

**South Dakota State Board of Elections**  
**ES&S Voting System (EVS) 6.0.4.0 State Certification**

Pursuant to South Dakota Codified Law (SDCL) § 12-17B-2, please accept this report as official application for certification of Election Systems and Software (ES&S) EVS 6.0.4.0. The testing of all equipment was conducted on July 22-24, 2019 in Pierre, SD.

**The following individuals were present:**

**ES&S**

State Certification Manager: Mark Manganaro

**South Dakota Secretary of State's office**

Secretary of State: Steve Barnett

Deputy Secretary of State: Jason Lutz

Director, Division of Elections: Kea Warne

State Election Coordinator: Christine Lehrkamp

HAVA Coordinator: Rachel Soulek

Elections & Federal Project Coordinator: Rory Mennenger

Election Assistant: Bailey Tibbs

**Other Participants**

Jackie Sieverding, Union County Auditor

Jane Naylor , Aurora County Auditor

Jennifer Deyo, Hughes County Auditor Staff

Kylie Stoddard, Hughes County Auditor Staff

Philena (Phil) Burtch, Stanley County Auditor

Susan Lamb, Sully County Auditor

Shawna Shaw, Potter County Auditor

Stefen Pluta, Department of Homeland Security

Jim Edman, Bureau of Information and Telecommunications

**System Testing Overview**

The components and versions of EVS 6.0.4.0 are as follows:

**Software**

ElectionWare, v. 5.0.4.0

- ElectionWare integrates the election administration functionality into a unified application. Its intended use is to define an election and create the resultant media files used by the ExpressVote, DS200 tabulator, DS450 tabulator, the DS850 Central Ballot Scanner, and Election Reporting Manager (ERM).

Event Log Service, v. 1.6.0.0

- ES&S Event Log Service is a Windows Service that runs in the background of any active ES&S Election Management software application to monitor the proper functioning of the Windows Event Viewer. The ES&S Event Log Service closes any active ES&S software application if the system detects the improper deactivation of the Windows Event Viewer.

Removable Media Service. v. 1.5.1.0

- Removable Media Service (RMS) is an application that runs in the background of the EMS client workstation and supports the installation and removal of election and results media.

## Hardware

### DS200 Central Digital Tabulator, v. 2.17.4.0

- Used in Aurora, Bon Homme, Haakon, Harding, Jerauld, Kingsbury, Sanborn, Perkins, Mellette, Corson, Campbell, Walworth & Ziebach counties
- DS200 digital tabulator is a paper ballot tabulator that is designed for use as a polling place tabulator or a central count tabulator, South Dakota counties will use as a central count tabulator. Both sides of the ballot are scanned at the same time using a high-resolution image-scanning device.

### DS450 Central Count Tabulator, v. 3.1.1.0

- Used in Clay, Lyman, Turner & Tripp counties
- The DS450 is a mid-range tabulator that simultaneously scans the front and back of a paper ballot and/or vote summary card. TruGrip™ technology insures that multiple sets of rollers are controlling the ballot in the transport at all times. This provides for reliable handling of ballots; even folded ballots. It can also read ballots in any of four orientations. It sorts tabulated ballots into discrete output bins without interrupting scanning.

### DS850 Central Count Tabulator, v. 3.1.1.0

- Used in Beadle, Brookings, Brown, Codington, Davison, Lincoln, Meade, Minnehaha and Pennington counties.
- The DS850 is a high-speed, digital scan central ballot tabulator that uses cameras and imaging algorithms to capture voter selections on the front and back of a ballot, evaluate results and then sort ballots into discrete bins without interrupting scanning. A dedicated audit printer generates a continuous event log. Machine level reports are produced from a second, laser printer. The scanner saves voter selections to an internal hard disk and exports results to a USB Memory stick for processing with ElectionWare Reporting Software.

### ExpressVote Universal Voting System, v. 2.4.5.0

- The ExpressVote is a universal voting device designed for all voters, with a printed voter-verifiable paper record. This system combines paper-based voting with touch screen technology. 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.
- The ExpressVote enables voters who are visually or physically impaired and voters more comfortable reading or hearing instructions to privately make their selections. The ExpressVote supports navigation through touchscreen, physical keypad or ADA support peripheral such as a sip and puff device.

## **Testing Overview**

During the test, the 500 ballots were split between five precincts including a split precinct in Precinct One. The SOS staff tested primary election and general election ballots. Tabulated ballots contained 10 choices and contained choices on both the front and back, except for the ExpressVote which prints all selections on one side. The ballots for testing were at least 90% fully voted with the remainder containing overvoted and undervoted ballots. An additional 15 ballots were also processed as absentee ballots in which each ballot was folded in the same manner as absentee ballots.

250 optical scan ballots were hand marked by staff which were then tabulated on a DS200, DS450 and DS850.

## **Description of ExpressVote Universal Voting Device Testing**

Pursuant to ARSD § 5:02:09:02.03, 250 ExpressVote pre-printed ballot cards were marked using three ExpressVote machines. Each card was accurately marked and displayed each race that was marked. Each card was then accurately tabulated pursuant to ARSD § 5:02:09:02.01 on a DS200, DS450 and DS850. The ExpressVote machine was unplugged and the battery back-up system was successfully tested to allow voting to continue uninterrupted for two hours without external power. One error message was displayed when a staff person tried to insert a primary election ballot, which the error message indicated that the machine was not programmed for that election. The ballot was ejected without opening the machine.

### **Description of Automatic Tabulating System Testing**

Pursuant to ARSD § 5:02:09:02.01, the 250 ExpressVote cards that were marked using the ExpressVote were then tabulated by a DS200, DS450 and a DS850. During the testing, the DS850 successfully detected the blank ballots and tabulated the optical scan ballots and the ExpressVote cards at a rate well over the required 15 ballots a minute. During the testing, the DS450 successfully detected the blank ballots and tabulated the optical scan ballots and the ExpressVote cards at a rate well over the required 15 ballots a minute. The DS200 correctly sorted the blank ballots by sorting them to a different side of the ballot box and accurately processed the ballots at a rate of 10 ballots per minute, the required time frame.

### **Conclusion**

All testing of the equipment was successful and met all requirements pursuant to codified law and administrative rule and EVS 6.0.4.0 is recommended for distribution in South Dakota with the ExpressPass exception. Attached is the Secretary of State's certification report and the Election Assistance Commission Grant of Certification and Certificate of Conformance.