our database of information current, we will be contacting appropriate RIC officials within 90 days to update our information. Furthermore, we will likely continue to contact RIC officials annually to keep our information current.

To clarify, our inquiries on the financial management and infrastructure services that you provide to component (or cross-contracting) school districts are not part of the statutorily required audit of each BOCES. We will contact you again when we plan to start an audit of the BOCES.

The results of our examination were discussed with RIC and BOCES officials and their comments, which appear in Appendix A, have been considered in preparing this report. Officials generally disagreed with the conditions cited in our final report. However, in one instance they indicated that they would take corrective action. OSC comments on the official response are included in Appendix B.

The Nassau BOCES Board has the responsibility to initiate corrective action. Pursuant to Section 35 of the General Municipal Law, Section 2116-a (3)(c) of the Education Law and Section 170.12 of the Regulations of the Commissioner of Education, the Board must approve a corrective action plan that addresses the findings in this report, forward the plan to our office within 90 days, forward a copy of the plan to the Commissioner of Education, and make the plan available for public review in the Board Clerk's office. For guidance in preparing the plan of action, the Board should refer to applicable sections in the publication issued by the Office of the State Comptroller entitled *Local Government Management Guide*.

If you have any questions, please contact our Hauppauge regional office at (631) 952-6534.

Sincerely,

Steven J. Hancox  
Assistant Comptroller of Local Government Services  
and Economic Development

## **APPENDIX A**

### **RESPONSE FROM BOCES OFFICIALS**

The response from BOCES and RIC officials can be found on the following pages.

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**BOCES**

Board of Cooperative Educational Services

Department of  
 Curriculum,  
 Instruction and  
 Technology

Fred M. Podolski  
 Executive Director

December 15, 2006

Mr. Steven J. Hancox, Assistant Comptroller  
 State of New York  
 Office of the State Comptroller  
 Division of Local Government Services  
 And Economic Development  
 NYS Office Bldg., Room 3A-10  
 250 Veteran's Memorial Highway  
 Hauppauge, NY 11788

Dear Mr. Hancox:

As requested, I am responding to your revised memo sent yesterday, December 14, 2006, that lists three items that you would like us to address that were part of your audit of the Nassau BOCES Regional Information Center. Your original items are listed below with our response to each one.

- The RIC provides a daily off-site backup and disaster recovery service for component school districts that subscribe to the service. Daily backups are performed and stored at the RIC, but the RIC does not periodically test and restore backups of data. The failure to periodically test the backup system could lead to the loss of data. RIC officials informed us that restores were only being performed when a district's network went down requiring the RIC to restore data. Performing these procedures periodically would provide assurance that backup data is complete and useable.
- Nassau BOCES routinely restores data to multiple systems as part of general operational procedures. It is inaccurate to state that we only perform restores when

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a district network is down. [REDACTED] and district based application sometimes require operational restores for the purpose of comparison or inadvertent file deletion. Recently, an entire block of servers was restored from disk due to a faulty vendor issued virus definition. We believe that this item represents a misunderstanding of our practice that occurred during the initial interview process. Backups are employed regularly and with consistent success. District requests for test restores are performed as per auditor's requests and test databases for financial reconciliation and training are performed on a regular basis. During these processes, flaws in the backup process or configuration can be rectified. To assert that restores are only performed when in a crisis or a down system state is not accurate or correct. Nassau BOCES uses both tape and disc for backup procedures, the presence of disc based backup permits fast access to data and the ability to restore routinely.

- The RIC's written disaster recovery plan covers only its in-house [REDACTED] application but does not cover services provided to school districts. A Disaster Recovery Plan (DRP) – sometimes referred to as a Business Continuity Plan (BCP) or Business Process Contingency Plan (BPCP) – describes how an organization is to deal with potential disasters. A plan consists of the precautions taken so that the effects of a disaster will be minimized, and the organization will be able to either maintain or quickly resume mission-critical functions. Typically, disaster recovery planning involves an analysis of business processes and continuity needs; it may also include a significant focus on disaster prevention.

- Although not completed in writing, the RIC provides disaster recovery services for districts running both the [REDACTED] [REDACTED] financial applications. In the case of [REDACTED] [REDACTED] districts, those who participate send a copy of their data file to the Network Operations center on a nightly basis. In the event of the catastrophic failure of a district site, the data file can be migrated to a [REDACTED] based application delivery server in a matter of hours. The [REDACTED] infrastructure is located in Westbury at the Network Operations Center and has a standby hot server located in the computer room at the Nassau BOCES Administrative Center, 71 Clinton Rd., Garden City. Failover Internet access can be provided through the Garden City location for access to applications in the event of a failure at the Westbury facility. [REDACTED] also has a

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standby server to which data is replicated and would serve as an emergency server in the event of a failure at Westbury. [REDACTED] and [REDACTED] can be used from anywhere on the BOCES WAN. Districts that have network, power, or infrastructure failures can send personnel to the Nassau BOCES Duffy Avenue, Hicksville location to work while repairs are completed. In the case of other applications, backups are run on a nightly basis in Westbury and written to tape and disk and copied to network attached storage at the Garden City administrative center. Tapes are also rotated off site on a regular schedule. When possible, hardware redundancy is provided for applications such as [REDACTED]. However, replication of all hardware required to deliver hosted applications to a hot site is beyond the financial capacity of Nassau BOCES and the local school districts. We are currently investigating the deployment of virtual server environments which consolidate multiple applications on a single server to reduce the cost of a redundant environment. Funding for this initiative is limited at this time. The written plan for disaster recovery and continuity is in process although many of the elements required for a level of business continuity are in place. What is absent is a fully redundant hardware infrastructure that mirrors the operations center in Westbury. Financing of a fully redundant environment is problematic at this point in time. Nassau BOCES will complete the written continuity plans in the near future and investigate funding methods should they become available.

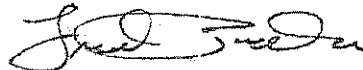
- RIC personnel print checks for several school districts using signature disks stored at the network operations center. There is no requirement that the treasurer from the school district oversee the printing of the checks. Signature disks should remain under the control of the school district treasurer at all times.-
  - The centralized check printing process at the network operations center uses several layers of job segregation and security to ensure the accuracy of the requested job and the safekeeping of the signature disks. District employees initiate the request for a check run, school district accounts payable or payroll; the specific totals are forwarded to a Nassau BOCES control clerk who prepares a one time run sheet for that job. After the check file is generated, it is compared to the run sheet before being sent to the [REDACTED] at the Network Operations center for printing. The signature diskettes

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are used by computer operators and run against the district generated file and a separate audit sheet is prepared for each job. After inspection, these jobs and the associated audit information is forwarded back to the control clerk for verification prior to delivery to the district. District personnel then inspect the job. The signature diskettes are stored in a locked secure location at all times when not in use. There is limited access to the operator's stations and the passwords to the [REDACTED] are only known to two local supervisors and the two computer operators. This system and it's built in process of checks and balances, has been reviewed by auditors from school districts in Nassau County and judged to be reasonable and possessing sufficient safeguards to provide security for participating districts. Nassau BOCES respectfully disagrees with the assertion that our process is insufficient or in any way subjects the customer to unacceptable risk. The personnel involved in check printing process do not have system access privileges on either [REDACTED] and as such cannot generate the files required for check printing. The presence of multiple levels of job generation and inspection are an effort to provide greater levels of security than exist at many school districts. Nassau BOCES personnel have no ability to modify or generate signature diskettes; these are done at the request of the district and processed directly by [REDACTED] payment systems.

We appreciate your extensive interview with the head of our Network Operations Center, Chris Reinertsen, on October 27, 2006, by your staff that included [REDACTED]. We are satisfied that we answered your questions adequately about our security, disaster recovery, and redundancy of our Regional Information Center infrastructure. We are prepared to answer any additional questions after your review of our response.

Sincerely,



Fred Podolski  
Executive Director  
Curriculum, Instruction & Technology

FP:af  
#1000  
cc: Dr. James D. Mapes  
Ms. Joan Siegel

## **APPENDIX B**

### **OSC COMMENTS ON THE BOCES RESPONSE**

#### Note 1

Officials provided us additional information about how they back up information after the completion of our fieldwork. As a result, we removed this finding from our final report.

#### Note 2

Officials acknowledged that they have not developed a written disaster recovery plan, but also provided a thorough explanation of potential processes and procedures in place in case a disaster occurs. However, it is important to note that absent a formal written plan, all pertinent personnel may not be fully cognizant of the processes and procedures that BOCES officials have developed.

#### Note 3

Officials misunderstand the crucial aspect of the finding. A facsimile signature should be under the control and supervision of the district treasurer at all times. Any control procedures in place at the BOCES do not absolve the treasurer from that responsibility.