

Voting System Qualification Test Report
Election Systems & Software, LLC
EVS Release 4.5.2.0, Version 1

For Publication
June 2016



Florida Department of State
Division of Elections
R. A. Gray Building, Room 316
500 S. Bronough Street
Tallahassee, FL 32399-0250

Contents

EXECUTIVE SUMMARY	3
INTRODUCTION.....	4
SYSTEM OVERVIEW.....	4
COMPONENTS UNDER REVIEW	6
CONDUCT OF TESTS / FINDINGS.....	6
PHYSICAL AUDIT	7
FUNCTIONAL SYSTEM AUDIT	7
<i>Voting Equipment Menus – Administrative and Diagnostic Reports</i>	<i>7</i>
<i>Mock Elections</i>	<i>7</i>
PRECINCT TABULATOR MASS BALLOT COUNT	8
ACCESSIBILITY – FORCE	9
ACCESSIBILITY – SOUND PRESSURE LEVEL	9
ACCESSIBILITY – VOTER INTERFACE	10
EXPRESSVOTE ROLLING KIOSK	10
CONTEST RECOUNTS.....	11
FOLDED BALLOTS	11
SYSTEM CLOCK	11
SIMULATED FAILURE / SYSTEM RECOVERY.....	12
SATISFACTION OF FLORIDA DIVISION OF ELECTIONS RECOMMENDED CHANGES	12
MODEMS	13
SOURCE CODE REVIEW.....	13
CONCLUSION	13
APPENDICES.....	14
APPENDIX A – COMPONENT VERSION LIST.....	14
<i>Election Management System</i>	<i>14</i>
<i>Voting Devices</i>	<i>17</i>
<i>Ancillary Submission</i>	<i>20</i>
APPENDIX B – ACRONYMS	21
APPENDIX C – TABLES INDEX.....	22
APPENDIX D – FLORIDA DIVISION OF ELECTIONS RECOMMENDED CHANGES	23

Executive Summary

Election Systems & Software, LLC submitted an application requesting Florida certification of the *EVS Release 4.5.2.0, Version 1* voting system. This release is a modification to the *EVS 4.5.0.0, Version 4* release (of which the latest revision, Revision 2, was certified on November 18, 2015). Specifically, this release provides customer requested enhancements to ElectionWare, Election Reporting Manager, the DS200 precinct scanner, and the ExpressVote universal vote capture device, as well as the introduction of a rolling kiosk to house the ExpressVote. Furthermore, this release seeks to meet the recommendations and conditions set forth by the Division of Elections' Bureau of Voting Systems Certification (BVSC) in the *EVS 4.5.0.0, Version 4* certification.

The current Florida certified voting system includes an election management system known as ElectionWare; a precinct scanner (DS200); two devices for Florida voters with disabilities—a precinct ballot marking device (AutoMARK) and a vote capture device with a verifiable paper record that is digitally scanned for tabulation (ExpressVote); and a high-speed central count scanner (DS850). Precinct results may be uploaded to the election management system manually, or via wireless or landline modems.

BVSC conducted the certification testing in two phases. Phase I consisted of verifying the setup of the two configurations of the election management system, restoration/import of two elections (general and primary elections), creation of two elections (municipal and presidential preference primary elections), a physical audit, and a functional audit. Phase II encompassed the conduct of mock elections and election cycle events, such as loading the tabulators with the requisite media, opening and closing of polls, feeding ballots, central count tabulation, and election night and post-election reporting. BVSC performed tests to verify compliance with standards for sound pressure levels and contest recounts, conducted mass ballot count testing for the DS200 precinct scanner, and conducted additional tests as necessary to observe the voting system's capabilities.

Qualification test results affirm that the voting system under test, *EVS Release 4.5.2.0, Version 1*, met applicable requirements of the Florida Voting Systems Standards, Florida Statutes and Rules, and the Help America Vote Act for usability and accessibility. BVSC, therefore, recommends certification of the referenced voting system.

Introduction

Election Systems & Software, LLC (ES&S) submitted an application, which was deemed complete on April 19, 2016, requesting Florida voting systems certification of the *EVS Release 4.5.2.0, Version 1* voting system. This release is a modification to the certified *EVS Release 4.5.0.0, Version 4* (certified on May 1, 2015; the latest revision, Revision 2, was certified on November 18, 2015).

Specifically, *EVS Release 4.5.2.0, Version 1* provides customer requested enhancements to Electionware, Election Reporting Manager (ERM), the DS200 precinct scanner, and the ExpressVote universal vote capture device. Furthermore, this release seeks to meet the recommendations set forth by the Division of Elections' Bureau of Voting Systems Certification (BVSC) in the *EVS 4.5.0.0, Version 4* certification. Other modifications include the ExpressLink v. 1.3.0.0, which has been rebranded and enhanced to improve card print quality; more choices for modems; and the introduction of an optional rolling kiosk to house the ExpressVote.

The scope of the certification effort included testing to verify that the voting system under test met the applicable standards, rules, statues, and federal laws for use in the state of Florida. Testing included qualification testing, regression testing on machines that did not change, such as the DS850 and AutoMARK, and mass ballot count tests. Volume testing of any voting machines or marking devices is considered outside the scope of this certification. Testing was completed on May 20, 2016.

System Overview

This is a paper-based voting system with an element for compliance with the Help America Vote Act (HAVA) provisions for precinct voting. The Florida certified voting system includes the Election Management System (EMS), a precinct scanner, ADA devices, and a central count scanner.

The EMS hardware platform is configured as either a stand-alone or a server/client configuration. The stand-alone configuration includes the election management system and the election results reporting manager; whereas, the server/client configuration includes one or more workstations (clients) which interconnect with a server. The system includes an option to upload election results wirelessly or using an analog modem.

The EMS software configuration includes:

- ElectionWare – an election management system that integrates the jurisdiction, districts, contests, and candidate databases as the main pre-voting phase and post-voting phase that allows ballot images to be viewed. It provides the method to configure elections, create ballot design, add languages (including audio), export ballot/election definitions and view ballot images.
- Election Reporting Manager – a client application used for integrating election results acquisition, consolidation, and reporting. Additional ERM clients can be configured to display scrolling results and over the Intranet.
- Regional Results Transfer – an optional application that allows results files accumulated on DS200 media devices at remote polling locations to be sent to Election Central from Regional Results Transfer sites. The results files are loaded from the DS200 media devices into the Regional Results Transfer station, which in turn sends the results to Election Central.
- ExpressLink – formerly branded as ExpressPass, this on-demand application prints a voter's ExpressVote activation card with the appropriate ballot style information (using the ExpressVote

Activation Card Printer). ExpressLink can run in either a standalone mode or in monitor mode where it monitors requests from a voter registration system over a shared network folder.

The voting equipment includes the DS200, ExpressVote, AutoMARK (VAT), and the DS850.



The DS200 is a voter interface device used to scan paper ballots. It is a precinct tabulator that can also be used for tabulating vote-by-mail ballots (formerly known as absentee ballots). This tabulator captures the voter’s selections and digitally images the ballot. The DS200 uses a USB drive for downloading the election definition, provides an option to capture cast ballot images on the USB, and provides the election results on the USB. The results data can be directly uploaded into ERM or the DS200 can transmit results via secure wireless or analog network telecommunications into ERM.



The ExpressVote is a voter interface device approved in Florida for use by voters with special needs. This system combines paper-based voting with touch screen technology to produce an independent voter-verifiable paper record that is digitally scanned for tabulation. The voter uses the ExpressVote to navigate the ballot through touchscreen, physical keypad, assistive support peripherals such as a sip and puff device, or other assistive equipment such as a two position switch. The ExpressVote includes a mandatory vote summary screen that requires voters to confirm or revise selections prior to printing the summary of ballot selections using the internal thermal printer. Once printed, ES&S ballot scanners process the vote summary card.



This certification application introduces a rolling kiosk to house the ExpressVote. This hard-sided enclosure provides voter privacy screens, angle adjustment to accommodate seated or standing voters, and a secure repository for marked ExpressVote vote summary cards to be tabulated at a later time.



The AutoMARK Voter Assist Terminal (VAT) is a voter interface device that allows a voter to mark a blank, preprinted ballot or assists a voter with contest selections via visual display, audio, or both. The voter uses the AutoMARK to navigate the ballot through touchscreen, physical keypad, assistive support peripherals such as sip and puff device, or other assistive equipment such as a two position switch. Also, the voter can use the AutoMARK to review a marked ballot and either to cast the ballot into an optical scan tabulator (like the DS200) or, if available, to deposit the ballot into an attached ballot box, known as the AutoCAST, for later tabulation.



The DS850 optical tabulator is a high-speed scanner for use with vote-by-mail ballot tabulation or contest/race recounts. The DS850 uses digital cameras to image paper ballots, capture voter selections on the image, and evaluate the results. It uses a USB drive for downloading the election definition, captures the cast ballot images on the USB, and provides the results on the USB. The results data are uploaded into ERM. The DS850 also uses two commercial off-the-shelf (COTS) printers, one for printing reports and the other for recording and printing an audit log.

Components under Review

The components of the voting system being reviewed for certification include the following:

- Upgraded ElectionWare election management system
- Upgraded Election Reporting Manager (ERM)
- Upgraded precinct count tabulator (DS200)
- Upgraded ballot marking device for voters with disabilities (ExpressVote)
- Additional wireless modem choices
- Ancillary software (Toolbox, ExpressLink with ExpressLink thermal printer)
- An optional rolling kiosk to house the ExpressVote

Conduct of Tests / Findings

The test objective was to verify that the *EVS Release 4.5.2.0, Version 1* voting system meets the applicable requirements of the Florida Voting Systems Standards (FVSS), Florida Statutes and Administrative Rules, and HAVA for usability and accessibility.

The FVSS qualification examination for this effort encompassed a physical and functional audit of the components under review. BVSC conducted additional tests to verify compliance with standards for sound pressure levels and observe ballot sensitivity. In addition, BVSC conducted a mass ballot count test on the precinct count tabulator, as well as regression testing to ensure that system modifications did not affect unchanged procedures.

BVSC also verified that the vendor satisfied the recommendations made in the final report for the previously certified voting system (see *Voting System Qualification Test Report: Election Systems & Software, LLC: EVS Release 4.5.0.0, Version 4*. April 2015).

Physical Audit

BVSC conducted a physical audit to verify that the voting system under test matched the specifications described in the application and the TDP documentation. The audit covered the election management system in both the standard and the standalone configurations, all precinct and central count scanners, and all accessible voting devices.

Findings:

BVSC found no discrepancies with the setup of the ElectionWare voting system configurations or the configurations of the scanners or accessible voting devices.

Functional System Audit

BVSC conducted a functional system audit to verify that all components of the voting system operate as described in the TDP.

Voting Equipment Menus – Administrative and Diagnostic Reports

BVSC performed a functional audit by testing all available menu options and administrative reports as well as systems functions in the course of testing.

Mock Elections

BVSC conducted mock elections incorporating multiple-card ballots of varying ballot lengths (11-inch to 19-inch). BVSC used four election types: presidential preference primary (PPP), municipal, primary, and general. The tests included both hand marked and machine marked ballots, as well as those cast via the accessible voting ballot marking machines (AutoMARK and ExpressVote), and used single-card and multi-card elections. All activities simulating an election were conducted using all equipment, from initial preparations and L&A (pre-election activities) through voting (election activities), election night and precinct level reporting (post-election and reporting activities). BVSC used ballot test decks and pre-determined results to compare to actual results.

Pre-Election Activities

Pre-election activities included coding or verifying the coding of the election database for each of the four elections (PPP, municipal, primary, and general), preparing the election media, preparing the ballot test decks, preparing and validating the expected results, and preparing the voting equipment. A universal primary contest (UPC) was included in the primary election definition.

Election Activities

Election activities included opening polls, casting ballots using test decks (including hand marked ballots and ballots marked using the AutoMARK and the ExpressVote), and closing polls.

Post-Election and Reporting Activities

BVSC examined test results against expected results. Post-election activities included generating reports. Activities included uploading election results and verifying results in the ERM by defined election group (absentee, early voting, Election Day, and provisional voting). BVSC uploaded results directly, since modem testing was done in a separate test.

The XML File utility produces the partial and complete summary XML files and the 30-day precinct level XML files. As an ancillary component of the voting system, this tool was examined outside the scope of this testing effort in a separate environment using an in-house developed program to verify that the tool could produce these files. Staff was able to verify that the XML utility could produce the files in the specified XSD format and that the vote totals (candidate, total precinct votes, and total precinct groups) match the report totals.¹

Findings:

The system performed as indicated in the vendor’s TDP and in accordance with FVSS, Florida Statutes, and Administrative Rules.

Precinct Tabulator Mass Ballot Count

BVSC conducted a mass ballot count on one DS200 precinct scanner using the 2012 Miami-Dade County General Election definition. The minimum requirement is a ballot count of 9,900 ballots on a single scanner. The test deck contained 360 two-card ballots (720 cards total). Staff ran the test deck through the DS200 fourteen times, for a total of 10,080 ballots.

Specific details follow:

Table 1. Mass Ballot Count details for DS200

Election definition used:	2012 Miami-Dade General election
Ballot length:	19 inches
Number of scanner units used:	1
Number of test deck sets:	1
Number of runs per test deck:	14
Number of ballots per deck:	320
Number of cards per ballot:	2
Number of cards per deck:	720
Total number of ballots cast:	10,080
Total number of vote targets:	293,832

¹ Since content is user driven by each county who defines distinctly its election in the tabulation system, the content was not programmatically validated.

Findings

The mass ballot count test was conducted twice. During the first attempt, BVSC encountered an error that prevented the poll from closing properly and staff was unable to directly upload results into ERM. The vendor traced the root cause to the 16 GB memory device (USB drive) that was used to perform the test. BVSC granted the vendor’s subsequent request to remove the 16 GB USB drive from consideration.

BVSC re-started the mass ballot count using an 8 GB USB drive. The second mass ballot count test was successful. The tested DS200 met the acceptance criteria for the precinct scanner mass ballot count. No further anomalies were observed. BVSC satisfactorily scanned 10,080 ballots with 293,832 vote targets.

Acceptance criteria are shown in the table below:

Table 2. Acceptance criteria for DS200

DS200 Mass Ballot Count – Acceptance Criteria	Expected	Accepted
Did the memory registers overflow?	No	✓
Did the public counters increment appropriately?	Yes	✓
Did the tabulated results agree with predetermined vote totals?	Yes	✓
Number of errors (must not exceed 1 in 1,000,000 vote targets). An error is defined as a target scan that produces a result other than the expected result.	≤ 1/1M vote targets	✓
Number of multiple feeds (must not exceed 1 in 5,000 ballots). A multiple feed occurs when the machine pulls multiple ballots and does not “catch” the error.	≤ 1/5K ballots	✓
Number of incorrect rejections of ballots (must not exceed 3%)	≤ 3% total ballots	✓

Accessibility – Force

The Force test is used to determine compliance with section 101.56062(1)(l), F.S., which requires that “the force required to operate or activate the controls must be no greater than 5 pounds of force.” BVSC conducted the force test during an accessible-voting session on the ExpressVote using a calibrated Dillon model GL digital force gauge and multiple voter input methods: the touchscreen and the audio tactile keypad.

Findings:

No measurement exceeded the maximum of 5 pounds of force. BVSC found that the ExpressVote complied with section 101.56062(1)(l), F.S.

Accessibility – Sound Pressure Level

The sound pressure level test is conducted to verify conformance to section 101.56062(1)(g-i), F.S., which describes the sound pressure level standards for a voting system’s audio voting features. BVSC conducted

a sound pressure level test on the ExpressVote, whose firmware version changed since the last certification. BVSC tested the ExpressVote using the AVID brand audio headsets supplied by the vendor.²

BVSC used an ITU-T P.50³ test signal that was incorporated into an election definition. The test signal replaced the initial sound file normally heard by a voter at the beginning of an accessible voting session. The election definition repeated the test signal as a loop. BVSC captured instrument readings across the entire loop.

Findings:

BVSC found that the ExpressVote complies with the applicable statute. The results of the sound pressure level tests for the ExpressVote are in the table below.

Table 3. Sound pressure level test results - ExpressVote

Sound Pressure Level Test Results – ExpressVote				
	Average Maximum Volume (dBA) ⁴	Average Minimum Volume (dBA)	Gain (dBA) ⁵	Intermediate Level (dBA) ⁶
Right Headphone	101.44	39.22	62.22	63.62
Left Headphone	102.68	39.20	63.48	64.57

Accessibility – Voter Interface

BVSC verified that the ExpressVote satisfies requirements for voter interface and interactions in accordance with applicable statutes and standards. Characteristics of the system such as ballot appearance, languages, input methods and feedback were examined.

Findings:

BVSC found that the ExpressVote complied with applicable statutes and standards.

ExpressVote Rolling Kiosk

Voting booths or tabletop installations must meet minimum height and knee clearance dimensions, as well as privacy requirements, as set forth in section 101.56062(m), F.S. The vendor’s application introduces a rolling kiosk to house the ExpressVote for voters with disabilities (see photo on page 5). BVSC examined the kiosk for accessibility requirements.

² The vendor’s application for certification lists “AVID [brand] stock headphones” in the Component Version List. The TDP specifies only “ES&S-approved” headphones (ExpressVote Operator’s Guide, Firmware Version 1.4, Document Version 1.0, pg. 41). The vendor supplied the following: AVID educational headphones (unmarked).

³ ITU-T P.50 - “ITU-T” is the telecommunication standardization sector of the “ITU,” which is the International Telecommunication Union. ITU is a United Nations specialized agency for information and communication technologies. The “P.50” represents one of their “P Series” objective transmission standards/measures used for testing the transmission quality of artificial voices.

⁴ Must be greater than 97 dB (decibels weighted).

⁵ Maximum volume minus minimum volume. Must be greater than 20 dB.

⁶ Must be between (Minimum volume + 12 dB) and 97 dB.

Findings:

The Election Assistance Commission's (EAC) 2005 Voluntary Voting System Guidelines (VVSG) describe a standard for voting booth accessibility that meets or exceeds that of section 101.56062(m), F.S. A federally-accredited voting systems test laboratory (VSTL) tested the ExpressVote rolling kiosk for conformance with the 2005 VVSG requirements. In lieu of testing for conformance to Florida Statutes, BVSC accepts the VSTL⁷ test findings that the ExpressVote rolling kiosk meets the requirements of the 2005 EAC VVSG.⁸

Contest Recounts

BVSC conducted a recount to verify compliance with section 102.141(7), F.S., and Rule 1S-2.031, Florida Administrative Code (governing recount procedures). BVSC selected one countywide race and one district-wide race in the general election, and suppressed the results of all other races, as per rule. The recount was conducted using a DS200 precinct tabulator, as well as a DS850 high speed tabulator.

Findings:

BVSC found that the voting system under test complied with applicable statutes and standards. ElectionWare allows the user to report results from only the affected races. Furthermore, a recount can be conducted on more than one race at a time, as demonstrated by processing both the countywide race and district-wide race in one recount.

Folded Ballots

Although Florida law and FVSS do not require this test, BVSC conducted a folded-ballot test to simulate the processing of vote-by-mail ballots. The objective was to observe the behavior of the DS200 and DS850 tabulators when folded ballots are scanned.

BVSC created a test deck for each of the four election types and four ballot lengths (11-inch PPP election; 14-inch municipal election; 17-inch primary election; and 19-inch general election). Different fold types were included in each test deck.

BVSC cast ballots into the DS200 and the DS850, and compared the results.

Findings:

Both the DS850 and the DS200 scanners operated as expected. Both scanners accepted all ballots they were programmed to accept, and rejected ballots they were programmed to reject, such as overvoted and undervoted ballots.

System Clock

BVSC examined the DS200 precinct scanner and the ExpressVote for the ability to properly implement system time and date changes such as Daylight Saving Time and leap years.

⁷ The VSTL is NTS (Huntsville, AL).

⁸ Test Report of 2005 VVSG Compliance Testing for Election Systems & Software ECO 1822, ExpressVote Rolling Kiosk. Test Report No. PR035098. (March 18, 2015). Test report is on file with the Florida Division of Elections.

Findings:

Both the DS200 and the ExpressVote operated as described in the TDP.

Simulated Failure / System Recovery

BVSC verified that the DS200 and the ExpressVote, when disconnected from the electrical outlet, functioned for the time period stated in the TDP documentation. The documentation states that the battery pack is capable of powering each machine for at least two hours.⁹

For both the DS200 and the ExpressVote, BVSC staff powered up the unit and disconnected the AC adapter. The equipment was left running on battery power until the unit drained the battery and performed a shutdown operation. No ballots were cast (nor, in the case of the ExpressVote, marked) during the battery interval. BVSC reconnected the AC adapter and reviewed the audit logs to determine the length of time the machine remained in a usable state before complete drainage of the battery power occurred. The table below reflects the outcome of these tests.

Table 4. Battery life test results

Battery Life Test Results		
	Battery Life per TDP	Actual Battery Life
DS200	At least 2 hours	2 hours 26 minutes
ExpressVote	At least 2 hours	5 hours 5 minutes

Findings:

The battery packs powered the DS200 and the ExpressVote for longer than the stated minimum battery life. It is expected that in a real-world scenario, in which the unit would be utilized during the battery interval, battery power would drain quicker relative to the number of ballots processed.

Satisfaction of Florida Division of Elections Recommended Changes

In the *EVS Release 4.5.0.0, Version 4* (May 2015) test report, BVSC recommended that certification of the *EVS Release 4.5.0.0, Version 4* be contingent upon certain conditions to be satisfied in future releases of the voting system. The text of the test report recommendations is attached as Appendix D.

Since *EVS Release 4.5.2.0, Version 1* is the next release of the EVS voting system for the state of Florida, the conditions enumerated above apply. BVSC examined this release to verify that it complies with the above conditions.

Findings:

BVSC found that the voting system satisfied the recommendations and conditions as set forth in the test report of the *EVS Release 4.5.0.0, Version 4* voting system.

⁹ Florida ES&S Voting System 4.5.2.0 System Overview, Revision 1.0, pp. 85, 88.

Modems

BVSC examined the ability of the voting system to report and accumulate results from precinct scanners via modem communication. This certification introduces a new modem model, the Sprint C2, in the modem line-up. Staff conducted a mock primary election with six DS200 precinct scanners, each using a different modem carrier or technology (landline, AT&T, Sprint, and Verizon).

Findings:

Staff observed no anomalies and the system functioned as expected.

Source Code Review

NTS Huntsville (AL) performed the required source code review pursuant to U.S. Elections Assistance Commission (EAC) certification. The report referenced for this activity is: *NTS Huntsville Letter No. PR043775R-003. Subject: FL EVS 4.5.2.0 V1 – Source Code Review Report (May 19, 2016)*. BVSC accepts NTS' findings that the source code meets the requirements of the EAC 2005 VVSG.¹⁰

Conclusion

Qualification test results affirm that the voting system under test, *EVS Release 4.5.2.0, Version 1*, met applicable requirements of the Florida Voting Systems Standards, Florida Statutes and Administrative Rules, and HAVA for usability and accessibility. The Florida Division of Elections, Bureau of Voting Systems Certification, therefore, recommends certification of the referenced voting system.

¹⁰ *NTS Huntsville Letter No. PR043775R-003. Subject: FL EVS 4.5.2.0 V1 – Source Code Review Report (May 19, 2016)*. The NTS letter is on file with the Florida Division of Elections.

Appendices

Appendix A – Component Version List

[Redacted pursuant to section 282.318, Florida Statutes, and to the U.S. Department of Homeland Security's designation of elections as a critical infrastructure.]

Election Management System

[Redacted pursuant to section 282.318, Florida Statutes, and to the U.S. Department of Homeland Security's designation of elections as a critical infrastructure.]

[Redacted, continued]

[Redacted, continued]

[Redacted, continued]

Voting Devices

[Redacted pursuant to section 282.318, Florida Statutes, and to the U.S. Department of Homeland Security's designation of elections as a critical infrastructure.]

[Redacted, continued]

[Redacted, continued]

[Redacted, continued]

Ancillary Submission

[Redacted pursuant to section 282.318, Florida Statutes, and to the U.S. Department of Homeland Security's designation of elections as a critical infrastructure.]

Appendix B – Acronyms

ADA	Americans with Disabilities Act
BVSC	Bureau of Voting Systems Certification
CF	Compact Flash (memory cards)
COTS	Commercial off the Shelf (software/hardware)
dBA	Decibels, weighted
EAC	U.S. Election Assistance Commission
ECO	Engineering Change Order
EMS	Election Management System
ESS	Election Systems & Software, LLC
EVS	ElectionWare Voting System
F.S.	Florida Statutes
FVSS	Florida Voting Systems Standards
GB	Gigabytes
HAVA	Help America Vote Act
HDD	High Density Drive
LAN	Local Area Network
L&A	Logic and Accuracy (voting system test)
MB	Megabytes
PPP	Presidential Preference Primary election
TDP	Technical Data Package
USB	Universal Serial Bus
VSTL	Voting Systems Test Laboratory
VVSG	Voluntary Voting Systems Guidelines
XML	eXtensible Markup Language

Appendix C – Tables Index

Table 1. Mass Ballot Count details for DS200	8
Table 2. Acceptance criteria for DS200.....	9
Table 3. Sound pressure level test results - ExpressVote	10
Table 4. Battery life test results	12

Appendix D – Florida Division of Elections Recommended Changes

Excerpt from the *Voting System Qualification Test Report: Election Systems & Software, LLC: EVS Release 4.5.0.0, Version 4* (April 2015), pages 42-44.

2. *Certification of future upgrades or enhancements to the EVS Release 4.5.0.0, Version 4 voting system, or for extension of the provisional approval of the ExpressVote component, if granted, should be conditioned upon the vendor:*
 - a. *Eliminating the risk of errors in contest selection while programming an election.*
 - b. *Programming a user warning and/or confirmation dialog box in ElectionWare whenever text is used, rather than data fields, to generate the ballot styles. This is to prevent discrepancies between voter instructions and “vote for” numbers.*
 - c. *Improving the ballot card list order to be consistent, so that the first card and subsequent cards in a multi-card election appear in consistent order on the ExpressVote ballot style selection screen.*
 - d. *Enhancing the ExpressVote multi-card voting functionality to prevent voting of the same card more than once by the same voter.*
 - e. *Modifying the option to disable the AutoCast feature, which is currently a setting at the unit level (on each ExpressVote) so that it can be optionally overridden by a universal disable setting at the election definition level (in ElectionWare).*

. . . BVSC recommends provisional approval of the ExpressVote ballot marking device for use in any election conducted through May 1, 2017, with the ExpressVote ballot marking device to be used solely by persons with disabilities. The approval should be conditioned upon the vendor first making the necessary changes to its written documentation to reflect BVSC recommendations set forth in paragraph 1 under the subsection entitled “Continuous Improvement and Recommendations” for greater specificity, clarity, and guidance regarding use of the system. The use of the ExpressVote ballot marking device, if approved, is also subject, before use in any election, to future revisions to Rule 1S-2.032, F.A.C., to provide standards for the accessible audio-visual onscreen display of the ballot and the printed vote summary card in accordance with section 101.5608(3), Florida Statutes. Finally, BVSC does not recommend an extension of this provisional approval, if granted, or recommend the approval of any future release of this ExpressVote ballot marking device unless the issues in paragraph 2 of the Continuous Improvements/Recommendations section of this report are addressed or are no longer an issue.



Florida Department of State
KEN DETZNER
Secretary of State