Virginia State Board of Elections

ELECTRONIC POLLBOOK CERTIFICATION

Procedures & System Requirements
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PART 1: INTRODUCTION

1.1. PURPOSE OF PROCEDURES

These procedures have been developed and approved as part of a continuing effort to improve the administration of elections in the Commonwealth of Virginia. They provide a formal and organized process for vendors to follow when seeking state certification for an electronic pollbook system or a significant improvement or modification to an existing electronic pollbook system currently certified for use in Virginia. To this end these procedures are designed to:

1. Ensure conformity with Virginia election laws relating to the acquisition and use of electronic pollbook systems and equipment;

2. Provide an organized and consistent means of evaluating and certifying electronic pollbook systems and equipment marketed for use in Virginia;

3. Provide an organized and consistent means of evaluating and re-certifying additional capabilities and changes in the method of operation for electronic pollbook systems previously certified for use in Virginia;

4. Provide for the improvement of the electoral process by ensuring that all electronic pollbook systems operate properly and are installed and tested in compliance with the State Board of Elections approved procedures; and

5. Provide for the accurate recording and reporting of a list of voters who participated in an election for any jurisdiction in which each certified system is used.

1.2. AUTHORITY

§24.2-611(D) of the Code of Virginia requires Electronic Pollbook (EPB) programs to be approved for use in elections by the Virginia State Board of Elections. Each EPB System submitted for certification in Virginia shall undergo State Certification. State Certification is intended to verify that the design and performance of the electronic pollbook complies with all applicable requirements of the Code of Virginia and that it provides the functionality required by the Virginia State Board of Elections (SBE) and The Virginia Department of Elections (ELECT).

1.3. SCOPE OF REQUIREMENTS PROGRAM

1. The electronic pollbook system and equipment must comply with the provisions within the *Code of Virginia* and the *Virginia Administrative Code* relating to pollbooks, voting, and voter registration.

2. The electronic pollbook system or equipment must comply with the provisions in the *Code of Virginia* relating to pollbooks (Chapter 6, Article 3 of Title 24.2).

1.4. APPLICABILITY

1. The procedures outlined in this document are applicable to all electronic pollbook systems first used on or after the effective date of this document.

2. These procedures are intended to assist local jurisdictions in identifying electronic pollbook systems that meet all state requirements and are available for purchase based on any individual locality requirements.

3. The requirements of these procedures are waived for any electronic pollbook system or equipment previously certified for and in use in the Commonwealth of Virginia on or before May 1, 2014. The State Board of Elections reserves the right to require re-certification of these systems or equipment at any future date.

4. Any modification to the hardware, firmware, or software of an existing system which has previously been certified by the Virginia State Board of Elections in accordance with these procedures will, in general, invalidate the certification unless it can be determined by the State Board of Elections that the change does not affect the accuracy, reliability, security, usability or accessibility of the system.

5. The intent of these procedures is to ensure that electronic pollbook systems have been shown to be reliable, accurate, usable, accessible and capable of secure operation before they are certified for use in the Commonwealth. EPB Systems with performance proven in commercial applications may be deemed acceptable, provided that they are shown to be compatible with the operational and administrative requirements of the election environment.

    Typically, the vendor will be required to provide documentation of a product's proven performance, such as test reports to comparable standards. Products not in wide commercial use, regardless of their performance histories, will require qualification, certification, and acceptance tests before they can be used.

6. Electronic pollbook systems generally utilize vendor designed software operating on a variety of commercial-off-the-shelf hardware devices. Certification shall be

provided to only similarly identical, and previously designated, hardware and operating systems at the time of certification.

7.   For the purpose of certification, web-based electronic pollbook systems that are operated via a web browser, must certify all requirements across all anticipated device platforms and browsers.

8.   Re-certification shall be required when a vendor makes significant changes or enhancements to its electronic pollbook system. This shall include, and not limited to, changes to:

     a.   The programming language in which the certified software was written.

     b.   The operating system(s). Minor updates to previously certified operating systems are excluded, however and SBE will determine if an update to a previously certified operating system is classified as major or minor and shall be consulted prior to any patching of an operating system. Generally, SBE will only seek certification of operating system updates if the update results in a risk to the interfacing systems used for the electronic pollbook device."

9.   A currently certified EPB system vendor may submit an Electronic Pollbook System Feature Enhancement Review & Recertification Waiver Request to the Virginia Department of Elections when the vendor believes that an enhancement to its currently certified electronic pollbook software does not warrant the necessity of a full certification review of the electronic pollbook system. The Virginia Department of Elections will prepare a summary for the Virginia State Board of Elections to determine if the request is approved. Vendors may submit a maximum of one request per system within a six month period.

A chart of major and minor changes can be found in APPENDIX C.

1.5. DECERTIFICATION & SUSPENSION

The State Board of Elections reserves the right to reexamine and reevaluate any previously certified electronic pollbook system for any reason, at any time. Any previously certified electronic pollbook system that does not pass the re-certification testing will be decertified. An electronic pollbook system that has been decertified by SBE may not be used in elections in the Commonwealth.

When sufficient evidence is provided indicating that a data security vulnerability is present in the software, SBE may suspend the usage of an electronic pollbook system pending the results of its recertification.

PART 2: REVIEW AND APPROVAL PROCESS

2.1. SUMMARY OF PROCESS

These procedures are limited to those systems and equipment that are in full production and available for immediate installation and use.

A total of six (6) steps have been established to carry out The Review and Approval Process. These steps are designed so that the State Board of Elections can, at any point, make a determination to continue the evaluation.

2.2. PROCEDURE FOR CERTIFICATION

The evaluation of the electronic pollbook system will proceed in the following steps:

2.2.1. Step 1: Submit Letter of Request for Certification and Certification Fee

The certification evaluation procedure shall be initiated by a letter from the vendor of the electronic pollbook system to the Secretary of the State Board of Elections requesting certification for either a specific electronic pollbook system or for a software, firmware, or hardware modification to a certified electronic pollbook system.

Vendors must pay a certification fee of $5,000.00 for Electronic Pollbook System certification and any other fees as required for requests for modifications to a previously certified electronic pollbook system. If SBE's actual costs for reviewing the vendor's submission exceed the amount of the initial fee, the vendor agrees to reimburse SBE for all additional costs incurred. All fees must be collected before certification will be granted.

The State Board of Elections will notify the vendor of the earliest date after which the requested certification evaluation can begin.

If the State Board of Elections finds any reason to deny the request, the vendor will be notified in writing and the certification fee will be returned.

The request to begin the certification process for an electronic pollbook system shall be a written letter addressed to:

Virginia Department of Elections
Election Administration and Compliance Division
1100 Bank Street, 1st Floor
Richmond, Virginia 23219

Letter of Request for Certification Components

The request shall be signed by a company officer and contain the following information:

- Identification of the specific electronic pollbook system to be evaluated for certification. Each electronic pollbook system or version of an electronic pollbook system requires a separate request for certification. Each component of the hardware, firmware, and software must be identified by version number.

- Copies of documents substantiating completion of certification by any other states' election administration agency.

- Whether the proposed electronic pollbook system has ever been denied certification or had certification withdrawn in any other state.

- A brief overview description of the electronic pollbook system. Typical marketing brochures are usually sufficient for this description (4 copies).

- The completed *Ability to Comply* form (Appendix B).

- A check or money order for the non-refundable certification fee must be included with this request before any certification work begins.

2.2.2. Step 2: Submit a Technical Data Package and Corporate Information

The vendor shall submit a Technical Data Package, Corporate Information, and other material described within this section of the document to an evaluation agent. The vendor will be supplied with the contact information of the evaluation agent.

The evaluation agent will review the Technical Data Package, Corporate Information, and other materials provided and notify the vendor of any deficiencies. Certification of the electronic pollbook system will not proceed beyond this step until the Technical Data Package and Corporate Information are completely submitted.

Technical Data Package Components

Each item in the package must be clearly identified; if the TDP is incomplete or the items in the package are not clearly identified, the entire package may be returned to the vendor and the evaluation of the electronic pollbook system rescheduled.

- *Customer Maintenance Documentation.* Documentation describing any maintenance that the vendor recommends can be performed by a customer with minimal knowledge of the system.

- *Operations Manual.* Operations documentation that is normally supplied to the customer for use by the person(s) who will operate the equipment.

- *Recommended Use Procedures.* Specific election administration procedures recommended for use with the system.

- *Software License Agreement.* The software license agreement must be perpetual. An annual renewable support fee may be included as an option.

- *Software Source Code.* A copy of the electronic pollbook source code shall be provided. It shall be supplied in the form of a listing and in a machine-readable form on media that is readable by the electronic pollbook system. If there is any chance of ambiguity, the required compiler must be specified.

- *Software System Design.* Documentation describing the logical design of the software. This documentation should clearly indicate the various modules of the software, their functions, and their interrelationships with each other.

- *Customer Documentation.* A complete set of all documentation which is available to the purchaser/user of the electronic pollbook system. Clearly identify the documentation that is included in the cost of the system and the documentation that is available for an additional charge.

- *Standard Contract.* Statement of deliverables to include: verification statement that equipment purchased is identical to equipment certified by the State Board of Elections, software licenses, warranties, support services provided, etc. and associated cost of each.

- *Warranty.* The period and extent of the warranty and the method of repair/replacement for all hardware items; the circumstances under which equipment is replaced rather than repaired and the method by which a user requests such replacement; additional warranties that are available over and above the standard warranty, what these warranties cover, and their costs; the period and extent of warranty and the method of correction or replacement for all software provided as part of the electronic pollbook system; and the technical documentation provided with all hardware and software that is used to certify that the individual component will perform in the manner and for the specified time.

- *Test Data/Software.* Any available test data and/or software that can be used to demonstrate the various functions of the electronic pollbook system or verify that the version of the applications submitted are identical to the versions that will be certified.

- *Recommended Security Practices.* Documentation of the practices recommended by the vendor to ensure the optimum security and functionality of the system.

If the electronic pollbook system is certified, the State Board of Elections will retain all contents of the Technical Data Package as long as the electronic pollbook system is marketed or used in the Commonwealth of Virginia.

Corporate Information Components

Before evaluation can begin, the vendor must submit to the evaluation agent the Corporate Information as detailed below with each item clearly identified. If the Corporate Information is incomplete or the items in the package are not clearly identified, the entire package may be returned to the vendor and evaluation of the electronic pollbook system rescheduled.

The Corporate Information shall contain the following items:

- History and description of the business including year established, products and services offered, areas served, branch offices and subsidiary and/or parent companies.

- Management and staff organization, number of full time employees by category, number of part-time employees by category, resumes of key employees who will assist Virginia localities in acquiring the system if it is authorized for use.

- Audited Report of the business' most current fiscal year.

- Comfort letter from the business' primary bank. If the business uses more than one, multiple comfort letters must be submitted.

- Gross sales in voting products and services for the past three (3) years and the percent that is representative of the total sales of the business and its subsidiaries.

- The location and servicing capability of each service facility that will be used to service the electronic pollbook system for certification and the service limitation of the facility.

- If publicly traded, indexes rating the business debt.

- Quality assurance process used in the manufacturing of the electronic pollbook system.

- Configuration management process used with the electronic pollbook system.

If the electronic pollbook system is certified, the State Board of Elections will retain the Corporate Information as long as the electronic pollbook system is marketed or used in Virginia. The Department of Elections will sign a statement of confidentially for corporate information only.

Proprietary Information

The vendor must clearly mark any information it requests be treated as confidential and proprietary before providing it to Virginia representatives for evaluation. Stating that the entire package is proprietary will be insufficient. All pages of the documentation that contain information the vendor considers proprietary information must be clearly marked as such. The State Board of Elections cannot guarantee the extent to which any material provided will be exempt from disclosure in litigation or otherwise.

Any non-profit or government agency, including the Virginia State Board of Elections, shall be exempt from sections 2.2.1 and 2.2.2 of this document, at the discretion of the Virginia State Board of Elections.

2.2.3. Step 3: Allow for Preliminary Review

The evaluation agent will conduct a preliminary analysis of the Technical Data Package, Corporate Information, and other materials provided and prepare an Evaluation Proposal containing the following information:

- Components of the electronic pollbook system requiring evaluation.

- Identification of any additional materials needed to ascertain financial stability and capabilities of the vendor to maintain support of the electronic pollbook system.

- Description of the activities required to complete the portion of the evaluation performed by the evaluation agent.

- Estimate of time required to complete the portion of the evaluation performed by the evaluation agent.

2.2.4. Step 4: Receive Authorization to Proceed

The vendor will review the Evaluation Proposal and notify the Virginia Department of Elections, in writing, of the desire to continue or terminate the evaluation process. A copy of this notification will be sent to the evaluation agent.

2.2.5. Step 5: Test/Pilot Election

The State Board of Elections will supervise a test use of the system in an actual election with the vendor present prior to final certification.

2.2.6. Step 6: Certification

Based on the information contained in the report from the evaluation agent, Technical Requirements Evaluation, the Test Election, Virginia Functional Configuration Audit, and any other information in their possession, the State Board of Elections will determine whether the proposed electronic pollbook system will be certified for use in the Commonwealth of Virginia and notify the vendor of the decision.

2.3. AUDIT AND VALIDATION OF CERTIFICATION

It is the responsibility of both the vendor and the local jurisdiction to ensure that an electronic pollbook system that is supplied or purchased for use in the Commonwealth of Virginia has been certified by the State Board of Elections. It is the responsibility of the vendor to submit any modifications to a previously certified electronic pollbook system to the State Board of Elections for review.

If any questions arise involving the certification of an electronic pollbook system in use in Virginia, SBE shall verify that the electronic pollbook system in use is in fact identical to the electronic pollbook system that was submitted for certification. Any unauthorized modifications to a certified system may result in decertification of the system by SBE or bar an electronic pollbook system vendor from receiving certification of electronic pollbook systems in the future.

2.4. TIME FRAME

The State Board of Elections reserves the right to terminate the certification process at any time if the vendor fails to proceed in a timely manner. In particular, if a period of three months expires between any request for information by the Board or its evaluation agent and the vendor's response to that request, the Board will terminate the certification process. If the certification process is terminated under this provision, the vendor will forfeit any fees received by SBE. Any certification process terminated under this provision must be re-initiated from Step 1, Section 2.2: Procedure for Certification.

The certification process is also terminated when:

a. SBE issues a determination regarding certification;

b. The Vendor withdraws from the process; or

c. The system fails the certification test; or

d. The vendor cannot conduct the certification testing with the equipment on-hand.

The process can only be re-initiated from Step 1, Section 2.2.: Procedure for Certification, if the process is terminated under conditions b, c, or d.

PART 3: CERTIFICATION

3.1. CERTIFICATION OVERVIEW

There are two distinct elements of testing that an electronic pollbook system must successfully complete before it can be certified for use in the Commonwealth of Virginia. These two levels are a **Technical Requirements Evaluation, Virginia Functional Configuration Audit, and Acceptance Testing.**

The Technical Requirements Evaluation is performed to ensure that the electronic pollbook system complies with any statutory and administrative requirements pertaining to data security and usage.

The Functional Configuration Audit is performed to assure that the electronic pollbook system complies with statutory, administrative, and operational requirements set forth by the State Board of Elections.

The Acceptance Testing is a locality event that will be completed after the electronic pollbook system is delivered to a locality to ensure that the system is functionally identical to the system that was certified.

3.2. TECHNICAL REQUIREMENTS EVALUATION

Prior to, or concurrently with, providing its electronic pollbook system to the State Board of Elections for a Functional Configuration Audit, the vendor shall submit its electronic pollbook system to a VSTL to verify functionality, stability, and applicability of the elements of the electronic pollbook system as set forth in this document.

The primary goal of the Technical Requirements Evaluation is to determine if the electronic pollbook system appropriately and securely warehouses, manages, and transfer voter registration data in compliance with the standards set forth by this document.

To support a review of Technical Requirements Evaluation, the following documents shall be provided to SBE:

1. A full copy of the Technical Data Package (TDP);

2. A copy of the Test Plan, Test Report and all Test Procedures and Test Cases from the VSTL;

3. A release to the VSTL to respond to any requests for information from all agencies in the Commonwealth of Virginia;

4. A release to other state election administration agencies which have certified the system or prior versions of the system to respond to any requests for information from the Commonwealth of Virginia; and

3.2.1. Electronic Pollbook System Hardware Elements

All equipment used in the electronic pollbook system shall be examined to determine if it is suitable for election use according to the appropriate procedures contained within this document. Equipment to be tested shall be identical in form and function with production units. Engineering or development prototypes are not acceptable.

Any modifications to existing hardware that has been previously certified by SBE will invalidate the prior certification unless it can be determined by the State Board of Elections that the change does not affect the accuracy, reliability, security, usability or accessibility of the system.

The Virginia SBE recognizes that most EPB vendors develop simple software solutions to be applicable to a variety of commercial-off-the-shelf (COTS) hardware elements that are traditionally chosen by its customers. It is because of this, SBE will only certify an EPB System on current or profoundly similar hardware platforms. A profoundly similar hardware platform shall be any device capable of running the identical version of the operating system as that being certified.

If the vendor is providing a "web-based" EPB solution, the system may only be certified on the devices that are submitted to the VSTL and SBE for the testing.

3.2.2. Electronic Pollbook System Software Elements

All elements of the electronic pollbook system software shall be examined and tested to ensure that it adheres to the performance standards specified within this document. This shall include but is not limited to, the firmware/operating system/platform of all hardware elements,

Modifications to existing software that has been previously certified by SBE will invalidate the certification unless it can be determined by the State Board of Elections that the change does not affect the accuracy, reliability, security, usability or accessibility of the system.

If the vendor wishes to provide a single feature enhancement to a previously certified system, the vendor shall have the opportunity to provide documentation and certification that the code and algorithms previously certified were not substantially altered to facilitate the addition of the single feature. Vendors may submit only one single feature enhancement within a six month window without the necessity to recertify the entire EPB System.

If the EPB system's operating system requires a modification after the system is certified the system shall maintain its certification with the operating system update, so long as the

modification is provided solely to the operating system, the vendor provides notification of the modification of operating systems prior to their installation, and the update is provided directly from the operating system developer (ie Microsoft, Apple, or Android). This shall apply only to minor version numbers of operating systems. See Appendix C.

The vendor shall submit to SBE, along with the operational version of the software, the source code and version change logs its electronic pollbook software at time of testing or modification.

SBE will not allow any EPB software wholly or containing components utilizing Alpha or Beta versions of software or programs to be tested.

The Virginia Department of Elections shall work directly with the VSTL to determine the specific manner in which the electronic pollbook system shall be evaluated with regards to the listing of the requirements in section 3.3.1 and 3.3.2 of this document and the features of the electronic pollbook system.

3.3. VIRGINIA FUNCTIONAL CONFIGURATION AUDIT

State certification testing is intended to verify that the design and performance of the electronic pollbook system being certified complies with all applicable requirements of the *Code of Virginia* and SBE regulations and policies.

The certification test is not intended to require exhaustive tests of system hardware and software attributes; these are evaluated during the Technical Requirements Audit. However, all system functions, which are essential to the conduct of an election, will be evaluated.

An important focus of Virginia Functional Configuration Audit is to review the operation of the EPB system. This review requires making inquiries of other users of the system. State certification reports and other evaluations of the system are read and analyzed for insight into the suitability of the system for use in Virginia.

The recommended use procedures are examined along with the EPB system to determine how well the system will integrate into Virginia election law and management practices.

Testing is performed to evaluate the system with respect to the specific practices of Virginia. Testing will evaluate all system operations and procedures that:

   a. Receive and process data containing applicable voter registration information;

   b. Receive and process data containing applicable polling place information;

   c. Receive and process data containing applicable election information;

   d. Verify system readiness for operation;

e. Accurately maintain whole and separate count(s) of voters distinguishable by Ballot Style, Voter's Party, Precinct, Precinct Split, Curbside Voter, Challenged Voter;

f. Perform data and operational integrity safeguard tests including:

   i. Removal and replacement of EPB units and other components,

   ii. Variable power source evaluation(s);

g. Obtain data and audit data reports; and

h. Support recount or election audits.

The test environment will include the preparation and operation of election and voting databases, and the validation, consolidation, and reporting of administrative and voter credit data as required by law.

The state may perform hash testing of applications software to verify that the versions provided by the vendor are identical to the versions that have undergone Technical Requirements Evaluation.

3.3.1. Chart of Statutory Requirements

The chart below details EPB functional requirements as designated by statutory standings contained within *The Code of Virginia, Title 24.2. Elections*.

For the purpose of this chart, the following terms shall apply:

EPB System – an entire software and hardware solution (including networking and peripheral devices) that consists of an election management module and deployed scalable and networkable Precinct EPBs.

Precinct EPB – a software and hardware solution (including networking and peripheral devices) that are operated specifically within a precinct for the purpose of checking voters into the polling place(s).

VERIS – The Virginia Elections and Registration Information System. This is the online voter registration and election management portal used by SBE and ELECT to manage voters and elections.

Items marked with an "" indicate items that will be evaluated during both the TRE & VFCA.*

Code Section	Requirement
Va. Const. Art. II, § 2	The EPB System shall have the ability to ensure that only voters residing within specific precinct are allowed to be checked into the current precincts on election day.
*§ 24.2-531	The EPB System shall have the ability to prepare a separate pollbook report for each party taking part in a primary election at the same time.
*§ 24.2-668(C)	The Precinct EPB shall have the ability to read and write data upon a removable memory device that can produce a list of those who voted. The Precinct EPBs removable memory device shall be sealable with other records of the election from the precinct. **- or-** The Precinct EPB must have the ability to produce a physical printed list directly from the pollbook device of persons who voted. The Precinct printed list of those who voted shall be formatted in a manner as to be sealable with other records of the election from the precinct.
*§ 24.2-668(C)	The EPB System shall have the ability to indicate the election in which the data and reports were used.

Code Section	Requirement
*§ 24.2-611(B) § 24.2-668(C)	The EPB system shall have the ability to produce a final consolidated list of those who voted for the purpose of applying voter credit to VERIS.
*§ 24.2-611(B)(ii)	The Precinct EPB shall have the ability to indicate whether a voter voted "Outside Polls" or "OP." The operator shall be allowed to notate independently or in conjunction with other notations set forth in these requirements. The Precinct EPB and the EPB System shall have the ability to provide listings and counts of such voters.
*§ 24.2-611(B)	The Precinct EPB shall have the ability to automatically record a consecutive number of the voter at the time he offers to vote.
*§ 24.2-611(C)	The EPB System shall employ AES standardized encryption methodologies to safeguard the data.
*§ 24.2-651 § 24.2-652	The Precinct EPB shall have the ability to indicate when a voter has signed a required statement allowing him to vote. The Precinct EPB and the EPB System shall have the ability to provide listings and counts of such voters.
*§ 24.2-652	The Precinct EPB shall have the ability to add additional voter records to the data set. This action shall prompt the Precinct EPB operator to verify that the addition was authorized by a locality's General Registrar.
*§ 24.2-653	The Precinct EPB shall NOT contain the ability to apply a consecutive pollbook count (PBC) number to any voter who cast a Provisional Ballot. The Precinct EPB and EPB System shall be able to produce a separate report listing all voters who cast a Provisional Ballot.
*§ 24.2-711	The EPB System shall contain the ability to identify voters (contained within the initiating data set) who have already voted via the absentee process. All such voters, shall be displayed, at minimum, with the designation of "AB" in the record listing.
§ 24.2-711	The Precinct EPB shall contain the ability to produce a printable and/or screen displayed listing of all voters having been marked with "AB."
*§ 24.2-711	The Precinct EPB shall contain the ability for the operator to edit any voter record to include or to update a voter's record to reflect a corrected or updated status of absentee voting.

3.3.2. Chart of Operational & Technical Requirements

The chart below details EPB operational and technical requirements as determined necessary for the effective use of EPB systems in Virginia.

For the purpose of this chart, the following terms shall apply:

EPB System – an entire software and hardware solution (including networking and peripheral devices) that consists of an election management module and deployed scalable and networkable Precinct EPBs.

Precinct EPB – a software and hardware solution (including networking and peripheral devices) that are operated specifically within a precinct for the purpose of checking voters into the polling place(s).

VERIS – The Virginia Elections and Registration Information System. This is the online voter registration and election management portal used by SBE and ELECT to manage voters and elections.

Items marked with an "" indicate items that will be evaluated during both the TRE & VFCA.*

Applicability	Requirement
*Database	The EPB System shall contain the ability to import, collect, store, retrieve, display, and edit information for all voter records and fields provided by VERIS.
*Search/Lookup	The Precinct EPBs shall contain the ability to retrieve and display information for voters by any combination of manual or automated search fields: Last Name, First Name, Street Address, District Information, Voter ID Number, and/or DMV Customer Number
*Simultaneous Elections	The EPB system and Precinct EPBs shall maintain the ability to consolidate the functional operations of multiple simultaneous elections while maintaining separate pollbook counts for each election.
*Simultaneous Elections	The EPB system and Precinct EPBs shall maintain separate unique election records for each election held on the same day.
*Simultaneous Elections	The Precinct EPBs shall prohibit the ability for any voter who has participated in one of the elections from participating in any of the other elections held on the same day without indicating that he has participated in the other election.

Applicability	Requirement
*Overall Capabilities	The EPB System and Precinct EPBs shall be structured with sufficient storage, networking, and processor components to access, display, and process 100% of voter records for a precinct containing at least 10,000 voter records.
*Overall Capabilities	The EPB System and Precinct EPBs shall be structured with sufficient storage, networking, and processor components to access, display, and process voters from datasets with at least 800,000 voter registration records contained within the data set.
Overall Capabilities	The EPB System and Precinct EPBs shall have the ability to support all VA election types and ballot combinations.
Voter Check-In	The Precinct EPBs shall have the capability of providing the EPB operator with sufficient voter record information for determining a voter's eligibility to vote, voter status, voted status, absentee status, districts and precinct information, and ballot code/type.
*Voter Check-In	The Precinct EPBs shall have the ability to display informational prompts and/or warnings based on non-qualifying voter criteria. The Precinct EPBs shall have the ability to require an advanced user authentication to "override" check-ins for non-qualified voters.
*Multiple Unit Synchronization	The Precinct EPBs must have the ability to conspicuously and automatically display and update the total count of voters checked-in at the precinct. If the Precinct EPBs communicate outside of their precinct, then EPB System shall have the ability to prohibit the display and/or combination of pollbook counts within any other precinct.
*Multiple Unit Synchronization	The EPB System and Precinct EPBs shall be configured in such a manner that when any two (2) or more Precinct EPBs are networked together, all data on any one of the Precinct EPBs is automatically and simultaneously synchronized between all other Precinct EPBs.
*Continuity of Operations	The EPB System and Precinct EPBs shall be configured to automatically synchronize data across any authorized device at added to the precinct network.

Applicability	Requirement
User Interface & Reports	The Precinct EPBs shall contain the ability to display data reports on the Precinct EPB device screen and should allow the operator to send reports to a printer. At minimum, available reports must be able to contain a timestamp, the election identification information, total number of voter's assigned to a precinct, total number of "AB" voters, total number of voters with status of "active," total number of voters with status of "inactive," total voters checked-in, and total number of voters checked-in by party.
*Overall Capabilities	The Precinct EPBs shall be capable of automatically switching to a self-contained direct current power source and not interrupt the operation or integrity of the data.
*User Interface	The Precinct EPBs shall be configured in such a way that the operator is provided indication when the Precinct EPB device(s) is operating on battery power (DC). The Precinct EPBS shall be capable of operating on battery power for a minimum of 2 hours.
*Data Security	The EPB System and Precinct EPBs shall be configured to ensure controlled, secure logical/administrative access.
*Data Security	The EPB System and Precinct EPBs shall be capable of providing accessible and exportable comprehensive audit logs of all transactions to include at minimum, timestamp and transaction/event.
*Data At-Rest Security	The EPB System, Precinct EPBs, and all other components shall be configured in such a manner to provide a constant static data encryption methodology that minimally meets AES Data Encryption Standards at a level utilizing at least 256-bit keys.
*Data In-Motion Security	The EPB System and Precinct EPBs shall be configured and managed in such a manner that all data in-motion maintains the highest level of physical or digital protections. The EPB System and Precinct EPBs shall be configured and managed in such a manner that they may never connect to a publically accessible network.

Applicability	Requirement
*Data In-Motion Security	*If Precinct EPBs utilize LAN networking connectivity:* All Precinct EPBs must be connected via LAN Ethernet Cable utilizing a closed and independent switch. **-or-** All Precinct EPBs must be connect via a closed wireless non-SSID broadcasting router with WPA/WPA2 encryption methodology employed, including and additional filtration scenario to allow only the known Precinct EPB devices the ability to connect to the wireless network. **-and-** The Precinct EPBs shall be configured in such a manner as to only be capable of connecting to the designated wireless networking device.
*Data In-Motion Security	*If EPB System and Precinct EPBs utilize WAN networking connectivity:* All Precinct EPBs must be connected via a wireless non-SSID broadcasting router or network with at minimum WPA/WPA2 encryption methodology employed, including an additional filtration scenario to allow only the known Precinct EPB devices within the precinct to connect to the wireless network. **-and-** The EPB System shall be configured in a manner that all data transmission shall only use full tunneling methodology that permits specific routing and approved encryption standards. (VPN) **-and-** The EPB System and Precinct EPBs shall be configured in such a manner that the wireless infrastructure must authenticate each client device prior to access. **-and-** The EPB System and Precinct EPBs shall be configured in such a manner that two-factor authentication is employed.
*Data Storage & Redundancy	All Precinct EPBs shall be configured in such a manner to automatically replicate and securely encrypt a copy of the data at all times to a removable/relocatable memory device such as a USB Memory Flash Drive.

Applicability	Requirement
*Data Storage & Redundancy	*If the EPB System and Precinct EPBs are designed in such a manner to not be capable of connecting to a peripheral memory device:* The Precinct EPBs shall be configured in such a manner to provide for the functionality to print reports and lists within the precinct at all times. -and- The Precinct EPBs shall maintain connectivity to the EPB System where each Precinct EPB's local data shall stay copied, secured, and remotely accessible at all times.
Maintenance & Support	The purchase of an EPB System and Precinct EPBs shall include warranty and service agreement options (hardware, software, technical support—telephone helpdesk, on-site support).
Maintenance & Support	The vendor of an EPB System and Precinct EPBs shall provide comprehensive training options for the locality.

3.4. ACCEPTANCE TEST

Acceptance Tests will be conducted by the local jurisdiction, with the assistance of state. Acceptance testing will be performed as part of the procurement process for the electronic pollbook system.

The local jurisdiction will conduct tests to confirm that the purchased or leased system to be installed is identical to the certified system and that the installed equipment and/or software are fully functional and capable of satisfying the administrative and statutory requirements of the jurisdiction. The state may require localities to perform hash testing of applications software for this purpose. SBE will request that upon acquiring equipment, the locality forwards a letter to SBE confirming that the versions of all software and model(s) of equipment received are identical to the certified system that was ordered.

The acceptance test will demonstrate the system's ability to execute its designed functionality as advertised and tested, including but not limited to:

a. Create a deployable election based on the type of locality;

b. Mark voters as having voted and been given a ballot only after specific action;

c. Provide the user notification and prompt specific action for: protected voters, inactive voters, absentee voters, voters out of precinct, voters that already voted;

d. Provide for the ability to add a voter to the electronic pollbook and to the ability to record as the voter as having voted;

e. Generate system status and error messages;

f. Comply with and enable voter and operator compliance with all applicable procedural, regulatory, and statutory requirements.

g. Produce an audit log.

h. Close the election and provide multiple secure files capable of providing voter credit to SBE systems.

PART 5: APPENDIX A - GLOSSARY

Acceptance Testing - The purpose of acceptance testing is to demonstrate and confirm to the greatest extent possible that the electronic pollbook systems purchased or leased by a local jurisdiction are <u>identical</u> to the electronic pollbook systems certified by the State Board of Elections and that the electronic pollbook systems equipment and software are fully functional and capable of satisfying the administrative and statutory requirements of the local jurisdiction. Acceptance testing is conducted when electronic pollbook systems are initially received by the local electoral board from a vendor or other outside source (e.g., another local jurisdiction).

Certification Testing - The purpose of certification testing is to verify that the design and performance of the electronic pollbook system being tested comply with all of the requirements of the *Code of Virginia*. Certification testing is not intended to exhaustively test all of the electronic pollbook system hardware and software attributes; these are evaluated during qualification testing by an approved VSTL. However, all electronic pollbook system functions, that are essential to the conduct of an election and a recount, are evaluated.

Electronic Pollbook System - The term "electronic pollbook system" refers to the total combination of mechanical, electro-mechanical, electronic and digital equipment (including the software, firmware, and documentation required to program, control, and support the equipment). The system is used to verify voter registration; track and report or the voter count total(s); and to maintain and produce any review audit information.

Evaluation Agent – A staff member, or independent contractor, designated by the Virginia State Board of Elections to perform analysis and testing of an electronic pollbook system.

Functional Configuration Audit – A series of comprehensive tests of the Electronic Pollbook System to determine the specific and situational capability and compatibility of the system to facilitate the statutory and administrative requirements

Technical Requirements Evaluation - The purpose of Technical Requirements Evaluation is to demonstrate that the electronic pollbook system complies with the requirements of its own design specifications and operates in accordance with the statutory and administrative requirements of the Commonwealth of Virginia and the State Board of Elections. This testing encompasses selective in-depth examination of software; inspection and evaluation of electronic pollbook system documentation; tests of hardware under conditions simulating the intended storage, operation, transportation, and maintenance environments; and tests to verify system performance and function under normal and abnormal operating conditions. Technical Requirements Evaluation is normally conducted by a Voting System Test Laboratory (VSTL).

Voting Systems Test Laboratory (VSTL): Test laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) to be competent to test electronic pollbook systems. When NVLAP has completed its evaluation of a test lab, the Director of NIST will forward a recommendation to the EAC for the completion of the accreditation process. It can also be referred to as an electronic pollbook system Test Laboratory.

PART 6: APPENDIX B – ABILITY TO COMPLY FORM

This form is required to initiate the procedures of Electronic Pollbook System Certification in Virginia. A corporate officer of the primary company that is responsible for the development, maintenance, and support of the Electronic Pollbook System must complete this form.

Name of Company: _____

Primary Address of Company: _____

City, State, Zip Code: _____

Name of EPB System to be certified: _____

Version Number/Name of EPB System to be certified: _____

Brief description of software capabilities, hardware components, and operating systems(s) to be certified: _____

_____

_____

_____

_____

_____

_____

_____

Name and Title of Corporate Officer: _____

I acknowledge that I have reviewed the entirety of *Electronic Pollbook Certification, Procedures & System Requirements, Rev-0315* and acknowledge that the above stated Electronic Pollbook System contains <u>the ability to meet all requirements</u> as designated within sections *3.3.1. Chart of Statutory Requirements* and *3.3.2. Chart of Operational & Technical Requirements*. Furthermore, I acknowledge that the above stated company and Electronic Pollbook System will comply with all elements of this certification program.

Signature of Corporate Officer: _____

Date: _____

This form is to be submitted with the Request for Certification Letter

PART 7: APPENDIX C – CHART OF MAJOR VS. MINOR CHANGES

The chart below will help vendors understand the Virginia State Board of Elections' definition and applicability of the major and minor changes to electronic pollbook software and its operating system.

"A major release is an incompatible change to the system software, and implies that [some] applications dependent on the earlier major release (specifically those that relied upon the specific features that have changed incompatibly) will need to be changed in order to work on the new major release. A minor release of the system software is an upward-compatible change--one which adds some new interfaces, but maintains compatibility for all existing interfaces. Applications (or other software products) dependent on an earlier minor release will not need to be changed in order to work on the new minor release: Since the later release contains all the earlier interfaces, the change(s) imparted to the system does not affect those applications[1]."

Description	Example	Recertification Required?
Change operating system developer.	Microsoft to Apple	YES
Major OS version build change.	Windows 7 to Windows 8	YES
Minor OS version build change.	Windows 8 to Windows 8.1	NO
Operating System and/or Background Services Security Update	Security Update for Microsoft .NET Framework 3.5 on Windows 8.1 and Windows Server 2012 R2 for x64-based Systems (KB2972213)	NO, so long as no additional software is installed
EPB Software Code Language Change	Migration from C++ to C#	YES
EPB Software "Bug Fix"	Fix to known deficiency of a feature not associated with statutory or technical requirements. (*Button requires double click and should be single click*)	NO, so long as the vendor applies for and receives waiver
EPB Software "Bug Fix"	Fix to known deficiency a function associated with statutory or technical requirements. (*Units do not sync properly*)	YES
Peripheral Support	Changes previously certified drivers or functionality of peripheral devices such as printers or scanners.	NO
Peripheral Addition	Adds drivers or functionality of peripheral devices such as printers or scanners that were not previously certified.	YES

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[1]

Runge, D. J. (2000). Library Interface Versioning in Solaris and Linux. *Proceedings of the 4th Annual Linux Showcase and Conference*.

PART 8: APPENDIX D – CONTACTS

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