COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF STATE

RESULTS OF ES&S ELECTRONIC POLL BOOK ExpressPoll 7.2.0.0 EVALUATION

Issued By:

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I.   INTRODUCTION

Pennsylvania's voter registration law, Act 3 of 2002 (Act 3), 25 Pa.C.S. §§ 1101 *et seq.*, requires that the poll book or district register "shall be in a form prescribed and approved by the Secretary" for both paper and electronic poll books, 25 Pa. C.S. §1402(b)(2). Pursuant to a request from Election Systems and Software (ES&S), the Department of State (Department) evaluated the ExpressPoll 7.2.0.0 Electronic Poll Book (EPB) to ensure that the system complies with all the applicable requirements of Act 3, including the regulations implementing Act 3, 4 Pa. Code §§ 183.1 *et seq.*, and the Pennsylvania Election Code, 25 P.S. §§ 2601 *et seq.*, and therefore can be used in Pennsylvania elections. The evaluation consisted of demonstrations via video conference conducted by ES&S representatives, conference calls and email communication with ES&S personnel and documentation review. The demonstration took place on January 6, 2021 and was led by TJ Burns, State Certification Manager, representing ES&S. Sindhu Ramachandran, Voting Systems Analyst; and John Hartzell, Deputy Chief Counsel, Office of Chief Counsel, represented the Secretary of the Commonwealth. The Department's election security collaboration partners, the Pennsylvania National Guard, also attended the demonstration to assist in evaluating the EPB system security posture. Representatives from ES&S were also available for teleconference discussions during the demonstration. The demonstration was completed via video conference to ensure timely completion of approval activities in accordance with COVID-19 pandemic restrictions.

II.   THE Express Poll 7.2.0.0 ELECTRONIC POLL BOOK

The ExpressPoll 7.2.0.0 EPB presented for evaluation and use in Pennsylvania included the following components:

a) Express Poll 7.2.0.0 Application and the polling place device Microsoft Surface Go - Electronic pollbook software pre-loaded on a Microsoft Surface Go tablet. The required voter data from the voter registration system is loaded to the tablet and the software displays the voter registration data in an electronic format to perform voter search, verification, and ballot issuance during an election. Microsoft Surface Go can be configured to operate in kiosk mode at a polling place for the poll workers to perform election day voter check-in activities. The system also supports an administrative windows role to perform specific operations that require privileged access.

b) ExpressPoll Terminal - The ExpressPoll Terminal integrates all necessary peripheral devices into the stand. This stand houses the tablet in the locked enclosure and includes two external USB hubs and an infrared barcode scanner. When connected to power, the tablet's internal battery will charge, and power will be supplied to the tablet and integrated barcode reader, also housed within the stand. When disconnected from power, the tablet's internal battery will provide up to four hours of power to the tablet and integrated barcode scanner.

c) Thermal Receipt Printer - Optional thermal printer used to generate reports and/or receipts as required by the jurisdiction. The printer uses continuous feed thermal paper. Refer to Attachment D: Pollbook Components, for specific printer versions identified in ES&S supplied documentation.

d) ExpressVote Printer - Optional printer used to generate ExpressVote and ExpressVote XL activation cards directly from the ExpressPoll 7.2.0.0 EPB when connected via USB to the ExpressPoll terminal.

The configuration presented for evaluation is identified as Local Area Network Communication (Peer to Peer) where multiple ExpressPoll 7.2.0.0 EPB units in the polling place communicate to each other via a secured wireless router device.

III. EVALUATION APPROACH, PROCEDURES AND RESULTS

A.   Evaluation Approach

To evaluate whether ExpressPoll 7.2.0.0 EPB can be successfully used for elections in the Commonwealth of Pennsylvania and meets all the requirements mandated by Act 3 and its regulations, and the Pennsylvania Election Code, the following approach was used: (1) System Demonstration; and (2) Documentation Review.

The Department requires a System Demonstration on a field-ready system to examine and confirm that the EPB satisfies all the statutory requirements. The demonstration also allows the Department to gain a broad understanding of the system capabilities. The Documentation Review consisted of analyzing the system specifications, user manuals, state certification and third-party test reports pertaining to the ExpressPoll 7.2.0.0 system. EPBs are heavily configurable distributed systems, typically consisting of networked tablets or laptops used at polling places to check-in voters. They work in conjunction with a central server performing the management functions, which include preparing the election data and preparing data voter history updates. The Documentation Review was conducted to confirm that the system can be efficiently used for elections in the Commonwealth of Pennsylvania, and to aid in deciding whether the EPB connectivity configuration should be approved for use in Pennsylvania.

B.   Procedures

1.   System Demonstration

Representatives from ES&S demonstrated the ExpressPoll 7.2.0.0 system on January 6, 2021. The demonstration included an end-to-end set up and capability walkthrough of the submitted EPB configuration. ES&S used the test data supplied by the Department for the demonstration. The purposes of the demonstration were to: (a) validate that the system complies with Pennsylvania's statutory and regulatory requirements for poll books; (b) discuss the overall capabilities of the system; and (c) evaluate the level of compliance with the Commonwealth Information Technology Policies (ITPs) outlined in Attachment C of this report.

2. Documentation Review

The Department requested the following documentation from ES&S for review.

1. System Specifications;
2. Hardware/Software/Peripherals/Additional Equipment Requirements;
3. Technical Data Sheet;
4. User Manual;
5. Usability Reports;
6. Security and Penetration Testing Reports;
7. Internal Quality Assurance test details; and
8. Reports from other states using the system.

Department staff reviewed the supplied documentation and analyzed the documentation of the system in detail.

3. Results

1. System Demonstration Results

a) Conformance to statutory requirements - The vendor successfully demonstrated that the EPB system conforms to the statutory requirements outlined in Pennsylvania law. The demonstration performed on ExpressPoll 7.2.0.0 proved that the system can be configured to meet the statutory requirements. *See* Attachment A for the list of statutory requirements discussed and validated during the demonstration.

b) Review of system capabilities - The Department reviewed the overall functional and nonfunctional capabilities of the system during the demonstration and documentation review. *See* Attachment B for the list of system functional and nonfunctional capabilities discussed during the demonstration and a brief overview of the discussion points.

c) Level of Compliance with Commonwealth IT policies – The Department provided ES&S with a copy of the Commonwealth of Pennsylvania IT policies relating to the security of distributed systems and system connectivity. The Department also

provided ES&S with a questionnaire they completed and submitted as part of the examination request. The Department set aside time during the demonstrations to discuss the security architecture of the system. The written response to the questionnaire and the security discussion with the ES&S technical team during the demonstrations allowed Department staff to evaluate the system's level of compliance to Commonwealth IT policies and to understand the security features of the system. *See* Attachment C for the specific policies and Submission Summary that occurred during the demonstration, and the questionnaire.

2. Documentation Review Results

Department staff analyzed the documentation provided by ES&S to understand the system capabilities in detail. The submitted documentation included test reports for ExpressPoll 7.2.0.0 prepared by Pro V&V, a federally recognized Voting System Test Laboratory ("VSTL"), to confirm operation consistent with Pennsylvania operational practices. No anomalies were reported as part of the VSTL testing.

The demonstration and documentation review determined that ExpressPoll 7.2.0.0 consists of Microsoft Surface GO tablets (Tablet) configured as ExpressPoll terminal kiosks to perform voter check-in activity at the polling place. The ExpressPoll terminal integrates all necessary and optional peripheral devices into the stand. The data from the Statewide Uniform Registry of Electors (SURE) system needs to be prepared by the ES&S data conversion team and the encrypted election data needs to be loaded onto the tablets. The system configuration presented for evaluation is represented as Local Area Network Communication (Peer to Peer), where multiple units in a single location or polling place are communicating via connection to a secured wireless router device.

3. Observations
Department staff noted the following as part of the demonstration and documentation review.

1) ExpressPoll 7.2.0.0 uses software configuration features to determine the final functional behavior of the system. Even though the demonstration and subsequent

evaluation showed that the system can be configured to satisfy all the statutory requirements, the Department will need assurance that the system setup complies with the approved configuration after purchase.

2) The deployed system security posture will depend on the parameters selected during set up. This will necessitate validating the configuration during and after the setup activity to ensure that the system is configured in a secure manner.

3) ExpressPoll 7.2.0.0 election set up requires the involvement of an ES&S data conversion team for preparing the data to be loaded to the tablets. The data extracted from the SURE system is transferred via secure file transfer to ES&S for conversion services. The ES&S team prepares the data and the converted data is then transferred back to the county to be loaded to the emulator and then the tablets. The data transfer and conversion services outside of the county IT offices will require strict monitoring and access control policies, and documentation of compliance with those policies, to avoid data compromise.

IV.   CONDITIONS FOR APPROVAL

Based on the evaluations, the Secretary of the Commonwealth of Pennsylvania approves ExpressPoll 7.2.0.0 subject to the following conditions:

A. The tablets in operation at a polling place can communicate to synchronize voter check-in data between each other at the polling place during the polling hours. However, any data transfer required between the central server and tablets must happen outside of polling hours.

B. ES&S must work with implementing jurisdictions to ensure that jurisdictions have a process to provide vote history data for updates to the SURE system in a timely manner and not later than the Thursday after the election. The process must allow counties to gather check-in information from polling place devices and create an extract in the format required by the SURE system. The existing system extract format is listed in Attachment E. Counties purchasing the ExpressPoll 7.2.0.0 must work with BEST to finalize the process of voter history updates during each election

cycle. ES&S must be able to adhere to the extract format and timing of the update suggested by SURE system administrators.

C. ES&S must work with implementing jurisdictions to ensure that there is a defined plan to load voter data and prepare the poll books for use on election day. The plan must ensure that counties can capture all the voter poll book data updates required for use on election day. The plan must be reviewed and approved by BEST to ensure that the extracts can be generated from the SURE system on the required dates.

D. Counties purchasing the ExpressPoll 7.2.0.0 must work with BEST to decide what portion of the data from the Statewide Uniform Registry of Electors (SURE) system can be shared with the vendor. The counties shall not allow the vendor to run any data extraction utilities against the SURE database/system. Any data transfer must happen via a file extract and secure file transfer process and must be encrypted. The extract must not contain any additional data elements than what was shared during the evaluation. The data elements and sharing mechanism must be approved by BEST. Counties must ensure the accuracy of data loaded to the EPB system and maintain appropriate reports as necessary for auditability.

E. Any data transfer required during the process of election set up and voter history updates between the county and ES&S data conversion services must happen via secure file transfer process. The file transfer and download must be tracked and audited to make sure that data has not been accessed by unauthorized personnel.

F. The tablets at an individual polling place communicating with each other must be configured and managed so they always meet and maintain secure data management and transfer standards, including those contained in Commonwealth ITP policies, and may never connect to a publicly accessible network. The network at the polling place must be a "closed network" allowing only components of the EPB system to connect, and encryption must be enabled and used. The security settings must prevent other devices from detecting and connecting to the network at the polling place.

G. Any components which are/were part of the EPB system, including removable media, must not be connected to the electronic voting system. This includes, but is not limited to: PEB encoders and Voter Access Cards encoded on the EPB systems; USBs; SD cards; printers; CDs; etc.

H. Portable media used to transfer files between any components of the EPB system must be new, unmodified and not refurbished. Alternatively, removable media that is being reused must be reformatted before each election. All removable media used for elections must be managed with proper chain of custody and administrative safeguards to protect against disclosure, theft, loss or damage.

I. Any unused ports in the Tablet used at the polling place must be sealed with tamper-evident seals. Jurisdictions must configure the tablets with tamper evident and tamper proof seals and locks as applicable to ensure physical security

J. Counties purchasing the ExpressPoll 7.2.0.0 EPB system must work with ES&S and BEST to do the following:
   1. Implement ExpressPoll 7.2.0.0 EPB system in a manner that satisfies all statutory requirements outlined in Act 3, its regulations, and the Pennsylvania Election Code. The parameter configuration and the text of informational messages must be approved by BEST.
   2. Implement ExpressPoll 7.2.0.0 EPB system in secure manner that complies with applicable county and Commonwealth IT policies and any best practices published by Department of State BEST. The system configuration, connectivity set up, password configuration and password management policies must be approved by BEST; and
   3. Implement ExpressPoll 7.2.0.0 EPB system with sound administrative practices and proper chain of custody in the same manner as counties deploy Electronic Voting Systems.

K. Counties implementing ExpressPoll 7.2.0.0 must change all default passwords including the maintenance PIN during implementation. County election officials must implement processes to confirm and maintain records that default passwords were changed before fielding the system. The proof must be export of the system log files whenever possible. In situations where the log entries are not detailed enough a screenshot of the password change action performed at the county elections office or documenting the password change during the acceptance testing can suffice. County election officials with administrative access must take proper precautions for password management and protection.

L. Counties must have a contingency plan to ensure that an election will not be affected should any component (including connectivity and power supply) of the EPB system fail, or any or all tablets in use at a polling place malfunction on election day. The contingency plan must ensure that no "check in" information is lost. The contingency plan must be reviewed and approved by BEST. At a minimum, the contingency plan must ensure the availability of a full voter list and a process for maintaining and reproducing a list of voters who have already checked in if the EPB fails during voting hours.

M. ES&S must notify the Department of State of any changes made to ExpressPoll 7.2.0.0 EPB system. This includes any changes to the software and to the environment of the EPB system, including but not limited to ES&S's development locations, cloud service vendors, or data center locations, for example.

N. ES&S must escrow a copy of the code, trusted build, any verification/identification software used, and installation instructions for safe-keeping to the Commonwealth of Pennsylvania and add the Commonwealth as a beneficiary to any Escrow accounts they have for safekeeping the ExpressPoll 7.2.0.0 code, and provide written

notification of this status to the Department, with an update on any successor Escrow parties.

O. ES&S must provide fully prepared and version-controlled system manuals for counties purchasing the EPB. The manuals must clearly identify each user configurable parameter. Final user manuals must be submitted to the Department before sale of product or delivery in Pennsylvania.

P. Counties must perform a thorough evaluation and User Acceptance Test of the EPB system before purchase. This test should include all expected activities occurring as part of the election including interactions to the SURE system. This approval is based on a demonstration done by vendor and documentation review. Demonstration by the vendor cannot be considered equivalent to testing.

Q. The counties must work with ES&S to define and implement policies on data retention and archiving on all parts of the EPB system including external servers and removable media. Any election data stored on devices outside of the county network must be deleted and/or archived to physical media with access control as soon as it is no longer required, or no later than ninety (90) days after Election Day. Voter data shared with the vendor must be tracked and deleted to avoid data breaches. Counties must retain, as required by law, archived copies of data sent and received from the vendor for audit purposes. ES&S must maintain and keep audit logs of every data access event and make those audit logs available for inspection to the counties or BEST upon request.

R. All jurisdictions implementing the ExpressPoll 7.2.0.0 must carry out full Logic and Accuracy testing on each device prior to every election in which the ExpressPoll 7.2.0.0 will be used and must maintain records of that Logic and Accuracy testing. The Department recommends creating a county specific plan for Logic and Accuracy testing that includes all peripherals and anticipated check in scenarios on Election Day. The vendor supplied Logic and Accuracy checklist

should be used as a reference but must not be accepted in lieu of a county specific plan.

S. ES&S must provide audit log specification documentation to BEST and counties purchasing ExpressPoll 7.2.0.0 system. The county election officials and IT personnel must work with ES&S to understand the system logging capabilities. The county must be able to identify and gather logs that provide an audit trail of the transactions at the polling place and logs that aid in identifying and managing security incidents, fraudulent activity and operational problems via application suite audit logs or operating system logs. Processes must be implemented to harvest and safekeep the logs after the election for future analysis and review.

T. Counties using EPB must implement processes of reconciliation at the close of polls to avoid any discrepancies between ballots and voter check-ins recorded on the EPB. Checklists should be developed for poll workers to ensure compliance with all requirements and reduce the chance of human error. Counties should also work with ES&S to produce quick reference cards for use by poll workers at the polling place on Election Day.

V. **RECOMMENDATIONS**

The Secretary makes the following recommendations to the counties purchasing the ExpressPoll 7.2.0.0 EPB system:

a) The counties should consider using the EPB in pilot mode during the first use in an election. This allows the jurisdictions to ensure that all appropriate checks and balances are in place before using the EPB system in full production mode. For larger counties, the county should also consider implementing in a phased approach to mitigate any unforeseen issues that may arise during implementation.

b) The Secretary urges counties to ensure that all poll workers and election officials receive appropriate training and are comfortable using the EPB and peripherals. The training activities should include, but not be limited to, hands-on training on devices to perform election set up and operations at a polling place, cyber hygiene practices and procedures for detecting cyber-attacks. The training should ensure that poll workers and elections officials can detect any warnings that signal cyber-attacks and immediately respond to it. Involvement of poll workers during the implementation project from start to finish with onsite trainings at the polling place is also recommended. Annual training for all poll workers and local election district personnel is also recommended, with documentation of training content and attendees.

d) The Secretary recommends that counties purchasing the ExpressPoll 7.2.0.0 EPB system perform proof of concept test onsite at all polling places to ensure connectivity and power supply availability. The Secretary further recommends that the test is conducted with a test system using components of the same make, model and configuration as to what will be used on Election Day. Counties should work with ES&S to make available at least two means of connectivity available for use during Election Day.

c) The counties using the ExpressPoll 7.2.0.0 EPB system should develop and implement a disaster recovery plan that includes the possibility of a data breach or cyber-attack on the EPB.

VI.   CONCLUSION

Based on the demonstration, documentation review, and consultation with the Department staff, the Secretary of Commonwealth concludes that the ES&S ExpressPoll 7.2.0.0 EPB meets all of the applicable requirements sets forth in Act 3, its regulations, and the Pennsylvania Election Code, and can be used for checking in voters during elections, provided that all of the conditions listed in Section IV of this report are met.

Attachment A - Statutory Requirements

Requirement	Demonstrated (Yes/No)
The computer list shall be in a form prescribed and approved by the Secretary. (25 Pa. C.S. §1402(b)(2)).	**Yes**
Form of the Electronic Poll Book	
Each screen of the EPB shall contain the name of the county. (25 Pa.C.S. § 1402(b)(2)	**Yes**
Each screen of the EPB shall contain the election district. (25 Pa.C.S. § 1402(b)(2)).	**Yes**
Each screen of the EPB shall contain the date of the election. (25 Pa.C.S. § 1402(b)(2)).	**Yes**
Each screen of the EPB shall contain the date and time the list was prepared. (25 Pa. C.S. § 1402(b)(2)).	**Yes**
Content of the List:	
For each election district, the EPB shall contain an accurate list of the names of the registered electors- alphabetically by last name. (25 Pa.C.S. §1402(b)(2) and 1402(c)).	**Yes**

Poll workers must have access to the list at all times so that voters can be checked in without interruption. The Electronic Poll Book should provide for the following relating to data recovery and adequate contingencies should one or more elements of the Electronic Poll Book fail:
 	
    ▪ Memory Redundancy
    ● Internal
    ● External
    ▪ Data Preservation
    ▪ If the contingency for Electronic Poll Book failure is the printing of paper poll books/precinct lists from the EPB,
	Yes

the EPB must provide for the printing of a paper poll book AND a copy of the list of registered voters within the precinct. **Demonstration Comments:** EPB keeps the data during operation on the hard disk of the tablet and a removable micro SD card to ensure that data is always preserved. The system allows a capability to connect printers and configure reports. Reports can be exported and saved to preserve data at any point in time. **Demonstration Comments:** The system demonstration showed that the system identifies an attempt to check in an already checked in voter. The EPB displays an indication of the original check in. In an environment where there are multiple filed systems that are connected, data syncing between the devices must be functioning to ensure multiple "check ins" are prevented.	
A legible digitized signature for each registered elector. (25 Pa.C.S. § 1402(b)(2)). The official digitized signature for each registered elector must be obtained from the Statewide Uniform Registry of Electors (SURE) and it must be displayed in such a manner so that only the poll worker can see the official signature at the time a voter is signing the EPB.	**Yes**
Street address of each registered elector. (25 Pa.C.S. § 1402(b)(2)).	**Yes**
Political party designation of each registered elector. (25 Pa.C.S. § 1402(b)(2)).	**Yes**
Suitable space for insertion of the signature of the registered elector. (25 P.S. § 3050(a.3); 25 Pa.C.S. § 1402(b)(2)).	**Yes**

Suitable space for insertion of the initials of the election official who enters the record of voting in the district register. (25 P.S. § 3050(a.3); 25 Pa.C.S. § 1402(b)(2)).

If the EPB is designed in such a manner as it provides for unique login credentials for each election official, this requirement can be satisfied by a system-generated audit report that identifies by unique election official ID which voters were checked in by that election official.

Demonstration comments: The poll workers can use their initials to login to the system. The actions are logged with the user id in the transaction log allowing identification of the poll worker who performed the check in. The system can also be configured to require the poll workers initials be captured before a ballot is issued. | **Yes** |
Indication of whether the elector needs assistance to vote and, if so, the nature of the disability. (25 Pa.C.S. § 1402(b)(2)).	**Yes**
The date of birth of the registrant. (4 Pa. Code § 183.11(b)(4)).	**Yes**
The SURE registration number of the registrant. (4 Pa. Code § 183.11(b)(5)).	**Yes**
The following elector's affirmation must appear above the signature area: "I hereby certify that I am qualified to vote in this election." (25 P.S. § 3043).	**Yes**
An identification of whether the registrant's status is active or inactive. (25 Pa.C.S. § 1901(c); 4 Pa. Code § 183.11(b)(6)).	**Yes**
Voter Status Flags required by the SURE system:	
For voters who are "Inactive," affirmation is required. (25 Pa.C.S. § 1901(c) and (d)(3); 4 Pa. Code § 183.11).	**Yes**

"ID Required"- Identification of whether the voter needs to present voter identification. An elector who appears to vote in an election district for the first time must present valid voter identification. (25 P.S. § 3050(a)).	**Yes**
"Absentee or Mail-in Ballot"- An elector who voted an absentee or mail-in ballot is ineligible to vote in the municipality on Election Day, although he or she may vote by provisional ballot if the district register does not show that the elector voted the absentee or mail-in ballot, and may vote by regular ballot if the ballot and envelope are remitted, and the voter signs the required declaration. (25 P.S. § 3146.6(b) and § 3150.16(b)).	**Yes**
"Must vote in person"- Identification of whether the voter needs to present voter identification if the elector votes for the first time by mail. (Federal: 52 U.S.C. § 21083(b)).	**Yes**

Attachment B - EPB Functionalities

Specific "check in"/voter handling Scenarios demonstrated

a) Provisional Ballot: The process for issue of a provisional ballot was demonstrated.

b) Voter who was issued an Absentee /Mail-in Ballot: The workflow configuration capabilities on the EPB when voter is issued an absentee/mail-in ballot was demonstrated using the test data supplied by Department.

c) Cancel Check in: The process for cancelling an incorrect check-in and the requirement for elevated access privileges for the function was demonstrated.

d) Reissue Ballot: The process of re-issue of a ballot for a spoiled ballot was demonstrated.

e) Inactive Voter Check in: The EPB system was configured with the appropriate workflow that allows the poll worker to identify an Inactive voter and handle the affirmation requirements was demonstrated.

f) Redirecting a voter to the correct polling place: The system capabilities for redirecting a voter to the correct polling place was discussed.

g) Search/Lookup voter Capabilities of the EPB: The EPB system voter look up capabilities and usability were demonstrated.

h) Identifying a Duplicate check-in: It was demonstrated that the system prevented the same voter from checking in multiple times.

Usability/User Interface Discussion

The following capabilities/functions of the EPB system were demonstrated.

    a)   Set up and Procedures for setting up the Field System/Poll Pad

    b)   Poll worker ability to access the system and login

    c)   Screen navigation capabilities

    d)   Languages Supported by the system

    e)   System power up and shutdown procedures

    f)   System help availability

Security and Chain of Custody

a) Password configuration on tablet: The password configuration capabilities of the EPB system was discussed.

b) Voter Signature Pad Information: The information displayed to the voter on the signature pad for the voter to sign using the stylus was displayed and demonstrated. The demonstration showed that that the voter will not be able to see the signature on file when signing on the EPB.

Attachment C - Commonwealth IT Policies

A) ITP-SEC001 – Policy that governs Commonwealth's antivirus agent, host intrusion prevention agent (host-based intrusion prevention system), incident response servlet and patch management agent for all servers.

   Submission Summary: The submission suggests that the tablets in use at the polling place use a hardened operating system image with windows defender. The hardened Windows image is built specially where all unnecessary services are restricted or disabled altogether to allow the ExpressPoll application to run in kiosk mode with a poll worker login. Service packs and security updates required are applied on an as-needed basis, based on risk analysis by ES&S personnel, and will be pushed to customer systems by way of Mobile Device Management (MDM) in partnership with county customers. The electronic pollbook utilizes USB drives for the purpose of loading data, but does not support the auto-run feature, and any executables on USB drives will not execute. Additionally, the ExpressPoll application on the tablet runs as an unprivileged user, not able to install software of any kind unto the tablet. Any data loaded onto the ExpressPoll must conform to a pre-determined format, and the data must be AES256 encrypted, providing the decryption key in order to import data. Any other files presented on USB drive are ignored. ES&S also represented that they have escalation processes identified through their Vice President of System Security in accordance with company security and disclosure policies.

B) ITP -SEC004 - Establishes policy and enterprise-wide standards for Commonwealth Agencies on Web Application Firewalls

   Submission Summary: The ExpressPoll system supports WPA2 and WPA2-Enterprise (PEAP-TLS, EAP-TLS) wireless protocols, and is capable of supporting MAC address filtering, and also includes the Windows Defender anti-virus and threat protection system on by default, only allowing ExpressPoll system to run successfully.

C) ITP-SEC019 and ITP -SEC016 – Establishes policy and procedures to protect commonwealth electronic data.

   Submission Summary: ES&S suggested that they have an appointed contact for security coordination. ES&S participates in the Department of Homeland Security's Cyber Hygiene program, and its servers and infrastructure that provide pollbook services are regularly scanned by DHS and other third parties.

D) ITP-SEC020 - Establishes policy and standards for encryption of data at rest

Submission Summary: The data on ExpressPoll tablet is AES 256 encrypted at the operating system level. In addition the database with voter data is encrypted and a valid encryption/decryption value must be provided by the end-user before the application can decrypt the underlying databases and use them.

E) ITP-SEC024 – Establishes policies, procedures and standards related to reporting and managing of cyber security incidents.

Submission Summary: ES&S suggested that they have a defined process in responding to cybersecurity incidents coordinated and escalated through an enterprise wide contact following any industry and internal best practices for reporting and incident management.

F) ITP-SEC025 – Establishes guidelines for the proper electronic use and disclosure of Personally Identifiable Information.

Submission Summary: ES&S suggested that data in the poll book system is protected by encryption of data. It was also explained that the company involves tooling such as OWASP. Threat modeling and threat identification is a normal part of the software development lifecycle process, and utilized before, during, and after development exercises.

G) ITP-SEC029 - Establishes policy and procedures for Commonwealth Agencies for physical security of IT resources.

Submission Summary: ES&S suggested that the organization follows policies to avoid unauthorized access to their facility by using access restrictions and monitoring the facilities by cameras installed on premises. The restricted access records are audited yearly. Physical access to IT related media including back up tapes is controlled to avoid unauthorized data access.
The physical security of the tablet is ensured by using tamper proof locks and seals to seal any unused ports. The system at the polling place consists of a tablet, the integrated stand and micro SD card. The tablet can be affixed into the stand, which includes a lock to prevent any type of removal. The micro SD card is inserted into the tablet, and a seal is placed over the opening, preventing the user from easily removing the micro SD card and making it obvious if the seal is broken. The system can be placed in a protective case with the data loaded, the micro SD card inserted and the tablet locked to the stand. The case can also be sealed to recognize the fact the system may have been compromised if the seal is broken.

H) ITP-SEC031 - Establishes policy and standards for encryption of data in transit to improve the confidentiality and integrity of data.

Submission Summary: ES&S suggested that the poll book system involves encryptions and secure transmission protocols. The application supports https /TLS 1.2/AES256.

I) ITP-SEC032 Establishes compliance standards for enterprise Data Loss Prevention (DLP).

Submission Summary: The policy refers compliance to the below mentioned policies. ES&S's answers are provided below

1) ITP-SEC019 - Policy and Procedures for Protecting Commonwealth Electronic Data

Refer to Item C above.

2) ITP-SEC020 - Encryption Standards for Data at Rest

Refer to Item D above.

3) ITP-SEC031 - Encryption Standards for Data in Transit

Refer to Item H above.

4) ITP-SEC017 - CoPA Policy on Credit Card Use for e-Government Applications (if applicable)

Not applicable.

J) ITP-SEC035 - This Information Technology Policy establishes policy, responsibilities, and procedures for connecting and using mobile communication devices to access Commonwealth IT resources.

Submission Summary: The discussion suggests that EPB Solution utilizes a Toshiba tablet for the voter facing display and signature capture. The tablet uses a hardened windows image and the ExpressPoll application. The Windows image is built specifically to allow the ExpressPoll application to run in kiosk mode. The Windows image also doesn't receive automatic patch updates to prevent unexpected downloads to the system. ES&S will monitor all security patches and recommend image updates after testing if a patch is required.

K) ITP-SEC007 - This Information Technology Policy establishes establish minimum standards for the implementation and administration of user, system, network, device, application account IDs, passwords, and requirements around multi-factor authentication.

Submission Summary: The Tablet with ExpressPoll 7.2.0.0 supports options that enable the creation of county-defined poll worker and supervisor passwords. The passwords are specific to each consolidation number/polling place. The maintenance PIN on the tablet also can be changed by the county personnel. The system comes with default passwords and the best practice recommendation by ES&S suggests counties change the default passwords after receipt, and regularly thereafter.

ES&S CentralPoint system which is used when EPBs are connected in Wide Area Network Communication to sync voter check-in information across the entire jurisdiction allows administrators to create new users and users can change passwords by an email weblink with an expiring token. CentralPoint users can be configured to limit re-authentication attempts and also allows to be configured with MFA. Wide Area Network Configuration implementation is not approved for use in PA.

Attachment D - Supported Peripherals

(The list is from Appendix D of the ES&S EP_7.2.0.0 Administrator's Guide Rev. 2.0)

- Device: ExpressPoll Terminal Pollbook Stand Model #: 100-10007-00 Interface: Wi-Fi/USB
  Note: The ExpressPoll Terminal ships assembled with tablet.

- Device: ExpressVote Thermal Printer
  Item #: 4200 Interface: USB
  Note: The ExpressVote Printer is used to print activation cards.

- Device: DYMO LabelWriter 450 Turbo Thermal Printer Model #: 1750283 Interface: USB
  For complete specifications, click the following link: DYMO.com

- Device: Epson TM-m30 POS 3" Receipt Printer
  Model #: M335B Interface: USB
  For complete specifications, click the following link: Epson.com

- Device: AC750 Wireless Travel Router Model #: TL-WR902AC Interface: Wi-Fi
  For complete specifications, click the following link: TP-Link.com

Attachment E – SURE Vote History Update Format

E-PollBook VH
Example.xlsx

(All fields are required)