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August 24, 2017

Ms. Kari Fresquez, Elections Director
Bureau of Elections
New Mexico Office of the Secretary of State
325 Don Gaspar, Suite 300
Santa Fe, NM 87501

sent via electronic mail

Ms. Fresquez:

Dominion Voting hereby requests certification by the New Mexico Secretary of State of the Democracy Suite 5.4 voting system; a modification of the previously certified 4.14 system. Specifically, we seek approval for:

Democracy Suite Election Management System v5.4.17.5 – application software used to manage the election workflow, from import of election definition information, ballot layout, voting machine programming and pre-election test, Election Night reporting, and post-election activities.

Democracy Suite Adjudication v5.4.17.3 – application software used to allow ballots with exceptions or out-stack conditions such as over-votes, blank ballots, write-ins and marginal marks to be resolved on-screen and sent to tally.

ImageCast® Evolution v5.4.8.3 – an accessible voting machine that combines an optical scanner and a ballot marking device, suitable for use by all voters while complying with the accessibility requirements of the Help America Vote Act and the 2005 Voluntary Voting System Guidelines (VVSG).

ImageCast Precinct v5.4.2.001 – a lightweight optical scanner for in-precinct use. The ImageCast Precinct can optionally be configured to provide accessible voting.

ImageCast Central v5.4.2.1 – a high-speed absentee ballot central scanning solution that utilizes Canon brand scanners (DR-X10C and DR-G1130).

This letter includes a point-by-point commentary on the items in the *2015 Election Handbook* that apply to voting systems to aid the examination committee in better understanding the Democracy Suite 5.4 system. Enclosed with this letter is the Technical Data Package (TDP) for this system along with its promotional materials and other States' approvals of this or other versions of the Democracy Suite system. As there is considerable documentation to cover the system, I recommend that any reviewers start with 2.02 – System Configuration and Overview Guide. The Overview Guide provides introductory material for the system, with some degree of detail regarding its components and their specifications. From there, documents starting with 2.03, 2.04, 2.05, and 2.06 contain detailed specifications of system hardware, software, and security. Documents starting with 2.08, 2.09, and 2.10 as well as User Guides describe how the system is set-up, operated, and maintained. Also included are the New Mexico User Guide documents.

The contents of the disk media will be encrypted due to the proprietary nature of the materials. Once you've received the disk, please contact me and I will provide you with the passphrase for decrypting the contents.



U.S. Election Assistance Commission (EAC) Test Reports and Certificates of Conformance can be found on the EAC's public website (<https://www.eac.gov/voting-equipment/system-certification-process/>) under the "Certified Systems" listing.

We look forward to working with you toward the certification of Democracy Suite 5.4 in the State of New Mexico.

Sincerely,

A handwritten signature in black ink that reads "Jessica Bowers". The signature is written in a cursive, flowing style.

Jessica Bowers
Manager, Certification Compliance

New Mexico requirements and Democracy Suite 5.4, Summary

1-9-7.1. Voting system; use of paper ballot.

A. All voting systems used in elections covered by the Election Code [Chapter 1 NMSA 1978] shall use a paper ballot on which the voter physically or electronically marks the voter's choices on the ballot itself.

Democracy Suite 5.4 is an optical scan voting system. Voters with accessibility needs mark their ballot using the ImageCast® Evolution, generating a paper ballot.

1-9-7.7. Voting systems; technical requirements.

Voting systems certified for use in state elections shall:

A. have a unique embedded internal serial number for audit purposes;

Each unit carries a serial number in non-volatile internal memory, given to the unit at the time of its manufacture.

B. be supplied with a dust- and moisture-proof cover for transportation and storage purposes;

Each ballot box has a top cover for this purpose; individual units can be transported in a dust and moisture proof case.

C. if the net weight of the system, or aggregate of voting device parts, is over twenty pounds, have self-contained wheels so that the system can be easily rolled by one person on rough pavement and can roll through a standard thirty-inch door frame;

All ballot boxes have casters, are designed to be moved by one person, and fit through a 30 inch door.

D. be a stand-alone, non-networked election system such that all pre-election, election day and post-election events and activities can be recorded and retained in each device;

Dominion recommends strongly that the election systems never be attached to the Internet or other network. Democracy Suite 5.4 is capable of operating in this manner.

E. employ scalable technology allowing easy enhancements that meet United States Election Assistance Commission standards and state law;

Democracy Suite 5.4 has a variety of scalable configurations and platform options. It has been certified by the U.S. Election Assistance Commission (EAC) to the VVSG 2005 requirements.

F. have ancillary equipment, such as printers, power sources, microprocessors and switch and indicator matrices, that is installed internally or is modular and transportable;

All necessary printers, power supplies, and similar ancillary devices required for precinct use are built into the voting machine or ballot box.

G. display publicly the number of ballots processed;

The ImageCast Precinct scanner and the ImageCast Evolution scanner both continuously show the number of ballots processed (Public Counter) when polls are open.

H. be able to print:

- (1) an alphanumeric printout of the contests, candidates and vote totals when the polls are opened so that the poll workers can verify that the counters for each candidate are on zero;*
- (2) an alphanumeric printout of the contests, candidates and vote totals at the close of the polls, which printouts shall contain the system serial number and public counter total; and*
- (3) as many copies of the alphanumeric printouts as necessary to satisfy state law; and*

All ImageCast equipment is capable of printing reports to these specifications. They also allow the jurisdiction to program a default number of report copies and allow the pollworker to print additional report copies as needed.

I. include a feature to allow reports to be sent to an electronic data file.

Reports can be exported to Excel, pdf, and other formats at the jurisdiction's discretion.

1-9-7.8. Voting systems; operational requirements.

Voting systems certified for use in state elections shall:

A. have internal application software that is specifically designed and engineered for the election application;

All internal application software is produced by Dominion Voting Systems, specifically for elections.

B. include comprehensive diagnostics designed to ensure that failures do not go undetected;

All scanners have a Power-On Self-Test (POST) as well as continuous monitoring of all critical functions so that malfunctions result in immediate warning to the pollworker and in unrecoverable situations, unit shutdown.

C. have a real-time clock capable of recording and documenting the total time polls are opened; and

All scanners have a real-time clock. Poll opening and closing events are recorded in the unit's audit log.

D. have a self-contained, internal backup battery that powers all components of the system that are powered by alternating current power; and, in the event of a power outage in the polling place:

- (1) the self-contained, internal backup battery power shall engage with no disruption of operation for at least two hours and with no loss of data; and*

(2) the system shall maintain all vote totals, public counter totals and the internal clock time in the event that the main power and battery backup power fail.

All scanners contain an internal battery tested to maintain at least two hours of operation. In the event that battery power is exhausted, all vote totals, counters, clock time, and any votes cast and confirmed to a voter are saved.

1-9-7.9. Voting systems; memory; removable storage media device; requirements.

Voting systems certified for use in state elections shall:

A. be programmable with removable storage media devices;

Each ImageCast scanner, as well as Central Count scanners, are programmed through Compact Flash cards.

B. contain ballot control information, summary vote totals, maintenance logs and operator logs on the removable storage media device;

These items are carried on the Compact Flash cards for each scanner, and can be uploaded along with results from that scanner.

C. ensure that the votes stored on the removable storage media device accurately represent the actual votes cast;

ImageCast Precinct and ImageCast Evolution utilize a pair of Compact Flash cards, writing results information to each one and checking that written information so that the accuracy of the information on each card is ensured. Mismatches in card content cause the unit to give a warning message then shut down.

D. be designed so that no executable code can be launched from random access memory;

ImageCast scanners are protected from code being launched from random access memory. The firmware for each unit is encrypted and signed when placed in the unit and only that code will execute on the scanner.

E. have any operating system software stored in nonvolatile memory, which shall include internal quality checks such as parity or error detection and correction codes, and which software shall include comprehensive diagnostics to ensure that failures do not go undetected;

The operating system for the scanners is stored in non-volatile memory on each unit. Each unit undergoes a Power-On Self-Test (POST) to ensure the integrity of its firmware prior to allowing polls to be opened.

F. allow for pre-election testing of the ballot control logic and accuracy, with results stored in the memory that is used on election day, and shall be capable of printing a zero-results printout prior to these tests and a results printout after the test;

Pre-election logic and accuracy testing is accomplished using the same compact flash cards in each unit that will be utilized on Election Day. Zero tapes are available at the start of pre-election logic and accuracy test as well as Election Day. Results tapes are also available after pre-election logic and accuracy testing and Election Day.

G. have internal audit trail capability such that all pre-election, election day and post-election events shall be stored, recorded and recovered in an easy-to-read printed form and be retained within memory that does not require external power for memory retention;

Each ImageCast scanner, as well as the central election management software maintain audit trails in accordance with VVSG 2005 requirements. These can be recovered in soft files and printed to hard copy as desired. The logs are stored on the Compact Flash cards in the scanners until uploaded to the election management software.

H. possess the capability of remote transmission of election results to a central location only by reading the removable storage media devices once they have been removed from the tabulation device after the poll closing sequence has been completed; and

The Democracy Suite 5.4 system accommodates remote transmission sites wherein the Compact Flash cards containing results and logs are removed from the scanners and the contents transmitted subsequent to that removal.

I. prevent data from being altered or destroyed by report generation or by the transmission of results.

Report generation and transmission do not affect the raw results or logs. This applies to both the scanners and the election management software.

1-9-7.10. Voting systems; ballot handling and processing requirements.

Voting systems certified for use in state elections shall:

A. accept a ballot that is a minimum of six inches wide and a maximum of twenty-four inches long, in dual columns and printed on both sides;

ImageCast scanners meet this requirement, being able to scan 8.5 inch by 11, 14, 17, 20, and 22 inch ballots, two to four columns, double-sided.

B. accept a ballot in any orientation when inserted by a voter;

Any of the four possible orientations are read by ImageCast scanners.

C. have the capability to reject a ballot on which a voter has made more than the allowable number of selections in any contest;

Overvoted contests will cause a ballot to be rejected by the scanner.

D. be designed to accommodate the maximum number of ballot styles or ballot variations encountered in the largest New Mexico election jurisdiction; and

Democracy Suite is designed to accommodate the largest jurisdictions in the United States and can easily accommodate New Mexico jurisdiction geographic and ballot layout needs.

E. be able to read a single ballot with at least four hundred twenty voting positions.

Democracy Suite can prepare ballots with 462 ballot positions.

1-9-7.11. Voting systems; source code; escrow.

As a condition of initial certification and continued certification, the source code that operates a voting system shall be placed in escrow and be accessible to the state of New Mexico in the event the manufacturer ceases to do business or ceases to support the voting system.

Dominion utilizes the NCC Group as a third party escrow agent. The State of New Mexico has been given beneficiary status for the escrowed products of this system configuration. The release conditions meet the state's requirements.

1-9-13. Voting system technicians.

A. Voting system technicians shall be trained and certified by the secretary of state as to their adequacy of training and expertise on voting systems certified for use in the state.

Dominion has a variety of training courses and materials to aid in compliance with this requirement.