

Hamilton County  
BOARD OF ELECTIONS

TIMOTHY M. BURKE  
Chairman

824 Broadway  
Cincinnati, Ohio 45202-1345

SHERRY L. POLAND  
Director of Elections

ALEX M. TRIANTAFILOU  
CALEB A. FAUX  
CHARLES H. GERHARDT, III

513 632-7000  
Fax 513 579-0988 or 513 744-9038  
www.VoteHamiltonCounty.org

SALLY J. KRISSEL  
Deputy Director of Elections

December 10, 2015

The Honorable Jon Husted  
Ohio Secretary of State  
180 East Broad Street, 16<sup>th</sup> Floor  
Columbus, OH 43215

Re: Review of November 3, 2015 General Election

Dear Secretary Husted:

The following comprises the Hamilton County Board of Elections' official response to your instruction to conduct a formal review and issue a report of the November 3<sup>rd</sup> 2015 General Election. The Board openly acknowledges that there were problems in November's election that resulted from the county-wide implementation of our e-Poll Book system. This report is effort to publicly identify and explain the specific problems surrounding the implementation and make clear the steps that we are taking to provide workable and lasting solutions.

In our public statement immediately following the November 3<sup>rd</sup> General Election, the Board committed to collaborate in a bipartisan manner to analyze data, identify shortcomings, and advance concrete solutions in an effort to ensure that the errors that impacted far too many voters were not repeated. We believe that this report accomplishes all of those goals and will serve as a useful tool in improving our processes and procedures, so the voters of Hamilton County receive the high quality of election that they deserve.

We look forward to working with the Office of the Secretary of State, voters, and Precinct Election Officials to continue to seek ways to improve the voting experience and provide fair and efficient elections in Hamilton County.

Sincerely,



Timothy M. Burke  
Chairman

Alex M. Triantafilou  
Member

Caleb A. Faux  
Member

Charles H. Gerhardt, III  
Member

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## **I Lead Up to the November 3, 2015 General Election**

### **Introduction**

The Hamilton County Board of Elections has been considering electronic poll books (e-Poll Books) in different iterations since 2011. E-Poll book use has become increasingly prevalent in jurisdictions across the country as elections administrators seek ways to improve the voting process. Currently, e-Poll Books are in use in jurisdictions in 32 states.<sup>1</sup> In Ohio, e-Poll Books are authorized for use in §3506.021 of the Ohio Revised Code and are certified by the Secretary of State.

The use of e-Poll Books is becoming increasingly popular across the country for several reasons. They allow Precinct Election Officials to look up voters countywide, while paper poll books are limited to voters who are registered in that particular precinct. The scanning of a voter's State ID or drivers license generally provides a faster check-in process than that experienced through paper poll book lookup. In addition, post-election processes can be streamlined to provide quicker and more accurate election data. Because of the many advantages e-Poll Books provide, President Obama's Presidential Commission on Election Administration specifically recommended that jurisdictions adopt the use of e-Poll Books in its 2014 report, citing their "extraordinary value" in providing "greater flexibility," "reduced poll worker errors," and reduction in check-in times.<sup>2</sup>

### **Electronic Poll Books in Hamilton County**

In May of 2011, the BOE piloted an e-Poll Book system from Hart InterCivic during the May Primary Election. That was followed by a pilot of a system from ES&S in the August 2011 Special Election. In 2014, Board staff began to look into e-Poll Book systems again as part of our continuous effort to provide the best voting experience for the people of Hamilton County. It was also becoming clear that there was a high probability that the State of Ohio was going to provide funding to local Boards for e-Poll Book purchases, and staff wanted to make sure we were ahead of the curve should that funding materialize. In June of 2015, the State Legislature appropriated \$12.7 million for Boards of Elections to purchase e-Poll Book systems and, because of prior work already completed, Hamilton County would become the first large county in Ohio to implement e-Poll Books.

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<sup>1</sup> Owens-Hubler, Katy. "Electronic Poll Books". [www.NCSL.org](http://www.NCSL.org). National Council of State Legislatures. May 11, 2015.

<sup>2</sup> Presidential Commission on Election Administration. (2014). The American Voting Experience: Reports and Recommendations of the Presidential Commission on Election Administration.

## **Electronic Poll Book Vendor Selection**

In August of 2014, BOE staff held a “demonstration day” for interested vendors to meet with BOE staff to display and demonstrate their e-Poll Book systems and answer questions. While the BOE had already conducted e-Poll Book pilots in 2011, the technology available for e-Poll Book systems had changed significantly, and staff wanted to gain a greater understanding of the options available before moving forward with a formal request for proposals. Participating vendors were required to fill out a questionnaire ahead of the event and were given approximately an hour to discuss and demonstrate their products.

In December of 2014, the Board of Elections issued a Request for Proposal for an e-Poll Book system through the County’s Purchasing Department. We received bids from eight vendors. Board staff conducted an extensive internal evaluation procedure to determine which system best suited Hamilton County’s unique needs. The evaluation was done in a bipartisan manner with staff from all departments participating.

An initial review of the materials provided by the vendors in their bid packets was conducted by Administration and IT staff to determine whether each system met the requirements set forward in the RFP. The vendors were evaluated on predetermined criteria set by BOE staff that included ease of poll worker use, compatibility with existing BOE elections software, durability and maintenance, system security, cost, versatility, ability to meet BOE implementation timelines, and several other factors. Three vendors were chosen to conduct mock elections. Those vendors were Elections Administrators, KNOWINK, and Everyone Counts. After receiving an invitation to participate, Everyone Counts withdrew from consideration, citing inability to obtain the necessary State of Ohio certification in a timely manner. They were replaced by ES&S.

As part of the mock election process, each vendor was given the opportunity to display and explain its equipment, software, and central control systems. All staff received a presentation and short training session on each system. Operations and IT staff were given separate, more detailed presentations on the systems’ functionality. Following each presentation and training session, mock elections took place with BOE staff serving as Precinct Election Officials and voters. Following the mock sessions, staff completed evaluation forms based on their experience, while IT and Operations staff met again with each vendor to discuss the system.

BOE staff also conducted a site visit to the Montgomery County Board of Elections to view its e-Poll Book system and discuss operations and implementation. Staff from the Montgomery County BOE gave an overview of its system and discussed how it changed its pre-election, Election Day, and post-election operations. The visit was made as a further attempt to make sure that we had exhausted all available sources of information at our disposal prior to selecting a vendor.

While each vendor had advantages and disadvantages, it was the opinion of the staff involved that none of the systems viewed in the initial round of mock elections fully met our needs. Staff then reached out to Tenex Software Solutions and invited it to conduct a mock election using the same process as the prior vendors. Tenex was initially left out of the mock process

exclusively due to concerns with the size of its product, which operated on a slightly smaller tablet.

In early April of 2014, a mock election with Tenex was conducted. Staff who served as Precinct Election Officials for the mock stated in overwhelming fashion through its post-mock evaluations that Tenex was the most intuitive and easy to use system it had seen. In addition, no one expressed concern or difficulty of use due to the size of the tablet. Operations staff and IT staff, who were more intimately involved in the process, expressed unanimous agreement that Tenex provided the smoothest process and easiest to use product.

Additionally, a bipartisan team went to Hillsborough County, Florida to observe the Tenex system in action in a live Special Election. The team spent the entire day from the opening of polls to closing speaking with Hillsborough County Elections staff, observing voting locations, and interviewing poll workers about their experience with the Tenex e-Poll Book system. In May of 2015, based on the unanimous recommendation of BOE staff, Deputy Director, and Director, the Board voted to award the contract for Hamilton County's e-Poll Book system to Tenex Software Solutions.

### **Hamilton County Electronic Poll Book Implementation**

Following the awarding of the bid to Tenex and contract negotiation, BOE staff immediately began working with the vendor to customize its software to meet both the specifications required by Ohio law and Hamilton County's own unique processes. Representatives from Tenex were frequently on site in addition to countless phone calls, teleconferences, and electronic communications. It's hard to quantify the amount of time put into this task, because staff was also performing its normal elections-related duties, but it is safe to say that thousands of staff hours were put into developing, testing, and refining the e-Poll Book hardware and software prior to its use in the November General Election.

On August 4<sup>th</sup>, 2015, the Board used the Tenex e-Poll Books for the first time in a live election. A Special Election was held in eight precincts, comprising the City of Mt. Healthy and Village of Saint Bernard. Precinct Election Officials were brought in for several hours of e-Poll Book training, and BOE staff was on hand to observe and assist with any issues that might arise. Aside from a problem that the scanner had reading a specific driver's license format in St. Bernard, no major issues were reported. BOE staff worked with Tenex to rectify the scanning issue and continued to refine the software to better fit our process needs in anticipation of a full countywide implementation in the November General Election.

The Board received the full complement of e-Poll Book related equipment in early August of 2015. To accommodate the increased need for staffing, we brought in extra employees on August 10<sup>th</sup>, which was a full month earlier than under normal circumstances. Between August and November, 10 to 16 staff members worked at the warehouse full-time to receive, unpack, label, and inventory thousands of pieces of equipment. BOE staff also conducted a thorough

acceptance testing program in the months leading up to the election. Warehouse staff, under bipartisan supervision, tested every e-Poll Book, router, printer, and cord for functionality.

While the Warehouse staff was testing devices and peripherals, IT and Administrative staff were working with the vendor to refine the software to meet our specific needs. Four software versions were created, each updating and improving the system to meet a need identified by BOE staff. Every software version received underwent internal and external testing to assure proper functionality, identify possible flaws, and confirm database compatibility.

In anticipation of the implementation of e-Poll Books, BOE staff had already completed wireless availability site surveys. Over the course of two weeks, staff conducted site visits to all 364 polling locations in Hamilton County to test and record wireless signal availability using both AT&T and Verizon wireless routers. Staff also completed location layout diagrams, noting available space and the location of existing electrical outlets.

On September 16<sup>th</sup>, the BOE held an all-day e-Poll Book focus group that consisted of Precinct Election Officials and trainers. BOE staff sought feedback from the group, so we could refine the training we were developing for all Precinct Election Officials, better coordinate our office and voting location Election Day procedures, and recommend additional software changes to improve ease of use for Precinct Election Officials. Several changes to documents, equipment, and supplies were put in place as a result of the feedback received. Training materials and coursework were also adjusted to better suit the needs of Precinct Election Officials.

In late September, the BOE held seven days of Train the Trainer classes to give the trainers of Precinct Election Officials experience with the e-Poll Book and familiarize them with updated documents and procedures. These trainers were also used as Help Desk staff on Election Day. In addition to their initial training, they also received specific Help Desk training the evening before the election. The Board increased its Election Day Help Desk staffing levels to those used in Presidential Elections. Twenty-seven Help Desk trainers were on hand to handle the anticipated influx of e-Poll Book calls from Precinct Election Officials on Election Day. In addition, 10 BOE staff were dedicated to command center and dispatch duties in the Help Desk room, and two representatives from Tenex were on hand for technical assistance.

The Board also doubled its complement of Election Day Troubleshooters. It placed 40 Troubleshooters in the field with 20 dedicated solely to resolving e-Poll Book issues. Ten additional Troubleshooters were held in reserve at the Board office to handle overflow calls. All 50 Troubleshooters attended a special BOE training session on the e-Poll Book system. Sixteen of the 50 also had considerable prior e-Poll Book experience as part of our warehouse e-Poll Book configuration teams.

As part of our backup procedures, paper poll books were included in the supply box of every precinct in Hamilton County, just as they have been in prior elections. A cover sheet informed Precinct Election Officials to contact the Board of Elections before using the paper poll books. Troubleshooters in the field were supplied with 80 backup e-Poll Books and printers along with 40 backup routers. Reserve Troubleshooters, based out of 824 Broadway, had another 20

backup e-Poll Books and printers along with 10 backup routers. Another 50 e-Poll Books were held in reserve at Board offices downtown in case they were needed. .

The Board's Precinct Election Official training program was completely revamped to include e-Poll Book system and software training and to integrate updated and changed procedures resulting from the move from paper signature poll books. Beginning October 5<sup>th</sup> and running through October 31<sup>st</sup>, every Precinct Election Official received three to four hours of training that included hands-on instruction with e-Poll Book units. In all, over 130 classes were conducted with Voting Location Managers (VLMs) and Voting Location Deputies (VLDs) receiving advanced e-Poll Book training. E-Poll Books and printers were distributed in the classes on a 1:1 ratio with Precinct Election Officials, so that every attendee had the opportunity to complete the training and accompanying exercises on his/her own unit. In addition, as part of the documents the Precinct Election Officials received with their materials on Election Day, the Board created a new e-Poll Book Supplemental Guide to walk users through setup and assist with issue resolution.

In the weeks leading up to the Election, a representative from Tenex was in Hamilton County meeting with BOE staff to discuss any final changes that needed to be made. That same representative also visited Precinct Election Official e-Poll Book training courses to receive and to discuss any issues that training staff had experienced. The representative also visited the BOE warehouse facility to oversee final database updates and downloads.

## **Summary**

The process undertaken to bring e-Poll Books to Hamilton County was long and labor intensive. Years of research and hands-on experience were followed by a thorough bid process and combined with countless hours of testing and training before implementation was attempted in the November General Election. The Hamilton County Board of Elections has strived to continuously improve the voting experience for the voters of Hamilton County through the introduction of industry accepted best practices such as e-Poll Books.

## **II The November 3, 2015 Election: Problems and Solutions**

### **Introduction**

Every election, large or small, carries with it unique challenges. Those challenges can be magnified when introducing new technology and processes. That was certainly the case in the November 2015 General Election as the Board introduced electronic Poll Books for the first time in a countywide election. Following the election, the Board spent a significant amount of time reviewing processes, gathering feedback, discussing options with our vendor, and analyzing data to determine what problems were encountered on Election Day and the steps that need to be taken to remedy those problems. Board staff has identified six critical areas that need to be addressed:

- 1) Election Day Setup
- 2) Router/Printer Connectivity
- 3) Locating Voters in the Electronic Poll Books
- 4) Precinct Election Official Staffing
- 5) Software and Database
- 6) Other Identified Issues

### **Election Day Setup**

#### Problem

Precinct Election Officials reported difficulties properly setting up the e-Poll Book equipment on Election Day. Problems stemmed from unfamiliarity with the process and lack of time. Our post-election analysis shows that 34.9% of voting locations reported some problems with e-Poll Book system set-up.

While all PEOs received e-Poll Book training for this past election, Voting Location Managers and Voting Location Deputies received separate, enhanced training. The Board hoped this would allow the VLMs and VLDs in charge of voting locations to acquire a certain level of expertise in the e-Poll Book's use. Post-election review, however, showed us that often times the individuals who were strongest with the system were not the VLMs or VLDs and, because of training differences, those individuals lacked the necessary information to complete certain processes, including device setup. Furthermore, because of physical constraints at our training location that limit available space for equipment, PEOs were trained on setup using a demo unit and training slides.

On Election Day, Help Desk staff walked PEOs through step-by-step instructions to resolve problems they were experiencing with setup. Troubleshooters in the field provided another layer of support for setup issues. Staff from Tenex was also present at the Help Desk command table to assist in problem resolution.

Solution

In future elections, all PEOs, regardless of position, will receive the same training. Furthermore, PEO training class size will be reduced to allow for the appropriate space to accommodate hands-on experience in setting up the e-Poll Book equipment.

Problem

In November's election and due mostly to security concerns, PEOs were instructed to set up their e-Poll Book equipment on Election Day morning along with the rest of the voting equipment. PEOs reported difficulty setting up the equipment in the time allotted on Tuesday morning.

Solution

The Monday night organizational meeting will be extended by 30 minutes to allow PEOs to set up and test the e-Poll Book equipment the night before the election. While PEOs will be required to lock up their e-Poll Books along with the ballots prior to leaving, it will allow for a "dry run" that provides practice, increases familiarity with the process, and identifies potential problems prior to Election Day. The Board will also change the PEO start time on Election Day from 6:00 am to 5:30 am to allow for additional setup time on Tuesday morning. PEO compensation will be adjusted to reflect the increased work hours.

The Board is also setting a goal of hiring 125 Troubleshooters/Supply Runners to assist PEOs at their Monday Night Organizational Meetings and on Election Day morning. This is an increase in staffing from the 50 Troubleshooters deployed in the November General Election and will allow for a ratio of one Troubleshooter to every three voting locations. Troubleshooters will visit every voting location on Monday night and again on Tuesday morning to update the e-Poll Books with acknowledgement card returns and absentee voter data as well as ensure proper e-Poll Book system setup.

The feedback the Board received from PEOs regarding the assistance provided by Election Day Troubleshooters in the field was very positive. Most Troubleshooters had prior election experience and were very familiar with BOE processes and procedures. Expanding the number of Troubleshooters to 125 necessarily means we will be hiring people who do not have prior election troubleshooting experience. To account for that change, Troubleshooter training will be enhanced and expanded from its current format to a more detailed, six hour, seminar-style class.

**Router/Printer Connectivity**

Problem

The most pervasive complaint we received from PEOs regarding the e-Poll Book units on Election Day had to do with problems arising from router and printer connectivity issues. Our analysis shows that 65.1% of voting locations reported an issue with router/printer connectivity. Some of the problems can be attributed to improper setup by PEOs at the voting locations, which we hope to alleviate through the aforementioned training enhancements. There were,

however, complaints throughout the day that cannot be explained by improper setup. The confusion that resulted slowed down the voting process on Election Day and accounted for the majority of the Help Desk calls received from voting locations. On Election Day, as it became apparent that there was an issue with connectivity, Board staff instructed PEOs who were unable to resolve the issue to process voters without using the printers.

### Solution

The use of printers will be phased in over several election cycles, following the November 2016 Presidential Election, and the process of printing a label for each voter will be eliminated. The label was meant as a tool to assist in retrieving the proper ballot and as a backup in case of a system failure, but created too much confusion among PEOs who were unsure of the process to follow if a printer was offline. While we see great potential for improving the voting experience by using the printers, we recognize that too much may have been introduced to PEOs at once and believe that a gradual phase-in will provide us with the best immediate results. The 11:00 and 4:00 lists will be preprinted as they were in prior elections, and voters who arrive to vote in the wrong polling location will be redirected using the e-Poll Book screen instead of a printed slip.

The Board is also working with its e-Poll Book vendor, Tenex, as well as its router supplier, AT&T, to resolve technical issues with connectivity between the routers and printers. This is expected to be an ongoing process. Due to the proposed phasing-in of the printers in subsequent elections, we do not anticipate this will cause problems in upcoming elections and fully expect a resolution in the short-term.

## **Locating Voters in the Electronic Poll Books**

### Problem

A common complaint on Election Day centered on the inability to locate registered voters in the e-Poll Book. Our analysis shows that 42.6% of voting locations reported some difficulty locating a voter in the e-Poll Book on Election Day. The vast majority of difficulties resulted from voters who have no date of birth in our database and PEO confusion over the proper processes to use when looking up a voter. Voters who have no date of birth in our database are not able to be found using a regular driver license scan. While this isn't a failure of the e-Poll Book system, PEO confusion about how to look the voters up by other means forced a number of otherwise eligible, registered voters to be processed provisionally.

In addition, some voting locations did not follow the proper procedures for data entry in manual lookup when a driver license scan didn't find a voter, while others simply failed to utilize the manual lookup option all together. Examination of abandoned transaction data following the election shows that, in many instances, searches were stopped prematurely by the PEO even though the voter was actually in the database.

While paper signature poll books were provided as a back-up for every polling location, PEOs were hesitant to use them because of cautionary language on the cover sheet and, in some cases, PEOs were unaware that paper poll books were even provided. Help Desk staff did instruct voting locations that were having significant problems with the e-Poll Book system to use the paper signature poll books.

### Solution

The Board will mail a notice from the Hamilton County BOE to voters without a date of birth explaining the need for the information and requesting it be provided. The universe of voters who fall into this category is shrinking, already due to the Secretary of State's mailing to voters who have no date of birth on file and date of birth information captured on Provisional ballot envelopes in the November 2015 General Election. Prior to the Secretary of State's mailing, we had 8,459 voters in our database without a date of birth. At the close of registration for the November 2015 Election that number dropped to 5,365. Following the input of data from the most recent election, we are now missing date of birth information from approximately 4,352 voters, a reduction of nearly 49% from pre-election numbers. A letter from the Board, our ensuing follow-up and new DOB data entry will reduce this number even further, which should alleviate the confusion voters and PEOs had regarding this issue on Election Day. The Board will also enhance its training on this issue to spell out more clearly the processes to be followed when a no date of birth circumstance exists.

The Board is also working with Tenex to change the language on the e-Poll Book screens to improve instructions on how to find a voter when a driver license scan is not being used. Instructions will be more specific and language more user friendly. Additional training will be given to PEOs to explain in more detail the voter lookup process.

Finally, a printed, alphabetical Registered Voters List with all registered voters in the location will be provided to PEOs as a complementary tool that can be used to assist in finding voters in the e-Poll Book. If a driver license scan and manual lookup are unsuccessful, PEOs will be able to look up the voter and enter the voter code associated with the voter in the e-Poll Book using the paper Registered Voters List as a guide. Paper signature poll books will continue to be provided for every voting location, and clearer instructions will be provided on when and how to use them.

## **Precinct Election Official Staffing**

### Problem

The problems encountered on Election Day made it clear that the Board needs to do a better job in the recruitment, training, and evaluation of Precinct Election Officials. Our analysis shows that 5.2% of voting locations reported a problem regarding Precinct Election Official staffing. This isn't a problem that is unique to Hamilton County. In fact, the bipartisan Presidential Commission on Elections states that one of the primary weaknesses of election administration

in the United States is the “absence of a dependable, well-trained corps of poll workers.”<sup>3</sup> This common problem is amplified when new technology and processes are introduced in attempts to improve the voting experience.

### Solution

Recruitment efforts will be enhanced to provide a larger pool of qualified PEOs. Enhancements will include, but not be limited to, an expansion of the Board’s “Youth at the Booth” program, which employs high school seniors at the polling place. A total of 125 high school seniors worked the polls in the November 3<sup>rd</sup>, 2015 Election. Feedback from voters and PEOs following the election about Youth at the Booth participants was overwhelmingly positive. Participants often have a greater familiarity and understanding of technology, which was extremely helpful in using the e-Poll Books. Our goal is to recruit 364 Youth at the Booth participants by the November Presidential Election using the assistance of newly added Board staff positions. This will allow us to place one high school senior in every polling location.

Along the same lines, the Board will be launching a “Partners in Democracy” program to build partnerships between the BOE and local public and private entities that are willing to assist in encouraging their employees to become PEOs. The Board has set a goal of enrolling two large companies and three government agencies by the March Primary to further help ensure that we have a skilled workforce at each polling location in Hamilton County on Election Day.

Board staff will organize both PEO and voter focus groups that will take place in mid-January of 2016. The focus groups will provide feedback and suggestions on updates to the e-Poll Book system and process changes that were made as a result of the issues experienced in the November 2015 General Election.

In addition to the training enhancements already discussed in this report, the Board will pursue the development of an online refresher training course for PEOs to refer to prior to Election Day. The online refresher training will attempt to bridge the time gap between PEO in-person training and the election. The Board will also work to create an e-Poll Book “laboratory” at BOE offices to give PEOs the opportunity to come in on their own to gain additional experience using the e-Poll Book system.

The Board will also pursue assistance from a professional expert in adult education to review the BOE’s training curriculum and develop training and evaluation methods that reflect best practices in the field. Once developed, PEOs must pass a test at the conclusion of training that evaluates and properly assesses their ability to complete the tasks required of a well-trained PEO. The Board is also re-evaluating its current pay structure in an effort to increase our pool of capable PEOs.

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<sup>3</sup> Presidential Commission on Election Administration. (2014). *The American Voting Experience: Reports and Recommendations of the Presidential Commission on Election Administration*

## **Software and Database**

### Problem

The Board's contract with our e-Poll Book vendor called for Tenex to assist BOE staff in the setup of database parameters in our initial elections to provide a training mechanism, so staff would be able to perform the function independently in future elections. As part of that process, Tenex failed to update a database parameter left over from the August Special Election, which resulted in some voters being mistakenly flagged as "Registered too late" by the e-Poll Book on Election Day. The system consequently instructed PEOs to process these voters provisionally. This anomaly impacted a potential universe of 11,475 voters. Post-election data review showed that 2,764 of these voters showed up to vote on Election Day and received the "Registered too late" error message. Tenex representatives and Board staff identified the error midday on Election Day, and staff was able to begin preparing for a proper remedy. Board staff was able to identify the affected voters as part of our provisional verification process, and all "regularly" registered voters who were impacted and cast provisional ballots had their ballots accepted and counted by the BOE.

### Solution

Board staff is in the process of working with Tenex to enhance system checklists and tests of the production database, so all scenarios can be reviewed for consistency between the Voter Registration Database and the e-Poll Book.

### Problem

PEOs had difficulty correctly identifying and inputting their voting location code in the e-Poll Book system and also expressed confusion about the roles and associated passwords they were required to input.

### Solution

The software has been updated to allow for the voting location for each e-Poll Book to be pre-defined and tested by Board staff prior to equipment delivery, eliminating the need for PEOs to input the information. The software's password and role selection process has also been streamlined to further simplify the process.

## **Other Identified Issues**

### Problem

Feedback from PEOs revealed that the BOEs Help Desk staffing level was inadequate to handle the volume of calls received on Election Day. PEOs and Help Desk staff also expressed trouble communicating due to noise levels.

### Solution

Help Desk staffing levels will be doubled with a goal of 40 Help Desk staff for the March Primary Election. Help Desk staff will receive the same advanced training as Troubleshooters. In addition, funds have already been encumbered for the purchase of new phones and headsets to

facilitate communication between PEOs and staff. The BOE will also develop new materials for Help Desk staff to better assist them in responding to problems on Election Day.

Problem

The BOE received complaints from voters that the stylus provided for signing the e-Poll Book was difficult to use.

Solution

Board staff is in the process of acquiring, testing, and assessing styli that are shaped more similar to pens to provide a better user experience for voters.

Problem

PEO's expressed difficulty using stitched ballot pads.

Solution

The BOE is in discussions with both Tenex and our ballot printing vendor, MCR, to develop ballot pads that are easier for use. Staff is also working with Tenex and MCR to discuss possible ways to differentiate between different ballot styles within a voting location to make it easier for PEOs to understand which ballot a voter should receive.

Problem

The responsibility of hiring, scheduling, training, and assessing 2,600 PEO's for a countywide election is much too large for the current two-person staff to adequately handle, especially with the addition of the new programs, recruitment efforts, and assessment tools discussed in this report.

Solution

The Board will seek to create two new full-time positions to assist with the recruitment, training, and assessment of PEOs, pending approval from the Hamilton County Board of Commissioners.

### **III Conclusion**

The Hamilton County Board of Elections did not make the decision to transition to Electronic Poll Books lightly, nor was it lax in its efforts to undertake the appropriate efforts to prepare for the November 3<sup>rd</sup> General Election. We know from data collected after the election that the vast majority of voters, some 200,000, were able to check in and vote without incident. Staff has received many comments from voters and PEOs alike expressing their positive experiences with the e-Poll Book system.

There were, however, obstacles to an entirely successful implementation that we did not foresee. Indeed, as the first large county in Ohio to undertake the implementation of the new generation of Electronic Poll Books, we anticipated that we would encounter problems of a varying nature. The problems encountered by far too many voters are simply unacceptable. 83.8% of polling locations reported some type of problem related to e-Poll Book implementation. The majority of these problems, however, were resolved by Help Desk and Troubleshooting staff.

The Board is confident, though, that the sources of the problems we experienced on Election Day with the Electronic Poll Books have been identified, and the appropriate steps will be taken to resolve those problems. In fact, many of the resolutions are well underway, as BOE staff and vendors began working diligently immediately after Election Day to make sure that the core problems we experienced would not be duplicated in future elections.

We welcome the opportunity to openly and transparently discuss exactly what took place in November and look forward to continuing to improve the voter experience through the adoption of best practice processes and modernized equipment such as e-Poll Books. As always, we will continue to strive to administer fair, efficient, and well-run elections in Hamilton County.