



★ VIRGINIA ★
DEPARTMENT *of* ELECTIONS

Voting System Certification Standard

March 2023

Version 2.1

Change History

Version	Brief Description of Change	Date	Author
1.0	Adoption by the State Board of Elections Primary changes were to improve clarity, security-related requirements, and document format; moving information that would likely change over time to appendices	09/17/2019	ELECT
2.0	Adoption by State Board of Elections Primary changes were in alignment with feedback and addition of Appendices I, & J	11/18/2019	ELECT
2.1	Adoption by the State Board of Elections Primary changes were the amount to be deposited by vendor for costs of travel, expense and billable hours by the VSTL for the certification process and specifics regarding the location and timeline of the certification.	03/07/2023	ELECT

Chapter 1: Introduction..... 3

 1.1. Purpose of Procedures.....3

 1.2. Specific Requirements3

 1.3. Decertification.....4

 1.4. Recertification5

Chapter 2: Basis for Certification..... 6

 2.1. Federal Compliance Testing6

 2.1.1. Voting System Hardware, Firmware, Infrastructure or Component Elements7

 2.1.2. Voting System Software Elements7

 2.2. State Certification Testing.....7

Chapter 3: Review and Approval Process 9

 3.1. Summary of Process9

 3.2. Certification Review Process9

 Phase 1: Certification Request from Vendor9

 Phase 2: Preliminary Review15

 Phase 3: Technical Data Package to Voting System Test Laboratory (VSTL)15

 Phase 4: Certification Test Report from VSTL.....15

 Phase 5: On-Site Testing in Mock Election16

 Phase 6: Approval by the SBE.....16

 3.3. Incomplete Certification Process.....16

Appendices 17

 A – Glossary.....17

 B – Contacts19

 C – Acceptance Test20

 D – Test Assertions22

 E – Software Patching Guidelines.....32

 F – Recertification Guidelines.....33

 G – Hardware Guidelines34

 H – Voting System Modifications & Product End of Life Planning.....35

 I – Voting System Certification Application Form.....37

 J – De Minimis Change Guideline38

 K – Cast Vote Record Clarification.....41

Chapter 1: Introduction

1.1. Purpose of Procedures

These procedures have been developed and issued 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 a new voting system or for improvements/modifications to a previously certified voting system in Virginia. To this end the procedures are designed to:

1. Ensure conformity with Virginia election laws relating to the acquisition and use of voting systems
2. Evaluate and certify voting systems marketed by vendors for use in Virginia
3. Evaluate and re-certify additional capabilities and changes in the method of operation for voting systems previously certified for use in Virginia
4. Standardize decertification and recertification of voting systems
5. Ensure that all voting systems operate properly and are installed and tested in compliance with the State Board of Elections' (SBE) procedures
6. Ensure accurate report of all election results from jurisdictions that use each certified system.

1.2. Specific Requirements

1. Compliance with the requirements contained in the latest version of the Voluntary Voting System Guidelines (VVSG) which are currently accepted for testing and certification by the U.S. Election Assistance Commission (EAC), or prior version if within the EAC transition period.
2. The voting system must comply with the provisions in the Code of Virginia relating to voting equipment (Article 3, [Chapter 6 of Title 24.2](#))
3. The voting system must comply with any applicable regulations or policies issued by the SBE or ELECT
4. The vendor must ensure that the voting system can accommodate an interactive visual and non-visual presentation of information to voters, and alternative languages when required. (See HAVA, 42 USC 15481(a)(3), (4), §203 of the Voting Rights Act (42 USC 1973aa-1a) and Virginia Code Section 24.2-626.1).

1.3. Decertification

ELECT reserves the right to reexamine any previously certified voting system for any reason at any time. Any voting system that does not pass certification testing will be decertified. A voting system that has been decertified by the SBE cannot be used for elections held in the Commonwealth of Virginia, and cannot be purchased by localities to conduct elections.

In addition, the SBE reserves the right to decertify the voting systems if the vendor does not comply with the following requirements:

1. Notify ELECT of any incident, anomaly or security-related breach experienced in an election jurisdiction, within 24 hours of knowledge
2. Report to ELECT within 30 calendar days of knowledge of any changes to Corporate Information including:
 - a. Business entity and structure
 - b. Parent and subsidiary companies
 - c. Capital or equity structure
 - d. Control; identity of any individual, entity, partnership, or organization owning a controlling interest
 - e. Investment by any individual, entity, partnership, or organization in an amount that exceeds 5% of the vendor's net cash flow from the prior reporting year
 - f. Location of manufacturing facilities; including names of the third-party vendor(s) employed to fabricate and/or assemble any component part of the voting and/or tabulating system being submitted for certification, along with the location of all of their facilities with manufacturing capability
 - g. Third-party vendors
 - h. Good Standing status
 - i. Credit rating
3. Submit any modifications to a previously certified voting system to ELECT for review within 30 calendar days from modification; see Appendix H for appropriate reporting process
4. If the operating system or any component has reached and/or will reach the Last Date of Mainstream Support within 18 months, as defined in Appendix H, send an upgrade plan with target date(s) to ELECT:
 - a. ELECT must receive the upgrade plan at least 12 months before the Last Date of Mainstream Support
 - b. The Last Date of Mainstream Support cannot include any type of Extended Support, as defined in Appendix H

- c. The voting system may still automatically be decertified as defined in Appendix H
5. Update all software with the latest patching and vulnerability updates in alignment with Appendix E.

NOTE: The SBE reserves the right to require recertification when new VVSG guidelines or changes to regulations and/or standards occur.

1.4. Recertification

See Appendix F for ELECT's guidelines on when voting system must go through recertification.

Chapter 2: Basis for Certification

The Code of Virginia requires a voting system to be in compliance with the Federal and State Certification Standards.

Federal Compliance Testing demonstrates that the voting system adheres to all requirements set in the most up-to-date version of the VVSG by the EAC. The primary evidence of compliance is the certification of the system by the EAC. Federal compliance may also be demonstrated through testing conducted by a federally certified Voting System Test Lab (VSTL) to the applicable VVSG. Meeting the requirements contained in the VVSG will substantiate compliance with the voting system requirements contained in Section 301 of the Help America Vote Act of 2002 (HAVA).

State certification testing will evaluate that the voting system complies with all applicable requirements of the Code of Virginia and SBE and ELECT regulations and policies.

The voting system must demonstrate accuracy, reliability, security, usability, and accessibility throughout all testing phases.

2.1. Federal Compliance Testing

Federal Compliance Testing is performed to demonstrate compliance with the latest version of the VVSG currently accepted for testing and certification by the EAC, or prior version if within the EAC transition period. EAC certification serves as prima facie evidence of compliance; federal compliance may also be demonstrated through testing conducted by a federally certified VSTL to the applicable VVSG. ELECT will make the final decision on compliance based on all available information. If there is evidence of a material non-compliance, ELECT will work with the vendor to resolve the issue.

To support a review of Federal Compliance Testing, the following documents shall be provided to ELECT:

1. A full copy of the Technical Data Package (TDP) submitted for Federal compliance testing
2. A copy of the Test Plan, and Test Report used by the VSTL in performing EAC certification testing; or results of testing conducted by a federally certified VSTL to the applicable VVSG
3. A release to the VSTL to respond to any requests for information from the Commonwealth of Virginia
4. A release to other states which have decertified the system or prior versions of the system, to respond to any requests for information from the Commonwealth of Virginia

5. Any additional information ELECT believes is necessary to determine compliance with the applicable VVSG or Commonwealth of Virginia Voting System Certification Standards.

2.1.1. Voting System Hardware, Firmware, Infrastructure or Component Elements

All equipment used in a voting system shall be examined to determine its suitability for election use according to the appropriate procedures contained in this document. Equipment to be tested shall be identical in form and function with production units. Engineering or development prototypes are not acceptable. See Appendix G for hardware guidelines.

Any modification to existing hardware, firmware, infrastructure or other components will invalidate the prior certification by the SBE unless ELECT can review and provide an assurance to the SBE that the change does not affect the accuracy, reliability, security, usability, or accessibility of the system. See Appendix J for the De Minimis Change Guideline that is applicable for hardware.

2.1.2. Voting System Software Elements

Voting system software shall be examined and tested to ensure that it adheres to the performance standards specified in the latest version of the VVSG currently accepted for testing and certification by the EAC, or prior version if within the EAC transition period.

Any modification to existing software will invalidate the prior certification by the SBE, unless ELECT can review and provide an assurance to the SBE that the change does not affect the accuracy, reliability, security, usability, or accessibility of the system. See Appendix J for the De Minimis Change Guideline that is applicable for software.

2.2. State Certification Testing

State certification testing will evaluate the design and performance of a voting system seeking certification to ensure that it complies with all applicable requirements in the Code of Virginia and SBE and ELECT regulations and policies. ELECT will examine the essential system functions, operational procedures, user guides, documents, and reviews from product users. Hash testing will be conducted to confirm that the application software is identical to the certified versions of federal compliance testing.

ELECT will evaluate the user experience with the current and prior versions of the voting system and certification reports from other states. In addition, the security and reliability analysis of the product model will be reviewed to determine the usability of the voting system for Virginia Elections.

State Certification Testing will examine all system operations and procedures, not limited to:

1. Define ballot formats for primary elections, general elections, and special elections including all voting options defined by the Code of Virginia

2. Install applications and election-specific programs and data in the ballot counting device
3. Count ballots
4. Prepare to perform and conduct the Logic and Accuracy tests
5. Obtain voting data and audit data reports
6. Support recount or election audits
7. Address compliance with physical and language accessibility requirements
8. Display an appropriate message on the review screen if a voter does not follow the ballot instruction; allow the voter to override the warning messages for overvote, undervote, blank ballot, or invalid Write-in to cast voter's ballot
9. Create a Cast Vote Record (CVR) for each vote for all elections
10. Integrate CVRs in a readable format
11. Does not have a built-in function for wireless connections or communications
12. Comply with the encryption requirement(s) as stated in Appendix D
13. Comply with the password protection requirement(s) as stated in Appendix D
14. Harden the voting system using the vendor's procedures and specifications
15. Comply with the requirements for Write-in image and format.

Chapter 3: Review and Approval Process

3.1. Summary of Process

The State certification is limited to the final products that have been used in a full production environment and available for immediate installation. The certification review process goes through six phases. At the end of each phase, ELECT will evaluate the results to determine the certification status.

Six Phases of the Certification Review Process:

1. Certification Request from Vendor
2. Preliminary Review
3. Technical Data Package
4. Certification Test Report from VSTL
5. On-Site Testing in Mock Election
6. Approval by the SBE.

3.2. Certification Review Process

Phase 1: Certification Request from Vendor

A vendor will request a certification either for a specific voting system, software, firmware, hardware, and/or modification to an existing certified voting system. This request should include the following information:

1. Voting System Certification Application Form, signed by a company officer; see Appendix I

NOTE: This should clearly identify the specific voting system to be evaluated for certification, and:

- a. Each voting system or version of a voting system requires a separate request for certification
 - b. Each component of the hardware, firmware, software, and other components must be identified by version number
2. Copies of documents substantiating completion of federal compliance testing, including whether the proposed voting system has been certified under the latest version of the VVSG currently accepted for certification by the EAC or tested by a federally certified VSTL, or prior version if within the EAC transition period
 3. Whether the proposed voting system has ever been denied certification or had certification withdrawn in any state, or by the EAC
 4. Eight copies of a brief overview description of the voting system
 - a. Typical marketing brochures are usually sufficient for the description

5. A list of all states where the proposed voting system version is currently used
6. The vendor will provide a check for \$20,000 to cover the costs for the travel, expense and billable hours by the VSTL for the certification process. Refunds will be provided to the vendor's if the difference of VSTL's invoices are less and the refund amount is over \$100.00. Testing will take place at ELECT, Washington Building, 1100 Bank Street, Richmond, VA 23219. The VSTL technician will travel to Richmond. Certification is a week long event, starting Monday and ending on Friday. Voting system equipment for certification will be sent before certification begins and shipped out after it is complete.
 - a. Checks for \$20,000 must be received by ELECT before the certification will be started Make checks or money order payable to Treasurer of Virginia
 - i. Checks or money orders should be made payable to Treasurer of Virginia and mailed to: Voting Technology / ELECT, 1100 Bank Street, 1st Floor, Richmond, VA 23219
7. TDP must clearly identify all items:
 - a. If the TDP is incomplete or the items in the package are not clearly identified, the entire package could be returned to the vendor
 - b. Upon the receipt of the corrected TDP from the vendor, the evaluation of the voting system will be rescheduled
8. Corporate Information must clearly identify all items:
 - a. If the Corporate Information is incomplete or the items in the package are not clearly identified, the entire package could be returned to the vendor
 - b. The evaluation process will be rescheduled after the corrected package is received.

NOTE: The request package with the items above should be sent to the location indicated in Appendix B.

Technical Data Package

The TDP must contain the following items if they were not included in the TDP submitted:

1. *Hardware Schematic Diagrams*: Schematic diagrams of all hardware
2. *Hardware Theory of Operations*: Documentation describing the theory of operation of the hardware, not limited to power cords and backup battery
3. *Software System Design*: Documentation describing the logical design of the software
 - a. This documentation should clearly indicate the various modules of the software, such as:
 - i. The list of functions

- ii. System flowchart
 - iii. Its interrelationships with each other
 - iv. The list of data formats that the voting system can import and export
 - b. Clearly specify the operating system and version with:
 - i. The Last Date of Mainstream Support, as defined in Appendix H
 - ii. The latest operating system version, security patches available, SHA256 hash value, and modification
4. *Software Deviations*: Include any exception(s) to the Security Content Automation Protocol (SCAP) checklist; document the reason why there is an exception and the mitigating controls/tools in place to secure the system
5. *Software Source Code*: A source code evaluation conducted in accordance with Software Design and Coding Standards of the most current version of the VVSG approved after March 1, 2015
6. *Definition of Marked Oval*: Define the system thresholds used to declare a readable mark in an oval to be read by the scanner
7. *Independent Third-Party Application Penetration Analysis Report*: An accredited application penetration test conducted, within the past 12 months, to analyze the system for potential vulnerabilities according to current industry standards. Potential vulnerabilities may result from poor or improper system configuration, known or unknown hardware or software flaws, or operational weaknesses in process or technical countermeasures. The test must involve active exploitation of security vulnerabilities of the voting system, whether or not the vulnerabilities can be mitigated through compensating controls. Pursuant to Virginia Code § 24.2-625.1, the Penetration Analysis Report is confidential and excluded from inspection and copying under the Virginia Freedom of Information Act. If a penetration test has been conducted in another state within 12 months on the same version of the voting system, then that may be submitted to fulfill this requirement.
8. *Customer Maintenance, Repair & Troubleshooting Manual*: Documentation that is normally supplied to the customer for use by the person(s) who will provide maintenance, repair and troubleshooting of the system
9. *Operations Manual*: Documentation that is normally supplied to the customer for use by the person(s) who will operate the system. At a minimum, the manual should include the maximum volume and speed of the scanner, the maximum capacity of container bin, ballot box, storage units, electronic storage device, and instructions for the proper and safe operation of the system to prevent injury or damage to any individual or the hardware, including fire and electrical hazards.

-
10. *User Guide and Documents*: The vendor should provide the following:
- a. Quick reference guide with detailed instructions for a precinct election officer to set up, use, and shut down the voting system
 - b. ADA compliant training material that:
 - i. May be in written or video form
 - ii. Must be in a format suitable for use at a polling place as a simple “how-to” guide(s)
 - c. Clear model of voting system architecture with the following documentations:
 - i. End-User Documentation
 - ii. System-Level and Administrator-Level Documentation
 - iii. Developer Documentation
 - d. Failsafe voting system data recovery procedures
 - i. For example: Recovery procedures for retrieving duplicated (contingency recovery) information from a different location within the device (or another device if networked capability is allowed and certified) in the event that access to the primary storage area is not possible for some unforeseen reason
 - e. A list of customers who are using or have previously used the voting system
 - i. The description of any known incidents or anomalies involving the functioning of the voting system, including how those incidents or anomalies were resolved with customer and date
 - f. If the operating system or any component (hardware and/or software) has reached and/or will reach the Last Date of Mainstream Support within 18 months, as defined in Appendix H, send an upgrade plan with target date(s) to ELECT; the Last Date of Mainstream Support cannot include any type of Extended Support, as defined in Appendix H.
11. *Recommended Security Practices*: CIS Security Best Practices, not limited to:
- a. System Security Architecture
 - b. System Event Logging
 - c. System Security Specification
 - d. Security Content Automation Protocol (SCAP)
 - e. Cryptography
 - f. Equipment and Data Security
 - g. Network and Data Transmission Security
 - h. Access control
 - i. Authentication procedure

- j. Software
 - k. Physical Security
12. *Standard Contract, Product Support, and Service Level Agreement (SLA)*: Customer and Technical Support hours and contact information. SLA should specify the escalation timeline and procedures with contact information. Vendor's capacity to provide, not limited to:
- a. On-Site Support and Technical Support within SLA on:
 - i. Election Day (defined as the start of the in-person absentee voting period up to and including Election Day)
 - ii. Within 60 days before Election Day
 - b. Resolution to outstanding issue(s), repair, maintenance, and service requests within 30 days
13. *Maintenance Services, Pricing, and Financing Options*: A list of maintenance services with price. Terms for replacing a component or voting equipment. Available financing options for purchase or lease
14. *Warranty*: The vendor should provide a list of warranty specifications to include the following:
- a. The period and extent of the warranty
 - b. Repair or Replacement
 - i. The circumstances under which equipment is replaced rather than repaired
 - ii. The method by which a user requests such replacement
 - c. Warranty coverage and costs
 - d. Technical documentation of all hardware and software that is used to certify that the individual component will perform in the manner and for the specified time
15. *Software License Agreement*
16. *Test Data and Software*: Vendor's internal quality assurance procedure, internal or external test data and reports, ballot decks, and software that can be used to demonstrate the various functions of the voting system. Vendor should also verify that the versions of the applications submitted are identical to the versions that have undergone federal compliance testing; for example, hash testing tools
17. *Non-Disclosure Agreement*: If applicable.

NOTE: If the voting system is certified, ELECT will retain the TDP as long as the voting system is marketed or used in the Commonwealth of Virginia.

Corporate Information

Corporate Information must contain the following items:

1. History and description of the business including the year established, products and services offered, areas served, branch offices, subsidiary and parent companies, capital and equity structure, identity of any individual, entity, partnership, or organization owning a controlling interest, and the identity of any investor whose investments have an aggregate value that exceeds more than 5% of the vendor's net cash flow in any reporting year
2. Management and staff organization, number of full-time and part-time employees by category, and resumes of key employees who will assist Virginia localities in acquiring the system if it is authorized for use
3. Certified financial statements for current and past three (3) fiscal years
 - a. If the vendor is not the manufacturer of the voting system, then submit the certified financial statements of the manufacturer for the past three (3) fiscal years
4. Bank Comfort Letter from the vendor's primary financial institution
 - a. If the vendor uses more than one financial institution, multiple Comfort Letters must be submitted
5. Certificate of Good Standing issued within 2 months
6. Credit rating issued within 2 months
7. If publicly traded, indexes rating of the business debt
8. Gross sales in voting products and services for the past three (3) fiscal years and the percent of the vendor's total sales
9. The location of all facilities with manufacturing capability; including names of the third-party vendor(s) that are employed to fabricate and/or assemble any component part of the voting and/or tabulating system being submitted for certification, along with the location of all of their facilities with manufacturing capability
10. The location and servicing capability of each facility that will be used to service the voting and/or counting system for certification and the service limitation of the facility
11. Quality assurance process used in the manufacturing and servicing of the voting system
12. Configuration management process used with the voting system.

NOTE: If the voting system is certified, ELECT will retain the Corporate Information as long as the voting system is marketed or used in Virginia. ELECT will sign a statement of confidentiality for corporate information only.

Proprietary Information

Prior to or upon submission of its certification request, the vendor shall identify any information in its request and/or accompanying materials that it believes should be treated as confidential and proprietary. Furthermore, the vendor must state the reasons why such information should be treated as confidential and proprietary.

“Identify” means that the information must be clearly marked with a justification as to why the information should be treated as confidential and proprietary information. A vendor shall not designate as proprietary information (a) the entire certification request or (b) any portion of the certification request that does not contain trade secrets or proprietary information.

ELECT cannot guarantee the extent to which any material provided will be exempt from disclosure in litigation or otherwise. ELECT, however, agrees to provide the vendor with five (5) days’ notice prior to disclosing such material to third parties so that the vendor has the opportunity to seek relief from a court prior to the disclosure of such materials by ELECT.

Phase 2: Preliminary Review

The Voting Technology Coordinator or designee will review the TDP, Corporate Information and other materials provided, and notify the vendor of any deficiencies. Certification of the voting system will not proceed beyond this phase until the TDP and Corporate Information are complete.

The Voting Technology Coordinator or designee will conduct a preliminary analysis of the Technical Data Package with VSTL. The Voting Technology Coordinator or designee will also review the Corporate Information and other materials to prepare an Evaluation Proposal, which includes:

1. Components of the voting system to be certified
2. Financial stability and sustainability of the vendor to maintain product support and contractual agreement for the voting system
3. Preliminary analysis of TDP

Phase 3: Technical Data Package to Voting System Test Laboratory (VSTL)

In addition, the vendor should submit the TDP to the Voting Technology Coordinator, who shall provide the TDP to the VSTL following review.

Phase 4: Certification Test Report from VSTL

VSTL will work directly with the vendor and ELECT designee to complete all test assertions and test cases and the Certification Test Report will be sent to ELECT upon completion.

Phase 5: On-Site Testing in Mock Election

ELECT will coordinate with the local jurisdiction to test the voting system at two polling places. With the vendor present, the Electoral Board members from the local jurisdiction along with ELECT will oversee the test use of the system in a mock election.

Phase 6: Approval by the SBE

Based on the report from the VSTL, the results from the On-Site Testing in Election and other information in their possession, the SBE will decide whether the voting system will be certified for use in the Commonwealth of Virginia. The decision will be sent to the vendor.

3.3. Incomplete Certification Process

If the certification process is terminated, the vendor will forfeit all fees received by ELECT. Any certification process terminated under this provision must be re-initiated from Phase 1. The vendor is responsible to pay all outstanding balance due to ELECT before ELECT accepts subsequent requests from the vendor.

ELECT reserves the right to terminate the certification process when:

1. Vendor does not respond to a request from ELECT within 90 days
2. ELECT issues any concerns regarding the certification
3. The Vendor withdraws from the process
4. The system fails the VSTL certification test
5. The test lab cannot conduct the certification testing with the equipment on-hand.

Appendices

A – Glossary

The following terms are defined in the United States Election Assistance Commission (EAC), the Code of Virginia and Virginia General Registrars and Electoral Boards (GREB) Handbook.

ADA – Americans with Disability Act (ADA) of 1990 broadly protects the rights of individuals with disabilities in employment, access to State and local government services, places of public accommodation, transportation, and other important areas of American life. The ADA also requires newly designed and constructed or altered State and local government facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities.

Anomaly – Any event related to the security or functioning of the voting system that is out of the ordinary regardless of whether it is exceptional or not; a deviation from the norm.

Cast Vote Record (CVR) – Permanent record of all votes produced by a single voter.

De Minimis Change – A minimum change to a certified voting system’s hardware, software, TDP, or data. The nature of changes will not materially alter the system’s reliability, functionality, capability, or operation. Under no circumstance shall a change be considered De Minimis Change, if it has reasonable and identifiable potential to impact the system’s performance and compliance with the applicable Voting Standard. Reference: EAC Testing & Certification Program Manual version 2.0 and Notices of Clarification.

Department of Elections (ELECT) – ELECT conducts the SBE's administrative and programmatic operations and discharges the board's duties consistent with delegated authority.

Election Assistance Commission (EAC) – The Help America Vote Act (HAVA) directs the U.S. Election Assistance Commission (EAC) to provide for the testing, certification, decertification, and recertification of voting system hardware and software by accredited laboratories. HAVA also introduces different terminology for these functions. Under the EAC process, test labs are “accredited” and voting systems are “certified.” The term “standards” has been replaced with the term “*Guidelines*.” As prescribed by HAVA, the EAC process was initially based on the 2002 Voting Systems Standards and will transition to the latest standards issued.

Help America Vote Act of 2002 (HAVA) – The Help America Vote Act (HAVA) of 2002 made reforms to America’s voting process by establishing minimum standards for states regarding election administration. Title III of HAVA contains standards regarding voting systems, provisional voting and voting information, computerized statewide voter registration list, and

requirements for first-time voters who register by mail. HAVA standards are critical to the operation of an election.

Incident – Any event related to the security or functioning of the voting system that may have caused or caused an interruption to the Check-in and/or Reporting process.

Logic and Accuracy Testing – Logic and accuracy testing is an integral part of preparing for an election. Each machine (not a sampling of machines) that will be used in an election must be tested prior to that election to ensure it has been programmed correctly and is functioning properly. The logic and accuracy test will also uncover any ballot printing or coding issues that may affect accurate and complete tabulation. Each machine should be tested with a sufficient number of ballots or votes to substantiate that each machine recorded the correct number of votes for each candidate. An electoral board member, general registrar, or a designated representative, must be present during this process and must certify the results from each machine. Form ELECT-633 must be submitted electronically to the Department of Elections after logic and accuracy testing is complete.

State Board of Elections (SBE) – The State Board of Elections is authorized to supervise, coordinate, and adopt regulations governing the work of local electoral boards, registrars, and officers of election; to provide electronic application for voter registration and delivery of absentee ballots to eligible military and overseas voters; to establish and maintain a statewide automated voter registration system to include procedures for ascertaining current addresses of registrants; to prescribe standard forms for registration, transfer and identification of voters; and to require cancellation of records for registrants no longer qualified. [Code of Virginia, Title 24.2](#), Chapters [1](#), [4](#) and [4.1](#).

Voting System – The total combination of mechanical, electromechanical, and electronic equipment, including the software, firmware, and documentation required to program, control, and support the equipment, that is used to define ballots, cast and count votes, report or display election results, recount votes and maintain and produce any audit trail information.

Voting System Test Laboratory (VSTL) – Test labs that are accredited to perform conformance testing of voting systems will use SBE approved voting system certification standard to guide the development of test plans, the testing of systems, and the preparation of test reports and recommendations for granting state certification.

B – Contacts

The Department of Elections

The certification request package should be sent to:

Virginia Department of Elections
ATTN: Voting System Certification
1100 Bank Street, 1st Floor
Richmond, Virginia 23219-3497

All other inquiries should be sent to:

Email: info@elections.virginia.gov

C – Acceptance Test

As required by the Code of Virginia §24.2-629 (E) and the procurement process, the local jurisdiction with the assistance of state officials or consultants will conduct the Acceptance Test.

The local jurisdiction will examine 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 compliant with the administrative and statutory requirements of the jurisdiction. The local jurisdiction could also perform a hash testing of application software, as well as, send a letter to ELECT as required by the procurement process, to confirm that the versions of all software and model(s) of equipment received are identical to the certified system.

As part of the acceptance test the vendor will demonstrate the system's ability to execute its designed functionality as presented and tested during certification, including:

1. Process simulated ballots for each precinct or polling place in the jurisdiction
2. Display an appropriate message on the review screen if a voter does not follow the ballot instruction.
 - a. Able to override the warning messages for overvote, undervote or blank ballot to cast the ballot
3. Handle Write-in votes
4. Create a Cast Vote Record (CVR) per each vote
5. Produce an input to or generate a final report of the election, and interim reports as required
6. Generate system status and error messages
7. Comply with and enable voter and operator compliance with all applicable procedural, regulatory, and statutory requirements
8. Produce an audit log

Validation of Certification

It is the responsibility of both the vendor and the local jurisdiction to ensure that a voting system that is supplied or purchased for use in the Commonwealth of Virginia has been certified by the SBE. The vendor is required to submit any modifications to a previously certified voting system to ELECT for review.

If any question arises involving the certification of a voting system in use in Virginia, ELECT shall verify the voting system in use is identical to the voting system that was submitted for certification. Any unauthorized modifications to a certified system may result in decertification by the SBE or bar the vendor from receiving certification of voting systems in the future with the Commonwealth of Virginia.

D – Test Assertions

The following test assertions will be executed by the ELECT designated VSTL.

General Requirements	
<i>Statutory Requirement</i>	<i>Test Assertions</i>
<p><i>§ 24.2-626.1. Acquisition and use of accessible voting devices.</i></p> <p><i>1. Provide for at least one voting system equipped for individuals with disabilities at each polling place, including nonvisual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters.</i></p> <p><i>2. Provide alternative language accessibility when required by § 203 of the Voting Rights Act of 1965 (52 U.S.C. § 10503).</i></p>	<p>I – The voting system must support audio ballots.</p>
	<p>II – Using the voting system, an individual voting by audio ballot does not require assistance by marking the ballot.</p>
	<p>III – The voting system must support multiple languages; including, English, Spanish, Vietnamese and allow future additions and support of other languages.</p>
<p><i>§ 24.2-629 (1). State Board approval process of electronic voting systems.</i></p> <p><i>It shall provide clear instructions for voters on how to mark or select their choice and cast that vote.</i></p>	<p>I – Must be able to alter instructions on the voting system’s electronically displayed ballots and audio ballots.</p>
<p><i>§ 24.2-629 (3). State Board approval process of electronic voting systems.</i></p> <p><i>It shall be capable of processing ballots for all parties holding a primary election on the same day, but programmable in such a way that an individual ballot cast by a voter is limited to the party primary election in which the voter chooses to participate.</i></p>	<p>I - The voting system must support multiple ballot styles on a single tabulator in a primary election.</p>
	<p>II – All voting systems must provide a voter-verifiable audit trail, a permanent paper record of each vote.</p>
<p><i>§ 24.2-629 (5). State Board approval process of electronic voting systems.</i></p> <p><i>It shall enable the voter to cast votes for as many persons for an office as lawfully permitted, but no</i></p>	<p>I – The voting system can present an accurate ballot based on a voter’s geopolitical subdivision based on the districts, regions, cities or other boundaries defined by the Commonwealth of Virginia.</p>

General Requirements	
<p><i>more. It shall prevent the voter from casting a vote for the same person more than once for the same office. However, ballot scanner machines shall not be required to prevent a voter from voting for a greater number of candidates than he is lawfully entitled to.</i></p>	<p>II – The voting system presents the voter only with candidates and contests that they are lawfully permitted to vote for.</p>
	<p>III – The voting system allows for the selection of multiple candidates or contest options. The voting system restricts the voter to select only a certain number of candidates or options in each contest. The voting system allows the voter to select a different number of candidates or options in each contest on the ballot.</p>
<p><i>§ 24.2-629 (7). State Board approval process of electronic voting systems.</i></p> <p><i>It shall provide the voter with an opportunity to correct any error before a ballot is cast.</i></p>	<p>I – For electronically displayed ballots, the voting system must provide the voter with a screen to review their selected choices prior to submitting the ballot.</p>
	<p>II - For electronically displayed ballots, the voting system must provide the voter the ability to return to a contest or question to make corrections. The system must also allow for an audio voter to return to any contest or question.</p>
	<p>III – The voting system must provide a warning or alert on the review screen to the voter for an incomplete or incorrect ballot; i.e. overvotes, undervotes, blank ballot.</p>
	<p>IV – ADA voting system must provide a voter-verifiable audit trail, a permanent record of each vote that can be checked for accuracy by the voter before the vote is submitted.</p>
<p><i>§ 24.2-629 (8). State Board approval process of electronic voting systems.</i></p> <p><i>It shall correctly register or record and accurately count all votes cast for candidates and on questions.</i></p>	<p>I – All component and system-level reports generated by the voting system provide accurate results that can be verified against known results.</p>

General Requirements	
<p><i>§ 24.2-657. Determination of vote on voting systems.</i></p> <p><i>In the presence of all persons who may be present lawfully at the time, giving full view of the voting systems or printed return sheets, the officers of election shall determine and announce the results as shown by the counters or printed return sheets, including the votes recorded for each office on the Write-in ballots, and shall also announce the vote on every question. The vote as registered shall be entered on the statement of results. When completed, the statement shall be compared with the number on the counters on the equipment or on the printed return sheets. If, on any ballot scanner, the number of persons voting in the election, or the number of votes cast for any office or on any question, totals more than the number of names on the poll books of persons voting on the machines, then the figures recorded by the machines shall be accepted as correct. A statement to that effect shall be entered by the officers of election in the space provided on the statement of results.</i></p>	<p>II – Public and private ballot counters increment for each accepted ballot. The ballot counters do not increment for ballots rejected by the system.</p> <p>III – The voting system records how many ballots are cast as overvotes, undervotes, Write-ins, and blank ballots for each contest and question.</p>
<p><i>§ 24.2-629 (9). State Board approval process of electronic voting systems.</i></p> <p><i>It shall be provided with a "protective counter," whereby any operation of the machine before or after the election will be detected.</i></p>	<p>I – Each tabulator has a lifetime counter/ "protective counter" that cannot be reset without reloading the firmware.</p> <p>II – The "protective counter" increments correctly for each ballot accepted by the tabulator.</p> <p>III – The "protective counter" does not increment for ballots not accepted by the tabulator.</p>
<p><i>§ 24.2-629 (10). State Board approval process of electronic voting systems.</i></p>	<p>I – Each tabulator has a "public counter" which tracks the number of ballots processed and accepted for an election.</p>

General Requirements	
<p><i>It shall be provided with a counter that at all times during an election shall show how many persons have voted.</i></p>	<p>II – The “public counter” increments correctly for each ballot accepted by the tabulator.</p>
	<p>III – The “public counter” does not increment for ballots not accepted by the tabulator.</p>
<p>§ 24.2-629 (11). State Board approval process of electronic voting systems.</p> <p><i>It shall ensure voting in absolute secrecy. Ballot scanner machines shall provide for the secrecy of the ballot and a method to conceal the voted ballot.</i></p>	<p>I – The voter cannot be identified in any manner on a ballot.</p>
	<p>II – The voting system audit records contain no information on a specific voter.</p>
	<p>III – The voting system must provide a “privacy sleeve.”</p>
<p>§ 24.2-629 (12). State Board approval process of electronic voting systems.</p> <p><i>It shall be programmable to allow ballots to be separated when necessary.</i></p>	<p>I – All Write-ins can be segregated physically with a diverter or logically separated with an electronic Write-in Report.</p>
	<p>II – Voting systems that centrally process ballots must <u>physically separate Write-ins from other ballots</u> or logically separate ballots with Write-in votes electronically.</p>
<p>24.2-629 (13). State Board approval process of electronic voting systems.</p> <p><i>Ballot scanner machines shall report, if possible, the number of ballots on which a voter under voted or over voted.</i></p>	<p>I – The voting system must alert the voter when the ballot submitted has an overvote or undervote, or the ballot is blank.</p>
	<p>II – The voting system must allow the voter to submit a ballot with an overvote or undervote, or a blank ballot.</p>
	<p>III – The voting system must count ballots cast with an undervote, overvote, or blank ballot. The system must be capable of producing a human-readable report on the number of ballots on which a voter under voted, and the number of ballots on which a voter over voted.</p>

General Requirements	
	IV – All Write-ins are properly handled including segregation of Write-ins physically with a diverter or logically with electronic Write-in Report.
<p><i>§ 24.2-637. Furniture and equipment to be at polling places.</i></p> <p><i>Before the time to open the polls, each electoral board shall ensure that the general registrar has the voting and counting equipment and all necessary furniture and materials at the polling places, with counters on the voting or counting devices set at zero (000).</i></p>	I – The tabulation component of the voting system must have a public counter. Upon opening of the polls, the tabulator must print a zero-proof report and the voting system must provide a means by which the report and the counter can be reconciled.
<p><i>§ 24.2-658. If machines that print returns are used, the printed inspection sheet and two copies of the printed return sheet containing the results of the election for each machine.</i></p>	I – The voting system can support the ability to print multiple results tapes.
<p><i>§ 24.2-802. (Effective until July 1, 2020) Procedure for recount.</i></p> <p><i>The court shall permit each candidate, or petitioner and governing body or chief executive officer, to select an equal number of the officers of election to be recount officials and to count printed ballots. The number shall be fixed by the court and be sufficient to conduct the recount within a reasonable period. The court may permit each party to the recount to submit a list of alternate officials in the number the court directs. There shall be at least one team from each locality using ballot scanner machines to insert the ballots into one or more scanners. The ballot scanner machines shall be programmed to count only votes cast for parties to the recount or for or against the question in a referendum recount. Each team shall be composed of one representative of each party.</i></p>	I – The voting system can be programmed to recount a single contest.

General Requirements	
<i>Functional</i>	<i>Test Assertions</i>
<p><i>Voting equipment must display an appropriate message if a voter does not follow the ballot instruction. Allow the voter to override the warning message to cast his/her ballot.</i></p>	<p>I – The voting system must provide written and audio instruction for electronically displayed ballots.</p>
	<p>II - The voting system must allow the voter to return to a contest or question to make corrections for electronically displayed ballots. The voting system must allow an audio voter to return to a contest or question to make corrections.</p>
	<p>III – The voting system must provide feedback to the voter for incomplete/ incorrect votes. i.e. overvotes, undervotes, blank ballot.</p>
	<p>IV – The voting system must allow the voter to override warning messages for incomplete/ incorrect votes. i.e. overvotes, undervotes, blank ballot.</p>
<p><i>Define ballot formats for a primary election, a general election, and special election including all voting options defined by the Code of Virginia.</i></p>	<p>For a Virginia Primary Election, the voting system must define the primary ballot as follows:</p> <ul style="list-style-type: none"> • Open Primary • Two Parties • No Write-in candidates • Support split precincts • Voting for N of M contests • Support of all contests • Support for all candidates • Multi-language support (English, Spanish, Vietnamese) • Referendum/Question contests
	<p>For a Virginia General Election, the voting system must define the general ballot as follows:</p> <ol style="list-style-type: none"> 1. Partisan contests

General Requirements	
	<ol style="list-style-type: none"> 2. Non-partisan contests 3. Write-in candidates 4. Support for split precincts 5. Voting for N of M contests 6. Support of all contests 7. Support for all candidates 8. Multi-language support (English, Spanish, Vietnamese) 9. Referendum/Question contests
<i>The voting system must create a Cast Vote Record (CVR) defined as, a Permanent record of all votes produced by a single voter whether in electronic, paper or other form, for each ballot for all elections.</i>	I – The voting system must produce a CVR in human-readable format.
<i>The CVR must integrate in a readable format.</i>	I – The voting system can export the CVR to a portable transport media. The voting system must produce a CVR in human-readable format.
<i>The voting system must be able to perform the Logic and Accuracy Tests.</i>	I – The voting system can be programmed for a primary, general, or special election.
	II – The voting system can process a known test deck containing valid marks, non-valid marks, undervotes, overvotes, and Write-in votes.
	III – The voting system can report accurate results from the known test deck.
	IV – The voting system provides a verifiable means that all test data are removed after the completion of the Logic and Accuracy Test from the voting system.
	V – Test ballots can be produced by a Ballot Marking Device (BMD) and can be used in the known test deck.

General Requirements	
<i>The voting system must comply with the requirements for Write-in image and format.</i>	I – The voting system must make a copy of the voter’s Write-in vote; the copy must be as legible as the original.

Security Requirements	
<i>Statutory</i>	Test Assertions
<p>§ 24.2-625.2. <i>Wireless communications at polling places.</i> <i>There shall be no wireless communications on election day, while the polls are open, between or among voting machines within the polling place or between any voting machine within the polling place and any equipment outside the polling place. For purposes of this section, the term wireless communication shall mean the ability to transfer information via electromagnetic waves without the use of electrical conductors.</i></p>	<p>I – The voting system will not transfer information between or among voting machines wirelessly. Here, wirelessly means “via electromagnetic waves without the use of electrical conductors.”</p>
	<p>II – The voting system will be unable to communicate wirelessly between devices inside and outside the polling place. Here, wirelessly means “via electromagnetic waves without the use of electrical conductors.”</p>
<p>§ 24.2-634. <i>Locking and securing after preparation.</i> <i>When voting equipment has been properly prepared for an election, it shall be locked against voting and sealed, or if a voting or counting machine cannot be sealed with a numbered seal, it shall be locked with a key. The equipment keys and any electronic activation devices shall be retained in the custody of the general registrar and delivered to the officers of election as provided in § 24.2-639. After the voting equipment has been delivered to the polling places, the general registrar shall provide ample protection against tampering with or damage to the equipment.</i></p>	<p>I – The tabulation component of the voting system must have the ability to be physically locked and require a key.</p>
<i>Functional</i>	Test Assertions
<p><i>The voting system must allow instruction to voters to be modified through administrative rights.</i></p>	<p>I – Only those with administrative rights can alter the instruction to voters.</p>

Security Requirements	
<i>The voting system cannot have the built-in wireless communications abilities.</i>	I - No component of the voting system can have wireless communications hardware unless disabled in the BIOS (password protected/locked BIOS and non-default password is different for each locality). i.e. wireless network cards, Bluetooth, infrared.
<i>The voting system must comply with the latest encryption standard.</i>	I – All modules are cryptographic and are FIPS 140-2 v1 compliant.
	II – All stored images are digitally signed.
	III – All digital hashes use SHA256 hashing algorithm or higher.
<i>The voting system must comply with the latest password protection standards.</i>	I – The voting system must require for a minimum 8 character password.
<i>The voting system must be hardened using the voting system provider’s procedures and specifications.</i>	I – The Security Content Automation Protocol (SCAP) for the voting system must be provided.
	II – The voting system can be verified to be in compliance with the SCAP checklist and all manufacturer procedures and specifications.

Audit Requirements	
Statutory	Test Assertions
<p><i>§ 24.2-671.1. Audits of ballot scanner machines.</i></p> <p><i>A. The Department of Elections shall coordinate a post-election risk-limiting audit annually of ballot scanner machines in use in the Commonwealth. The localities selected for the audit shall be chosen at random with every locality participating in the Department's annual audit at least once during a five-year period. The purpose of the audits shall be to study the accuracy of ballot scanner machines.</i></p> <p><i>B. No audit conducted pursuant to this section shall commence until after the election has been certified and the period to initiate a recount has expired without the initiation of a recount. An audit shall have no effect on the election results.</i></p> <p><i>C. All audits conducted pursuant to this section shall be performed by the local electoral boards and general registrars in accordance with the procedures prescribed by the Department. The procedures established by the Department shall include its procedures for conducting hand counts of ballots. Candidates and political parties may have representatives observe the audits.</i></p> <p><i>D. The local electoral boards shall report the results of the audit of the ballot scanner machines in their jurisdiction to the Department. At the conclusion of each audit, the Department shall submit a report to the State Board. The report shall include a comparison of the audited election results and the initial tally for each machine audited and an analysis of any detected discrepancies.</i></p>	<p>I – The voting system must be capable of producing a CVR for purposes of conducting a post-election risk-limiting audit.</p>

E – Software Patching Guidelines

All vendors must comply with the policies, guidelines, and directives regarding software patching of voting systems as adopted and modified by the EAC and the SBE from time to time.

F – Recertification Guidelines

All vendors must comply with the policies, guidelines, and directives regarding recertification of voting systems as adopted and modified by the SBE from time to time.

If there is evidence of a material non-compliance, ELECT will work with the vendor to resolve the issue, and ultimately the SBE reserves the right to decertify the voting system.

A voting system that has been decertified by the SBE cannot be used for elections held in the Commonwealth of Virginia and cannot be purchased by localities to conduct elections.

G – Hardware Guidelines

Memory devices or USB drives provided with the voting system and/or supplied to localities must follow these standards:

1. Must be fully wiped per the DoD 5220.22-M wiping standard to prevent any preloaded software from being inadvertently installed on the systems
2. Must be cryptographic and FIPS 140-2 v1 compliant
3. Must use SHA256 hashing algorithm or higher
4. Must comply with applicable Commonwealth information security standards
5. Must comply with applicable policies, guidelines, and directives as adopted and modified by the SBE from time to time.

H – Voting System Modifications & Product End of Life Planning

Voting System Modifications

The process of reporting modification will be determined by the Department of Elections based upon policies, guidelines, and directives as adopted and modified by the SBE from time to time.

Product End of Life Planning

“End of life” (EOL) is a term used with respect to product (hardware/software/component) supplied to customers, indicating that the product is in the end of its useful life (from the vendor’s point of view), and a vendor stops sustaining it; i.e. vendor limits or ends support or production for the product.

Product support during EOL varies by product. Depending on the vendor, EOL may differ from end of service life, which has the added distinction that a vendor of systems or software will no longer provide maintenance, troubleshooting or other support. For example, Extended Support is the period following end of Mainstream Support.

The definitions of Last Date of Mainstream Support and Extended Support, as applicable to decertification/recertification and associated policies and procedures, will be determined by the ELECT based upon policies, guidelines, and directives as adopted and modified by the SBE from time to time. As of initial adoption of this standard by the SBE, the definitions are as follows:

Mainstream Support: The first phase of the product lifecycle; when support is complimentary

Extended Support: The phase following Mainstream Support, in which support is no longer complimentary

Last Date of Mainstream Support: The last day of Mainstream Support

Policies and procedures applicable to decertification/recertification of voting systems which contain software or hardware components that have and/or will reach the Last Date of Mainstream Support within 18 months, will be determined by the ELECT based upon policies, guidelines, and directives as adopted and modified by the SBE from time to time.

A voting system could still be decertified even if an upgrade plan is submitted. This could happen for a variety of reasons, such as a vendor is not showing progress in meeting their upgrade plan.



★ VIRGINIA ★
DEPARTMENT of ELECTIONS

Vendor Notification of “End of Life”

We have certified equipment with the SBE and have determined that the following (hardware/software/components) in our certified system will, within 18 months, be at “End of Life” status. Complete this form (for the areas applicable), attach the upgrade plan and send to:

Secretary of SBE, 1100 Bank Street, 1st Floor, Richmond, VA 23219

“End of life” (EOL) is a term used with respect to product (hardware/software/component) supplied to customers, indicating that the product is in the end of its useful life (from the vendor’s point of view), and a vendor stops sustaining it; i.e. vendor limits or ends support or production for the product.

Mainstream Support: The first phase of the product lifecycle; when support is complimentary

Extended Support: The phase following Mainstream Support, in which support is no longer complimentary

Last Date of Mainstream Support: The last day of Mainstream Support

Vendor _____ Date: _____

Certified Voting Systems Impacted: _____

Certified Version(s) Software: _____ Firmware: _____

Certified Product: _____

Certified EPB System Impacted: _____

Certified Version(s): _____

DATE(S) FOR “END OF LIFE”:

	Operating System (description) _____
	Software (Modules or Packages) (description) _____
	Product(s) (components) (description) _____

Vendor must submit an upgrade plan to the SBE 12 months in advance of “End of Life”. The plan should include timeline(s), list of impacted localities, estimated cost for localities (if any), and VSTL report(s) showing the upgrade(s) will ensure all systems operate properly with the new upgrade(s) and/or replacements(s).*

*A voting system could still be decertified even if an upgrade plan is submitted. This could happen for a variety of reasons, such as a vendor is not showing progress in meeting their upgrade plan.

ELECT Personnel Received and Reviewed by _____ Date: _____

EOL Upgrade Plan Approved REJECTED SBE Meeting: _____

I – Voting System Certification Application Form

Certification <input type="checkbox"/>	Recertification <input type="checkbox"/>
--	--

The company officer or designee who is responsible for the voting system should complete this form. With this signature, the company officer agrees to a release for the VSTL as well as other states that may have decertified the voting system to respond to any questions by ELECT. This application must be signed by a company officer and enclosed in the Voting System Certification Request Package.

Check if you prefer to have the VSTL testing performed at another site to be specified which may require additional cost for the testing.

Name of Company: _____

Name and Title of Corporate Officer: _____

Contact Phone Number: _____

Email Address: _____

Primary Address of Company: _____

City, State, Zip Code: _____

Name of voting system to be certified: _____

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

I reviewed and confirmed that the voting system meets the requirements of the Virginia Voting System Certification Standard. My company will comply with additional requests in a timely manner to complete this certification.

Signature of Corporate Officer: _____

Date: _____

J – De Minimis Change Guideline

The SBE has adopted the EAC’s De Minimis Change Guideline and applicable EAC Notice of Clarification of De Minimis Change Guidelines to manage a minimal hardware and/or software change to a certified voting system in a consistent and efficient manner. Software De Minimis Changes should have the following general characteristics:

1. Update a discrete component of the system and do not impact overall system functionality
2. Do not modify the counting or tally logic of a component or the system (formatting changes to reports are allowable)
3. Do not affect the accuracy of the component or system
4. Do not negatively impact the functionality, performance, accessibility, usability, safety, or security of a component or system
5. Do not alter the overall configuration of the certified system (e.g. adding ballot marking device functionality to a previously certified DRE component)
6. Can be reviewed and/or tested by VSTL personnel in a short amount of time (approximately less than 100 hours).

A vendor must submit the VSTL’s endorsed package to ELECT for approval along with a copy of the EAC determination. A proposed De Minimis Change may not be implemented to the certified voting system until the change has been approved in writing by ELECT.

VSTL Endorsed Changes

The vendor will forward to ELECT any change that has been endorsed as De Minimis Change by VSTL. The VSTL’s endorsed package must include:

1. The vendor’s initial description of the De Minimis Change, a narrative of facts giving rise to, or necessitating, the change, and the determination that the change will not alter the system’s reliability, functionality, or operation.
2. The written determination of the VSTL’s endorsement of the De Minimis Change. The endorsement document must explain why the VSTL, in its engineering judgment, determined that the proposed De Minimis Change meet the definition in this section and otherwise does not require additional testing and recertification.

VSTL Review

The vendor must submit the proposed De Minimis Change to a VSTL with complete disclosures, including:

1. Detailed description of the change
2. Description of the facts giving rise to or necessitating the change

3. The basis for its determination that the change will not alter the system's reliability, functionality, or operation
4. Upon request of the VSTL, the voting system model at issue or any relevant technical information needed to make the determination
5. Document any potential impact to election officials currently using the system and any required notifications to those officials
6. Description of how this change will impact any relevant system documentation
7. Any other information the VSTL needs to make a determination.

The VSTL will review the proposed De Minimis Change and make an independent determination as to whether the change meets the definition of De Minimis Change or requires the voting system to undergo additional testing as a system modification. If the VSTL determines that a De Minimis Change is appropriate, it shall endorse the proposed change as a De Minimis Change. If the VSTL determines that modification testing and certification should be performed, it shall reclassify the proposed change as a modification. Endorsed De Minimis Change shall be forwarded to ELECT for final approval. Rejected changes shall be returned to the vendor for resubmission as system modifications.

ELECT's Action

ELECT will review the proposed De Minimis Change endorsed by a VSTL. ELECT has sole authority to determine whether any VSTL endorsed change constitutes a De Minimis Change under this section.

ELECT's Approval: ELECT shall provide a written notice to the vendor that ELECT accepted the change as a De Minimis Change. ELECT will maintain the copies of approved De Minimis Change and track such changes.

ELECT's Denial: ELECT will inform the vendor in writing that the proposed change cannot be approved as De Minimis Change. The proposed change will be considered a modification and requires testing and recertification consistent with this Certification Standard.

De Minimis Change is not applicable to the voting system currently undergoing the State Certification testing; it is merely a change to an uncertified system and may require an application update.



★ VIRGINIA ★
DEPARTMENT *of* ELECTIONS

Virginia State Board of Elections | Request for De Minimis Change

In accordance with the State Certification of Voting System and Electronic Pollbook Requirements and Procedures, SBE has adopted guidelines to manage hardware/software related changes to certified Voting System and Electronic Pollbook System. To request a De Minis Change the procedure begins with a letter, from the vendor to the Secretary of the State Board of Elections and the VSTL endorsed package for the De Minimis Change. This letter shall begin the process to evaluate whether the De Minimis Change will be approved for use on Voting Systems and/or Electronic Pollbooks certified in Virginia.

De Minimis Changes should have the following characteristics:

1. Update a discrete component of the system and do not impact overall system functionality.
2. Do not affect the accuracy of the component or system.
3. Do not negatively impact the functionality, performance, accessibility, usability, safety, or security of a component or system.
4. Do not alter the overall configuration of the certified system.
5. Can be reviewed and/or tested by VSTL personnel in a short amount of time (approx. less than 100 hours).

Vendor description of the De Minimis Change: _____

Description of the facts giving rise to or necessitating the change: _____

Document any potential impact to election official currently using the system and any required notifications to those officials. _____

VSTL endorsed package included.

Signature of Company Officer: _____ Date: _____

ELECT's Action: Received by: _____ Date: _____

Reviewed by: _____ Date: _____

APPROVED

REJECTED

Vendor Notified of Status by: (initials) _____ Date: _____

K – Cast Vote Record Clarification

1. A permanent record of all votes produced by a single voter
2. Electronic CVRs are called ballot images
3. CVR is evidence that a ballot was available for review by the voter
4. CVR should have an identifier that can be linked to an identifier on the corresponding paper ballot provided; the scanner creating the CVR can impress an identifier on the ballot as it is scanned
5. CVR should include indications of what actions the scanner took if the scanner does contest-rule post-processing of the ballot selections
6. CVR has indications of marginal marks, mark quality/density (if scanner is capable).
7. A CVR can include signed/hashed references to an associated image of the ballot or images of write-ins made by the voter on a paper ballot