Minutes
State Election Commission Meeting
December 5, 2023

The State Election Commission meeting was called to order by Chairman Jimmy Eldridge at 12:05p.m., Central Daylight Time, December 5, 2023.

The following members and staff were present: Commissioners Blackburn, Eldridge, McDonald, Meadows, and Smith; Commissioner Younce participated by phone; Coordinator of Elections Mark Goins and Kathy Summers, Elections Specialist.

Public Comment – See attached list of persons who signed up for Public Comment.

Presentation of Nationally Recognized Presidential candidates for the Presidential Preference Primary

Pursuant to TCA § 2-5-205(a)(1), Secretary of State Tre Hargett submitted names certified by the statewide political parties as candidates to be placed on the March 5, 2024, to the State Election Commission. **(See attached memorandum from Secretary Hargett.)**

Secretary of State Tre Hargett, pursuant to TCA § 2-5-205(a)(2), also informed commission members Congressman Dean Phillips filed a petition with the State Election Commission by 12:00 Noon on December 5, 2023. Secretary Hargett advised the petition will need to be verified with two thousand five hundred (2,500) valid signatures of registered voters from Tennessee to be placed on the March 5, 2024, ballot. **(See attached memorandum from Secretary Hargett.)**

Commissioner McDonald made a motion to adopt the October 9, 2023, minutes, seconded by Commissioner Blackburn. (Aye votes: Blackburn, Eldridge, McDonald, Meadows, and Smith; No votes: None; Abstention: None.)

Commissioner Smith made a motion to adopt the November 9, 2023, telephonic minutes, seconded by Commissioner Blackburn. (Aye votes: Blackburn, Eldridge, McDonald, Meadows, and Smith; No votes: None; Abstention: None.)

Commissioner Blackburn made a motion pursuant to TCA. § § 2-12-101 and 2-12-106 to approve any nomination(s) for county election commission appointments submitted, and to leave the nomination process open until 4:30 p.m. Central Daylight Time, Tuesday, December 5, 2023, seconded by Commissioner McDonald. (Aye votes: Blackburn, Eldridge, McDonald, Meadows, and Smith; No votes: None; Abstention: None.) **(See attached county election commission appointments made.)**

Old Business

Commissioner Smith discussed cast vote records and whether they are considered public records. Coordinator Goins stated he will need to research the issue further before discussing with the commission.

New Business

- **Hart InterCivic – Verity 2.7 – Voting Machine Demonstration**

Tyson Gosch, Certification Project Manager and Dan Gosser, Certification Manager gave the presentation and demonstration to the State Election Commission members. **(See attached information provided by Hart InterCivic.)**

Coordinator Goins discussed Hart InterCivic's request, advising their request is a software upgrade and their voting machine upgrade is EAC certified. Coordinator Goins stated per the State Election Commission policy the commission may either review the voting machine in use in another state or the commission may at their discretion review letters of recommendation from users in other jurisdictions as support for approval.

Commissioner Smith made a motion for Hart InterCivic to have jurisdictions using Verity 2.7, to submit questionnaires to the commission for review and approval at their next meeting, seconded by Commissioner McDonald. (Aye votes: Blackburn, Eldridge, McDonald, Meadows, and Smith; No votes: None; Abstention: None.)

Coordinator Update

- Congressman Dean Phillips was to file a certified copy of his presidential petition with the Tennessee Democratic Party by NOON and the party has advised the petition was not timely filed by NOON.
- The Republican ballot for the March Presidential Preference Primary will be a long ballot with all the delegate candidates.
- Coordinator Goins anticipates thirty percent (30%) of voters will vote early in the Presidential Preference Primary.

Meeting was adjourned at 1:22 p.m. Central Time.

The next regularly scheduled meeting is set for January 8, 2024, at 12:00 Noon, Central Standard Time in the Nashville Room of the William R, Snodgrass – TN Tower Conference Center.

Respectfully submitted,

Mike McDonald

Mike McDonald - Secretary
State Election Commission

State of Tennessee

State Election Commission
312 Rosa L. Parks Avenue, 7th Floor
Nashville, Tennessee 37243-1102

Vacant Status

December 5, 2023

Jackson R Kent Younce / D Mike McDonald

R

Loudon R Judy Blackburn / D Secondra Meadow

D

Warren R Kent Younce / D Mike McDonald

R

Total Vacancies: 3

State of Tennessee

State Election Commission
312 Rosa L. Parks Avenue, 7th Floor
Nashville, Tennessee 37243-1102

New Appointment Status

December 5, 2023

		Appointment
Jackson	R Kent Younce / D Mike McDonald	
	R Irene Elizabeth Hamilton	12/5/2023
Loudon	R Judy Blackburn / D Secondra Meadows	
	D Laurence John Best	12/5/2023
Warren	R Kent Younce / D Mike McDonald	
	R Lori Carol Anderson	12/5/2023

Total New Commissioners: 3

State Election Commission Meeting
Public Comment Sign Up Sheet
Meeting Date December 5, 2023

The Commission shall allow a maximum of six (6) people to speak during the public comment period. If more than six (6) individuals sign up to speak in a meeting, a lottery will be utilized to determine the speakers. The Commission will take all practicable steps to ensure that opposing viewpoints are represented fairly including giving each view point an equal number of speakers, if any.

No.	Printed Name	Street Address	City/State/Zip	Agenda Topic	For/Against Topic or Neutral
01	Christine Kramer	2000 Glenwood Ave	Colton, CA 92324	Ballot Access –	For Access Phillips – Williamson Ungi
02	Carl Allison	1817 Cynthiana Ln	Franklin, TN 37067	County Election Commision	Neutral
03	Elise Farrell	188 Front St.	Franklin TN 37064	County Election Commission	Neutral
04					
05					
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10					
11					
12					

November 5, 2023

State of Tennessee Elections Board
312 Rosa Parks Avenue
7th Floor
Nashville, TN 37243

Re: Democratic Presidential Preference Primary Ballot Access

Dear Election Commissioners,

We prevail upon the gathered commissioners to look into the denial of ballot access to the following Democratic Party Presidential candidates by its State Party and render within the limits of this committee a finding as to if the process was fair and considered the rights of Tennessee Voters to determine the candidate that best represents their Presidential Preference.

The following candidates were reasonably known to the Tennessee Democratic Party for their consideration in advance of its November 13, 2023 determination.

Dean Phillips

- Filed FEC candidacy paperwork on October 26, 2024
- Democratic Party Candidate Affirmation Oath Filed by tracked mail delivery with the Democratic Party on November 1
- Acknowledgment from the DNC of receipt on November 2, 2023
- Dean Phillips is a 3 term Congressman from the State of Minnesota who has also served on the Communications Committee of the Democratic National Committee
- All required documents under the Delegate Selection Plan were mailed to the state party
- Media stories as of the time this committee met were consumed over 13 billion times in National Media which is demonstrative of a point that any qualified political professional would have been aware of the existence of the campaign

Report Generated:	13 Nov 2023 02:06:13 UTC
Story Count:	174
Audience:	232,662,403
Nielsen Audience:	3,734,680
Nielsen Radio Audience:	20,600
Unique Visitors:	228,907,123
Ad Value:	$8,747
Calc Ad Value:	$247,379
Calc Publicity Value:	$742,139
Runtime:	17:46
Word Count:	64,999
Average Stay:	12248.98
Attention:	0.0000
Rank:	117,909,987
Page Views:	13,144,917,190

Source: NewsPowerOnline Media service

Marianne Williamson

- Filed with the FEC on February 12th, 2023
- Filed Presidential candidate affirmation oath to DNC on
- Ran for President of the United States in 2020 -
- Marianne Williamson was on the Tennessee ballot in 2020.
- Williamson participated in three DNC sanctioned debates in 2020.
- Has a social media following of 2.7 million followers on X (Twitter), over half a million followers respectively on Facebook, Instagram, TikTok, etc.
- Has campaigned in Tennessee - speaking at pro-LGBTQ events in Johnson City, a guest of honor at the Nashville pride parade, and multiple campaign events around the state.

Cenk Uygur

- Filed with the FEC on October 11, 2023
- Is a nationally known CEO of TYT, the world's largest online news outlet, and host of The Young Turks
- Ran for Congress in the 25th district of California in 2020
- Sent both a letter to the Secretary of State of Tennessee and an email to the State Party Chair prior to the deadline.

Thank you for your kind consideration of these issues and all that you do to ensure that the voters of Tennessee are able to participate in free and fair elections that reflect their Presidential Preference.

Christine Kramar
National Director Ballot Access and Delegates
Dean Phillips for President

CITIZEN TRUTH REVIEW
Introduction

- March 8th 2023 – Commissioner Christopher Richards held a town hall for citizens to express their views on buying BMDs.
- May 4th 2023 – WCEC wrote a letter to CC in advance of presenting a resolution to purchase BMDs.
- May 8th 2023 – CC monthly meeting the resolution was presented. The WCEC representative was questioned during the meeting. The resolution was defeated.
- May 18th 2023 – WCEC meeting the election commission voted to again to propose the same resolution that was previously defeated but to add a $30,000 to $50,000 proposal to study hand marked paper ballots for the future.
- Jun 12th 2023 – CC monthly meeting the resolution was presented as amended. The WCEC representative again spoke at the meeting. The resolution passed.

The proposed resolutions by the WCEC ignored a history of comments from citizens via emails, public statements at the CC & WCEC, and the town hall meeting. However, most troubling to citizens was the inaccurate citing of sources by the WCEC that may well have swayed Commissioner's votes. At the CC meetings, citizens were not allowed to rebut the WCEC's statements or present the testimony of experts to provide balance to the WCEC's arguments.

County Commissioners cannot be experts on every subject and must rely on county staff and commissions to present correct information. We submit that the May 4th letter, as well as the representations made on May 8th and June 12th, are examples of presenting misleading information to achieve the goal of acquiring voting machines, despite the valid concerns expressed by citizens.

The following "Citizen Truth Review" identifies and documents with factual sources examples where misinformation was used, and presents pertinent data that should have been shared with Commissioners in order to present fair and balanced information. The authors have gone to great lengths to present documented facts that are backed up with footnotes and links to sources.

It is particularly critical for governmental and community leaders to require accurate and correctly documented facts to make informed decisions. The following document was created to bring to light the misinformation that was provided by the WCEC.

Citizen's Truth Review

	WCEC Allegations	The Truth WCEC did not publicly disclose to Commissioners
A.	**May 4 WCEC letter misrepresentations**	
1	WCEC argues against Hand Marked Paper Ballots (HMPB), citing National Academies of Science, Engineering, Medicine (NA)[1a]	The NA actually recommends both HMPB and BMD systems (P. 6). The NA states "voter-marked paper ballots are the **standard** for usability..." and "This has prompted calls for hand-marked (opposed to BMD-produced) paper ballots whenever possible" (P. 79). The National Academies along with many university cyber teams and Ph.D. professors **strongly support HMPB** over BMDs.[1b, 1c, 1d, 1e, 1f, 1g, 1h, 1i, 1j]
2	WCEC said "Ballot box 'stuffing' on a large scale is not a hypothetical risk," therefore, they should not go to HMPB.[2a] The WCEC cited 750 cases from the Heritage Foundation Election Fraud database.	The cited cases are not applicable to the process citizens are requesting, which is HMPB + optical scanners in precincts. This is an inaccurate citing for the source to object to HMPB in a polling location.[2b,2c]
3	WCEC states, "Studies have shown that the error rate of recording true voter intent with Hand-Marked Paper Ballots to be as high as 5%... WCEC experience mirrors this for Mail-in Absentee Voting..."[3a] WCEC says, "a system exclusively of Hand-Marked Paper Ballots is 3 to 5 times more error prone than the current system used in Williamson County." [3b]	WCEC specifically chose a cited source with a **34 Senate candidate race**, which is an aberration.[3c] The two statements made by WCEC are misleading for several reasons: (1) the high 4.9% error is based on a central tabulator (without the possibility of self-adjudication) plus the 34 candidate aberration; (2) without the aberration, the central tabulation error rate in this cited source is listed as 0.9%; (3) these statements are being used to discount all uses of HMPB based on a small % of HMPBs that have always been used, which is the absentee ballot (which have never had the possibility of self-adjudication, that has always been allowed); (4) if using HMPB in precincts, as requested by citizens of Willco, the same study shows the error rate to be a low of 0.7% (without aberration) to high 1.4% (with aberration), much lower than the 5% cited by WCEC; (5) WCEC cited source states HMPB in precinct is actually an advantage, because tabulators alert voters to errors; (6) the state of Washington uses HMPB for millions of voters and has a low reject rate of 0.72%. This is with no in-person voter self-adjudication and the 0.72% includes signature mismatch rejects. [3d,3e,3f,3g]
4	WCEC states, "Without stringent chain of custody controls, Hand-Marked Paper Ballots are highly vulnerable to tampering. Once a ballot is added to the ballot box, there is no way to determine if it is legitimate or not." "Similarly, Hand-Marked Paper Ballots can be destroyed and manipulated."[4a]	Voter electronic data & records can be destroyed and manipulated by a single keystroke. Multiple experts denounce BMDs as easily manipulable, errors not auditable[4b] & a high security risk. Without stringent chain of custody controls, BMD vote systems are **extremely** vulnerable to tampering. [4c, 4d, 4e, 4f, 4g, 4h, 4i] Whether it is a BMD barcode ballot or a HMPB, once it is added to a ballot box, there is no way to determine if it is legitimate and there are documented machine vote manipulations.[4j] However, HMPB's can have security features in the paper, have unique features from hand marking, and utilize random & unique control numbers, whereas, BMD codes are susceptible, which is the reason the State of Colorado banned them. [4k]
5	WCEC says it completed a thorough request for proposal (RFP) and that it was "asked to consider implementing Hand-Marked Paper Ballots ..."[5a]	WCEC only did a RFP for a BMD system and did **NOT** do a RFP for HMPB.[5b,5c] WCEC did not clarify this point with CC. WCEC alleges they listened to citizens' HMPB request for over two years, but still did not do a RFP for HMPB.
6	WCEC says HMPB "would cost Williamson County more to implement."[6a]	The WCEC information is incorrect because (1) the BMD proposal failed to include an additional ~$200K necessary for 3 more vote centers;[6b,6c] (2) a HMPB + optical scanners capital cost is estimated at $800K gross total, one-half the cost of WCEC BMD system;[6d, 6e, 6f] (3) Pennsylvania state-wide actual costs show HMPB + OS is **half the cost** as a full BMD model; [6g] (4) Georgia studies show significantly higher YOY BMD costs; (5) there is no analysis of full life-cycle costs of BMD's vs. HMPB's YOY, which would include IT staff, support and maintenance contracts, breakdowns of equipment, transportation and secure storage, purchase of new machines once they reach end of life, etc. [6h, 6i, 6j, 6k, 6l]

7	WCEC states, "we were notified by the SSDOE [Secretary of State Division of Elections] that we could no longer use the election equipment [the Dominion system]."[7a]	In the SSDOE Feb 2022 letter to the WCEC, the SSDOE recommends, but does not mandate, removal of the Dominion system.[7b] By removing Dominion, WCEC wasted $1.5MM in usable 2019 equipment[7c] only to request the state and county cover rental & capital payments for a **similar system** costing an additional $1.6MM [7c] for a county that has a debt greater than **$1.2 billion**.
B.	**May 8th CC & June 12th CC meetings, WCEC verbal misrepresentations**	
8	In May 8 CC meeting, WCEC gives example of absentee ballots (HMPBs) where voter intent is unclear and ballots are not counted. Therefore, WCEC says they cannot recommend a HMPB voting system.[8a]	The absentee HMPB system is not changing. The HMPB + optical scanner model the citizens are requesting confirms if ballots have no errors (Voter Verified Self-Adjudication). If a ballot needs to be corrected, voter can correct on the spot with no impact to efficiency.[8b,8c,8d] WCEC **must or should know about self-adjudication.**
9	The WCEC was questioned in the May 8 meeting about long lines with BMDs (vote times). WCEC stated the Aug & Nov 2022 experienced long vote lines all across TN with HMPB and BMDs, so BMD is not the issue. WCEC solution is to add more vote centers and machines.[9a] WCEC noted citizens have stated HMPB provide more reliability, but they say their findings have found the opposite.[9b]	We question the WCEC statement regarding the Aug and Nov 2022 elections because the WCEC provided no evidence that HMPB vote times were as long as BMD vote times anywhere in the state. WCEC provided no evidence a precinct HMPB + optical scanner system is less reliable than an all-BMD machine voting system. In general, HMPB stations can be twice as fast as BMD stations[9c] and a university 10,000 simulation shows touchscreens can create long lines that HMPBs do not.[9d] Poll workers and poll watchers in multiple elections have observed that BMDs are the slowest part of system, because (1) BMDs break down, reducing reliability; [9e,9f] (2) BMDs require startup time; (3) BMDs require extra steps for verification; (4) BMDs require time to print summary cards; (5) BMDs require humans to explain system to voters; (6) booths remain open because not enough poll workers to explain the system; (7) BMDs malfunction requiring multiple tries to get votes recorded; (8) poll workers and poll watchers confirm voters are disenfranchised because they cannot wait in long BMD lines; (9) BMDs cannot handle influx in voters like HMPBs; (10) In poll working training, technicians noted there can be BMD calibration issues as also noted in decades of elections. [9g,9h] (11) "Simple error situations required rebooting the device. This can easily create long lines...."[9i] The WCEC proposed solution to shorten wait times equates to hundreds of thousands of dollars in additional costs that the county does not have and more machines will not solve the vote time problem and does **not** resolve the BMD reliability issue.
10	WCEC stated in June 12 CC meeting that vote centers were successful because of a 9% voter increase from Nov. 2016 to Nov. 2020 presidential elections.[10a]	The SOS voter turnout statistics show a 6.68% increase from 2016 to 2020. Vote centers empirically did not increase voter turnout based on SOS statistics from 2000 – 2020 for presidential elections.[10b, 10c, 10d] Maury County and Williamson County estimated population increases were both around 12% to 13%.[10e,10f,10g, 10h] National Media data shows both Maury County and Williamson County increased actual votes by 31% from Nov. 2016 to Nov. 2020. Yet, Maury County is a **precinct county**, not a vote center county.[10i] Therefore, vote centers make no impact to voter turnout over precincts. Therefore, Williamson County data does **not** show vote centers increasing voter turnout.

REFERENCES:

1a. Grey, Chad. Duda, Jonathan. WCEC letter to TN Williamson County Commissioners. 4 May 2023. page 5
1b. National Academies of Science, Engineering, & Medicine (NA). "Securing the Vote: Protecting American Democracy." 2018, pages 6 & 79. https://nap.nationalacademies.org/catalog/25120/securing-the-vote-protecting-american-democracy
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1j. Geller, Eric. Vasquez, Christian. Hermani, Jordyn. "Cybersecurity – State election officials opt for 2020 voting machines vulnerable to hacking." Politico. 1 March 2019. https://www.politico.com/story/2019/03/01/election-vulnerable-voting-machines-1198780

2a. Grey, Chad. Duda, Jonathan. WCEC letter to TN Williamson County Commissioners. 4 May 2023. page 3
2b. Heritage Foundation. "Election Fraud Cases - https://www.heritage.org/voterfraud/search
2c. Allison, Carl. "Williamson County WCEC May 4th 2023 Letter Review V2." 11 June 2023, page 9 Heritage Foundation table Election Fraud database. https://tennesseeelectionintegrity.com/wp-content/uploads/2023/06/Carl-Allison-letter-why-cant-trust-WCEC-voting-machine-assessment-V2-061223.pdf

3a. Grey, Chad. Duda, Jonathan. WCEC letter to TN Williamson County Commissioners. 4 May 2023. page 3
3b. Grey, Chad. Duda, Jonathan. WCEC letter to TN Williamson County Commissioners. 4 May 2023. page 4
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3d. Kimball, Ph.D. David (University of Missouri-St. Louis), Kropf Ph.D., Martha (University of North Carolina-Charlotte). "Analysis of Overvotes in the 2016 California Senate Primary Election."
https://work.civicdesign.org/civicdesign-staging/wp-content/uploads/2016/04/Analysis-of-Overvotes-2016-Senatt-Kimball-Kropf.docx ; Page 2 "The critical voting equipment feature involves whether ballots are tabulated at polling places or at the central county election office... One advantage of the polling place tabulators is that those machines are designed to prevent overvotes or alert voters when there is an overvote on their ballot... The overvote rate in the Senate primary was 4.1% of ballots cast in counties using a central tabulation system. In counties that tabulated ballots at polling places the overvote rate was 1.1%."
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https://www.nbcnews.com/politics/elections/online-vulnerable-experts-find-nearly-three-dozen-u-s-voting-n1112436
4j. Heritage Foundation, Election Fraud Cases, - https://www.heritage.org/voterfraud/search; Example #1: "He conspired with Domenick Demuro and Marie Beren, Judges of Elections for each ward by bribing them to add additional fraudulent votes to voting machines for candidates." Example #2: "She then stepped out of the voting booth, spoke to Murtaugh (who was serving as the minority elections inspector at the polling place), signed the election register under her 23-year-old son's name, reset the voting machine, returned to the voting booth, and cast a ballot in his name."
4k. Griswold, Jena. "Colorado Secretary of State Takes Action to Increase Cyber Security, Announces Initiative to Remove QR Codes from Ballots." State of Colorado News Release. 16 September 2019.
https://www.sos.state.co.us/pubs/newsRoom/pressReleases/2019/PR20190916QRCodes.html

5a. Grey, Chad. Duda, Jonathan. WCEC letter to TN Williamson County Commissioners. 4 May 2023. page 2
5b. June 10 2023 conversation with County Commissioner Christopher Richards confirmed June 10 2023 Jonathan Duda emailed CC Richards that the WCEC did not complete a HMPB RFP.
5c. Richards, Christopher. County Commissioner 7th District. "Williamson County Board of Commissioners Meeting." WC-TV, 12 June 2023. time stamp 1:39:04. https://youtu.be/FaisQoTNKSU?t=5944

6a. Grey, Chad. Duda, Jonathan. WCEC letter to TN Williamson County Commissioners. 4 May 2023. page 3
6b. June 10 2023 conversation with County Commissioner Christopher Richards confirmed that Jonathan Duda noted, on June 10 2023, the State of TN will cover cost for all equipment deployed pre-February 2022 with 200 of the 300 Dominion BMDs deployed at that time. Therefore, a precinct hand marked paper ballot, optical scanner, and ADA options will be fully covered by State of TN agreement of deployed pre-February 2022, post equipment vendor discounts. Yet, the WCEC's desire for 3 extra vote centers ~+28 BMDs would not be covered by state and it's scope was separated out for 2024 budget.
6c. 200 BMDs = 25 vote centers, so 8 avg BMDs. So, +24 BMDs & +18 express vote printers for 3 new vote centers.
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Williamson County Election Commission
405 Downs Blvd
Franklin, Tennessee 37064
(615) 790-5711
Fax (615) 790-5617
www.williamsonvotes.net

May 4, 2023

Williamson County Election Commission
405 Downs Blvd
Franklin, TN 37064

Re: Resolution 5-23-27

Honorable Commissioners,

The Williamson County Election Commission has completed a Request for Proposal (RFP) for the procurement of an election system in order to operate the elections for Williamson County. With Resolution 5-23-27, we are requesting authorization from the Williamson County Commission to fund the purchase of election equipment and also authorize the County Mayor to enter into necessary agreements to complete the purchase with Election System and Software (ES&S), with funding assistance from the State of Tennessee.

The purpose of this letter is to summarize how we arrived at our decision, and to address questions that we have received as we completed this process.

Executive Summary

Having completed a thorough Request for Proposal (RFP) and extensive evaluation of the various options that exist in procuring an election system to conduct elections for Williamson County, it is the considered judgement of the Williamson County Election Commission to proceed with a purchase of a configuration of election equipment that includes Ballot Marking Devices, Scanner Tabulators and the ExpressVote ballot style provisioning enhancement from ES&S.

Background

Although a Department of Williamson County, the Williamson County Election Commission (WCEC) is an extension of the State Election Commission, under Secretary of State, Tre Hargett. We must operate under the laws of the State of Tennessee. Our primary duty is to operate the elections for the 167,226 actively registered voters of Williamson County.

In Tennessee, all election systems must be approved by the Secretary of State Division of Elections (SSDOE). Each system must be certified under the federal Election Assistance Commission (EAC), and the State Election Commission.

On February 16, 2022, following an investigation into issues that we had experienced during the Franklin City Election of October 2021, we were notified by the SSDOE that we could no longer use the election equipment that we had previously purchased to conduct elections in Williamson County. This letter stated, in pertinent part:

> *Given the questions regarding the cause of the issue in the Franklin City Election, the voting system cannot be used in its current configuration in 2022. Although the May election is approaching quickly*

State of Tennessee

The Secretary of State
State Capitol
Nashville, Tennessee 37243-0305

Tre Hargett
Secretary of State

615-741-2819
Tre.Hargett@tn.gov

MEMORANDUM

To: Tennessee State Election Commission
Jimmy Eldridge, Chairman
Mike McDonald, Secretary
Donna Barrett, Commissioner
Judy Blackburn, Commissioner
Secondra Meadows, Commissioner
Bennie Smith, Commissioner
Kent Younce, Commissioner

From: Tre Hargett
Tennessee Secretary of State

Date: December 5, 2023

Subject: List of Candidates Certified by Parties for Presidential Preference Primary

CC: Scott Golden, Chairman, Tennessee Republican Party
Hendrell Remus, Chairman, Tennessee Democratic Party

Pursuant to T.C.A. § 2-5-205(a)(1), I submit the following names certified by the chairs of the statewide political parties as candidates to be placed on the March 5, 2024, Presidential Preference Primary ballot:

Republican Primary Ballot

Ryan Binkley
Doug Burgum
Chris Christie
Ron DeSantis
Nikki Haley
Asa Hutchinson
Vivek Ramaswamy
David Stuckenberg
Donald J. Trump

Democratic Primary Ballot

Joseph R. Biden

State of Tennessee

The Secretary of State
State Capitol
Nashville, Tennessee 37243-0305

Tre Hargett
Secretary of State

615-741-2819
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MEMORANDUM

To: Tennessee State Election Commission
Jimmy Eldridge, Chairman
Mike McDonald, Secretary
Donna Barrett, Commissioner
Judy Blackburn, Commissioner
Secondra Meadows, Commissioner
Bennie Smith, Commissioner
Kent Younce, Commissioner

From: Tre Hargett
Tennessee Secretary of State

Date: December 5, 2023

Subject: List of Candidates Filing Petitions for Presidential Preference Primary

CC: Scott Golden, Chairman, Tennessee Republican Party
Hendrell Remus, Chairman, Tennessee Democratic Party

Pursuant to T.C.A. § 2-5-205(a)(2), the following candidate filed a nominating petition with the State Election Commission by 12:00 noon on December 5, 2023, seeking nomination in the March 5, 2024, Presidential Preference Primary.

Democratic Primary Ballot

Dean Phillips

The signatures on the petition are being verified by county election commission offices to determine if Congressman Phillips will be on the ballot. In order to appear on the ballot, two thousand five hundred (2,500) valid signatures of registered voters as required by Tennessee law must be verified.

PROCEDURES FOR CERTIFYING VOTING MACHINES BY THE TENNESSEE STATE ELECTION COMMISSION

All voting machines/vendors must receive certification from the state election commission and the coordinator of elections before any voting machines or systems may be sold in the State of Tennessee.

First Step:

Any interested vendor should submit a written request to the coordinator of elections and the state election commission requesting certification of your company together with the EAC certification number, a financial report and a list of all states that have already bought your voting machines or systems. If you would like to demonstrate your product at a meeting of the state election commission, please make that request in your letter. You will be notified of the date, time, and place of the meeting where you may make your presentation.

Second Step:

A. Voting Machine Procedure

Following verification of EAC certification and an initial presentation of your product and/or services, you would need to arrange for at least two (2) State Election Commissioners (of opposite parties) and the coordinator of elections (or designee) to view your machines or system in use in an election of a substantial size in another state. An election of a substantial size involves at the minimum the following characteristics:

- The jurisdiction has a population of at least 10,000 persons;
- The jurisdiction has at least two (2) or more district races on the ballots; and
- There are at least two (2) contested races involving both at large and district races on the ballot.

B. Voting Machine Software or Hardware Upgrade

- EAC Certification;
- Presentation of upgrade before State Election Commission at a meeting; and
- Viewing of upgrade in another state (In lieu of viewing machine in another state, at the discretion of the State Election Commission, letters of recommendation from users in other jurisdiction may be used as support for approval.)

C. De Minimis Voting System Changes

- Any De Minimis change to an EAC certified voting system shall be submitted to the state election commission and coordinator of elections to be approved. For purposes of approval of the de minimis change to the voting system, all that will be required is a letter from the EAC stating the change is de minimis, unless further information is requested by the state election commission or coordinator of elections.

Third Step:

The State Election Commission must vote to certify the machine in order for the machines to be used in an election in Tennessee.

You may send any correspondence for both the state election commission and the coordinator of elections to the following address:

312 Rosa L.Parks Avenue, 7th Floor
William R. Snodgrass Tower
Nashville, Tennessee 37243
(615) 741-7956

If you have any further questions regarding certification of your company, please feel free to contact the office of the state election coordinator at the phone number listed above.

HART intercivic

September 6, 2023

Mr. Mark Goins
Elections Coordinator
Division of Elections
312 Rosa L. Parks Avenue
7th Floor, William R. Snodgrass Tower
Nashville, TN 37243

Via: Physical Mail Only

RE: Verity Voting 2.7 Certification Application

Mr. Goins:

Please be advised that Hart InterCivic, Inc. is seeking certification of *Verity Voting 2.7* in the State of Tennessee. *Verity Voting 2.7* is certified by the EAC as conformant with the federal *Voluntary Voting System Guidelines (VVSG),* Version 1.0 (2005) and the system has never been denied certification, nor been decertified. You will find included herewith the following items for your consideration:

1. *Verity Voting 2.7 Components with Description*
2. *Verity Voting 2.7 Testing and Deployment Scope*
3. *Certificate of Conformance and Scope of Certification Document from the U.S. Election Assistance Commission*

Should you have any questions or concerns regarding the materials provided, please do not hesitate to contact our office. I look forward to a favorable review. Thank you for your time.

Best,

Krista Mejias,
Certification Project Manager
Hart InterCivic

Verity Voting 2.7 Components

Overview of the Verity Voting system

The Verity Voting system includes software, hardware, devices, and peripheral components that allow election professionals to accomplish the following high-level tasks:

- Election definition
- Ballot production
- Flash media production
- Voting machine configuration and use
- Central scanning and adjudication of ballots
- Counting of votes
- Consolidation and reporting of results and audit logs

Components of Verity Voting 2.7

The Verity Voting 2.7 system includes the following components:

Software Applications

- **Verity Data** is a component of the Verity Voting system used by officials to enter election data for contests, candidates, proposition text, translations, and audio. Data also provides the user with controls for proofing of data and layout and performs validation prior to locking the data to ensure its readiness for use in Verity Build.

- **Verity Build** enables election officials to define ballot styles and generate election definitions. In addition to producing paper and electronic ballot styles, Build allows users to program voting device behavior in a variety of ways. After ballot generation, Build electronically writes the election data file (including all ballot styles) to portable flash media known as vDrives, which can then be deployed for a variety of different voting types, such as central scanning with Verity Central or in-person voting with Verity Scan, Verity Touch, Verity Touch Writer, and Verity Touch Writer Duo. After generating election definitions, Verity Build can also print ballots or output them electronically for third-party printers.

- **Verity Central** enables election officials to scan paper ballots at a central location using a commercial-off-the-shelf (COTS) scanner, adjudicate voter selection marks as necessary, and convert voter selection marks to electronic Cast Vote Records (CVRs). Central is especially well-suited for scanning and adjudicating by-mail ballots. When all ballots have been scanned and adjudicated, Central writes Cast Vote Records to vDrive portable flash media, which can be tabulated in Verity Count tabulation software. It is important to note that Central does not tabulate votes; because it simply scans and records Cast Vote Records, this allows jurisdictions to begin scanning before the close of polls, thereby greatly accelerating the scanning workflow. While Central does produce a variety of reports, because it does not tabulate, it does not produce reports containing results totals.

- **Verity Count** allows election officials to tabulate and report the results of Cast Vote Records stored on vDrives. vDrives inserted into the tabulation workstation can contain by-mail votes from Central, or in-person votes from Scan or Controller devices. Once the CVRs have been read and tabulated, Count can produce a variety of standard and customized reports. Count also allows officials to adjudicate write-in votes from Scan, Controller, or Central. Finally, Count also collects and stores audit logs from Verity voting devices, allowing for post-election audit and/or analysis.

- **Verity User Management** enables users with administrative permissions to create and manage user accounts within the Verity Voting system. Depending on the component for which the accounts are created, permissions may be managed by various roles. Depending on the role, each user has access to different features of the Verity software applications and other components.

- **Verity Election Management** enables users with administrative permissions to add, copy, delete, import, export, archive, restore, and manage elections in the Verity system.

- **Verity Desktop** allows authorized users to set the system date and time, export Verity application file hashes to removable USB media for software validation and import printer configuration files.

Voting Devices and Peripheral Equipment

- **Verity Print** is a pre-voting ballot production device for use by election officials and/or poll workers. Verity Print produces unmarked paper ballots. Print is paired with a commercial off-the-shelf printer to allow the user to select and print the desired ballot style based on the precinct and voter registration information. The Verity Print device is activated so the election official can print one or more blank ballots from one selected precinct at a time. Ballots can be printed on-demand for immediate use, or they can be printed in advance for additional inventory.

- **Verity Scan** is a digital scanner for paper ballots. Scan is paired with a purpose-built ballot box to ensure accurate, secure, and private ballot scanning and vote casting for each voter. Poll workers perform a minimal number of steps to open the polls and activate the Verity Scan device so that it can receive paper ballots. Once the polls are open, to vote, voters insert their ballots when Scan indicates it is appropriate, and then voters wait for Scan to indicate that the ballot has been successfully cast. Scan also supports "second chance" voting for mismarked ballots. During the election definition process in Verity Build, election officials may specify the types of mismarks for which Verity Scan should reject ballots and present voter instruction messages for "second chance voting;" officials can choose to flag undervotes, overvotes, and blank ballots, and they can also specify whether voters are required to have poll worker assistance to cast a mismarked ballot. After scanning, each ballot's Cast Vote Record is stored on vDrive portable flash media, which can be tabulated by the Verity Count software application.

- **Verity Controller** is a polling place management device that is used to generate random Access Codes for voters. Access Codes are used to activate a ballot session on Verity Touch and Verity Touch Writer Duo. Up to twelve Touch or Touch Writer Duo devices can be connected to a single Verity Controller via a daisy-chain network.

- **Verity Touch Writer and Touch Writer Duo** are ballot marking devices for paper ballots. Voters use the electronic interface to privately and independently make their selections on the ballot. Voters

can also make selections with Verity Access, an Audio-Tactile interface (ATI) component with three tactile buttons, one audio port (for headphones), and one port for external two-switch devices. When voters finish making their selections, they print the marked ballot.

Verity Touch Writer is configured as a standalone device with a separate COTS printer, and Verity Touch Writer Duo, which has an integrated printer, is configured for use in a daisy-chained network with Verity Controller. Using Verity Touch Writer or Touch Writer Duo in conjunction with Verity Scan provides the voter with a reviewable paper ballot that is accurately captured through reviewing, scanning, and acceptance for tabulation as a voter's cast vote record (CVR). As ballot marking devices, the Verity Touch Writer and Touch Writer Duo do not record electronic cast vote records.

- **Verity Touch Writer Duo Standalone** is a standalone Ballot Marking Device (BMD) which allows voters to utilize the touchscreen or optional Audio Tactile Interface to generate a machine-readable and human readable printed vote record, based on vote selections made.

- **Verity Duo Go** is a carrier for use with Verity Touch Writer Duo to enable "curbside" voting.

- **Verity Touch** is a Direct Recording Electronic (DRE) device. After polls have been opened, poll worker(s) use the Controller to create anonymous voter Access Codes that are associated with **various ballot styles. Access Codes are used by voters to activate their ballot session and cast a vote** in private. After the voter privately and independently marks and reviews the ballot, he or she will electronically cast the ballot. The poll worker uses the Controller to manage any combination of Touch devices, up to a total of 12, that are connected via a daisy-chain network.

- **Verity Access** is an audio tactile interface (ATI) controller that is connected to Verity Touch Writer ballot marking devices as a complement to the touchscreen display, to provide additional options for accessible voting. Access has three tactile buttons, one audio port, one port for two-switch adaptive devices (such as "jelly switches" or sip-and-puff devices), and a custom USB cable. Jacks for headphones and adaptive devices are located on the top edge of the device, and the device has gripping surfaces on either side.

- **Ballot Box.** Designed to work seamlessly with the Scan device, the Verity Ballot Box is designed for security, light weight, and ease of deployment. Using an innovative folding design, the durable ballot box includes separate secure compartments for scanned and un-scanned ballots, and it folds to just 5" thin, for easy transportation and storage.

- **Voting Booth.** Like the Ballot Box, the specially designed voting booth for Touch Writer and Touch is designed for light weight and easy set up. The booth includes only three parts to assemble, and it also includes durable nylon privacy screens. ADA-compliant versions of the Verity Voting Booth are also designed to comply with VVSG requirements for accessibility and controls within reach.

- **Verity vDrive.** vDrives are flash memory media devices that carry the election definition from Verity to Verity devices, including Scan, Touch Writer, and Controller. vDrives also store Cast Vote Records (CVRs) and audit information. After polls are closed, vDrives can be removed from Controller, Scan or Touch Writer to transfer CVRs and/or audit logs to Count. vDrives are also used to store CVRs associated with scanned ballots in Central. vDrives from Controller, Scan and Central are read into Count, which tabulates votes and reports results.

- **Verity Key** is a two-factor authentication device used to secure access to critical functions throughout the election. Two-factor authentication means that users must have the physical Key device, which is similar to a USB token, as well as knowing the passcode associated with the physical security device. This electronic device is required for access to secure functions in the Build, Central, and Count applications, including tasks such as accepting ballot styles, opening new election functions, and tabulating votes.

Verity Voting 2.7 Testing and Deployment Scope

Verity Voting 2.7 received certification from the EAC on June 7, 2022. Verity Voting 2.7 has since received certification from the following states:

- Kentucky
- Missouri
- New York
- Ohio
- Pennsylvania
- Oregon
- Washington
- Texas

Verity Voting 2.7 certification efforts are currently underway in the following states:

- Wisconsin
- Virginia
- Illinois

United States Election Assistance Commission

Certificate of Conformance

Hart Verity Voting 2.7

VVSG 2005 VER. 1

EAC CERTIFIED

The voting system identified on this certificate has been evaluated at an accredited voting system testing laboratory for conformance to the *Voluntary Voting System Guidelines Version 1.0 (VVSG 1.0)*. Components evaluated for this certification are detailed in the attached Scope of Certification document. This certificate applies only to the specific version and release of the product in its evaluated configuration. The evaluation has been verified by the EAC in accordance with the provisions of the EAC *Voting System Testing and Certification Program Manual* and the conclusions of the testing laboratory in the test report are consistent with the evidence adduced. This certificate is not an endorsement of the product by any agency of the U.S. Government and no warranty of the product is either expressed or implied.

Product Name: Verity Voting

Model or Version: 2.7

Name of VSTL: SLI Compliance

EAC Certification Number: HRT-Verity-2.7

Date Issued: June 7, 2022

Mark A. Robbins

Executive Director

Scope of Certification Attached

Manufacturer:	*Hart InterCivic*	**Laboratory:**	*SLI Compliance*
System Name:	*Verity Voting 2.7*	**Standard:**	*VVSG 1.0*
Certificate:	*HRT-Verity-2.7*	**Date:**	*6/7/2022*

Scope of Certification

This document describes the scope of the validation and certification of the system defined above. Any use, configuration changes, revision changes, additions or subtractions from the described system are not included in this evaluation.

Significance of EAC Certification

An EAC certification is an official recognition that a voting system (in a specific configuration or configurations) has been tested to and has met an identified set of Federal voting system standards. An EAC certification is **not**:

- An endorsement of a Manufacturer, voting system, or any of the system's components.
- A Federal warranty of the voting system or any of its components.
- A determination that a voting system, when fielded, will be operated in a manner that meets all HAVA requirements.
- A substitute for State or local certification and testing.
- A determination that the system is ready for use in an election.
- A determination that any particular component of a certified system is itself certified for use outside the certified configuration.

Representation of EAC Certification

Manufacturers may not represent or imply that a voting system is certified unless it has received a Certificate of Conformance for that system. Statements regarding EAC certification in brochures, on Web sites, on displays, and in advertising/sales literature must be made solely in reference to specific systems. Any action by a Manufacturer to suggest EAC endorsement of its product or organization is strictly prohibited and may result in a Manufacturer's suspension or other action pursuant to Federal civil and criminal law.

System Overview:

The **Verity Voting 2.7** system represents a set of software applications for pre-voting, voting and post-voting election project activities for jurisdictions of various sizes and political division complexities.

Verity Voting 2.7 functions include:

- Defining the political divisions of the jurisdiction and organizing the election with its hierarchical structure, attributes, and associations.

- Defining the election events with their attributes such as the election name, date, and type, as well as contests, candidates, referendum questions, voting locations and their attributes.
- Preparing and producing ballots for polling place and absentee voting or by-mail voting.
- Preparing media for precinct voting devices and central count devices.
- Configuring and programming the **Verity Scan** digital scanners for marked paper ballots and Verity Touch Writer printed vote records.
- Configuring and programming the **Verity Touch Writer** BMD devices.
- Configuring and programming the **Verity Touch Writer Duo Standalone** BMD devices.
- Configuring and programming the **Verity Controller** with **Verity Touch Writer Duo** BMD devices.
- Configuring and programming the **Verity Print** on-demand ballot production device.
- Transmission of the election results via **Verity Relay**.
- Transmission of the election results via **Verity Transmit**.
- Producing the election definition and auditing reports.
- Providing administrative management functions for user, database, networking, and system management.
- Import of the Cast Vote Records from **Verity Scan** devices and **Verity Central**.
- Preview and validation of the election results.
- Producing election results tally according to voting variations and election system rules.
- Producing a variety of reports of the election results in the desired format.
- Publishing of the official election results. Auditing of election results including ballot images and log files.

Verity Scan is a digital scan precinct ballot counter (tabulator) that is used in conjunction with an external ballot box. The unit is designed to scan marked paper ballots or Verity Touch Writer Duo printed vote records, interpret and record voter marks on the marked paper ballot or record voter selections on theprinted vote records, and deposit the ballots into the secure ballot box.

Verity Relay provides remote transmission capability. Utilizing an optional modem with **Verity Scan**, at close of polls, results are transmitted from the polling place device to the **Verity Relay Receiving Station** workstation.

Verity Transmit provides remote transmission capability. Utilizing an optional modem, Wi-Fi, or Ethernet accessory kit. Results from the **Verity Scan** and **Verity Central** are transmitted to the **Verity Transmit Receiving Station** workstation.

The **Verity Touch Writer** is a standalone precinct level Ballot Marking Device (BMD) which also includes an Audio Tactile Interface (ATI), which allows voters whocannot complete a paper ballot to generate a machine-readable and human readable paper ballot, based on vote selections made, using the ATI.

The **Verity Touch Writer Duo** is a daisy chained configuration of a **Verity Controller** device configured with up to twelve **Verity Touch Writer Duo** BMD devices, which allows voters to

utilize the touchscreen or optional Audio Tactile Interface to generate a machine-readable and human readable printed vote record, based on vote selections made.

The **Verity Touch Writer Duo Standalone** is a standalone BMD device, which allows voters to utilize the touchscreen or optional Audio Tactile Interface to generate a machine-readable and human readable printed vote record, based on vote selections made.

Verity Print is an on-demand ballot production device for unmarked paper ballots.

Verity Election Management allows users with the Administrator role to importand manage election definitions. Imported election definitions are availablethrough the Elections chevron in Build. Users can also delete, archive, and manage the election definitions.

Verity User Manager enables users with the correct role and permissions to create and manage user accounts within the **Verity Voting** system for the local workstation in a standalone configuration, or for the network in a networked configuration.

Verity Desktop enables users with the correct roles to set the workstations' date and time, gather **Verity** application hash codes (in order to validate the correctness of the installed applications), and access to Windows desktop.

Verity Data provides the user with controls for entering and proofing data and audio. **Verity Data** also performs validation on the exported information to ensure that it will successfully import into **Verity Build**.

Verity Build opens the election to proof data, view reports, and print ballots, and allows for configuring and programming the **Verity Scan** digital scanners, and **Verity Touch Writer** and **Controller/Touch Writer Duo** BMD devices, **Verity Print**, as well as producing the election definition and auditing reports.

Verity Central is a high-speed, central digital ballot scanning system used for high-volume processing of ballots (such as vote by mail). The unit is based on COTS scanning hardware coupled with custom **Hart**-developed ballot processing application software which resides on an attached workstation.

Verity Count is an application that tabulates election results and generates reports. **Verity Count** can be used to collect and store all election logs from every **Verity** component/device used in the election, allowing for completeelection audit log reviews.

Verity Relay Receiving Station is a remote transmission software application that receives election data transmissions sent by Verity Scan devices equipped with an optional Relay modem accessory.

Verity Transmit Receiving Station is a remote transmission software application that receives election data transmissions sent by Verity Transmit devices.

Certified System before Modification (If applicable):

Verity Voting 2.6

Anomalies and/or Additions addressed in Verity Voting 2.7:

The following anomalies found in previous Verity releases are corrected in the Verity Voting 2.7 modification:

1. Verity Data/Build
   Help screen for: "Shared Device Behaviors" is inaccurate. The help screen states, "Require user to view all choices in each contest" however what is displayed is "Require voters to view all choices in each contest."
2. Verity Scan
   Scanner multi-feed calibration can get stuck on a spinner and not show the results screen, requiring a lock and unlock of the tablet to exit the screen.
3. All Verity Devices
   Physical keyboard input of "Alt-ESC" returns to the user to the Verity launcher splash screen.
4. Verity Count
   If the number of columns in contest are less than or equal to 14 in the Canvass Results Report, then a blank page will follow the contest on the PDF export.

The following additions were made:

Features for all devices and workstations

- When using the System Validation Tool on devices or workstations, the system exports hashes for all Verity-related system files, as well as the files themselves.
- Verity supports adding new languages to devices and workstations via the "Language Pack" functionality.
- Verity supports the following additional languages:
  - Gujarati
  - Hmong
  - Lao
  - Hawaiian
  - Cantonese
  - Punjabi
  - Bengali

COTS updates

- Added support for the Brother HL-L6400DWVS laser printer. This printer now replaces the OKI Data B432 printer for use on Verity Touch Writer, Verity Printer, Verity Build, and for report printing on all Verity workstation software.
- Added the Duracell DR660PSS UPS for battery backup for the new Brother HL-L6400DWVS printer when used with the Verity Touch Writer laser printer.

- Added support for the IntoPrint SP1360 laser printer, which is a brand of the OKI Data C931 printer that it replaces on Verity Build.
- Added additional CFast card vendor.
- Added magnifying devices for use with ballots in the polling place.

Hawaii-specific Features

- Supports General and Open Primary elections only.

Verity Count Reporting

- Now allows users to set a custom order for contests on results reports across all Tasks in an election.
- Includes the following new reports and exports: o Three-Column Summary Results Report
    - Three-Column Precinct Results Report (export only)
    - Statement of Vote Report
    - Precinct Detail Export
    - Summary Export

- Adds support for adding a Run ID to the report header of the following reports:
    - Three-Column Summary Results Report
    - Three-Column Precinct Results Report
- Adds support for identifying the following reports as "zero reports"
    - Three-Column Summary Results Report
    - Three-Column Precinct Results Report
- Added support for calculating ballots cast in a multi-sheet election using the highest recorded sheet count for the following reports:
    - Three-Column Summary Results
    - Three-Column Precinct Results
    - Statement of Vote Report
    - Precincts Reporting
    - Summary Export
    - Precinct Detail Export
- Added an Election Preference to "Enable Hawaii results reports and exports".
- Manual vote recording now allows users to enter sheet counts for each sheet that exists in the ballot for the precinct-split/party being adjusted.

Paper Ballot Features

- Paper ballots support a maximum paper size of 8.5"x22", without stub capability.
- Paper ballot stubs support adding a customizable prefix to the stub number display.
- Verity now supports 80lb Text paper weight for ballots.

- Added targeting landmarks to ballot corners for option box triangulation.

Grid Ballot Features

- Verity now supports grid-based paper ballots, where office contests appear in columns and parties in rows on odd-numbered pages, and propositions appear in a column-based layout on even-numbered pages.
    - Proposition-only ballots can utilize both sides of a sheet.
- Grid-based paper ballots support all paper sizes in a landscape orientation (short edge on left):
- Grid-based paper ballots support the same stub sizes and options as column-based paper ballots.
    - 8.5" x 22" ballots do not support a stub
- Grid-based paper ballots support all paper ballot election definition elements EXCEPT:
    - Party Selector contests
    - Open Primary Party Selector contests
    - "Ranked Choice", "Cumulative", or "Fractional Cumulative" contests
    - Ballot Additional Text
    - Rotation
    - Column or page forcing on Office type contests
        - Column or page forcing is allowed for contests appearing on the Proposition side of the ballot.
    - Contest images
    - Dependent contests
    - Two-line write-ins
    - Uncommitted choices
- Grid-based ballots support candidate cross-filing, where if a voter marks multiple boxes for a cross-filed choice, it will be recorded as a single vote for the choice.
- Added support for Slate Choices, where two choice names can be treated as a single votable option.

Features for all devices

- Updated model for each Verity device
    - A single standardized circuit board replaces baseboard and I/O board combinations found in all Verity devices, with no change to functionality. Electronic components from the existing Tally Tape Thermal Printer are added directly to the baseboard.
    - Tally Tape thermal printer for report printing now uses Hart built plastics and firmware. .
    - Rear panel connectors now recessed to increase ruggedness and reduce cable strain if a device is handled while cables are installed.

    - Power input connector no longer contains to slide to release cable retention feature.
    - Tamper evident seal now serialized
- All Verity devices now show the first three sections (XX.XX.XX) of the system version number in the user interface, without needing to reboot the device.
- All Verity devices now follow these optional VVSG 1.0 user-interface conventions:
    - If an unrecoverable error occurs on a polling place device, the device suspends voting operations and presents a clear indication to the user of the malfunction.
    - Warnings and alerts issued to a voter on a device shall state the nature of the problem; the set of responses available to the voter;, and whether the voter has performed or attempted an invalid operation, or the voting equipment itself has malfunctioned in some way.
    - When color is used to indicate status in the system, the user interface uses green, white, or blue for normal status; amber or yellow for marginal status; and red for an error status.
    - When color is used to indicate the type of information displayed, the user interface uses green, white, or blue for general information; amber or yellow for warnings; and red to indicate problems that require immediate attention.

Features for Verity Scan

- Added support for Write-in Mark Detection, where Scan can return the ballot for second-chance voting input if a mark is detected in the write-in area, but the option box is not marked.
    - If the ballot is accepted as-is, unmarked write-ins will count only if the Build setting for default counting behavior is enabled, except for ranked-choice or cumulative contests
- Performance improvements that reduce ballot processing time. This change is applicable to all Verity Scan models.

Features for Verity Scan with Relay only

- Device startup reports are now labeled "Verity Scan with Relay," not "Verity Scan."
- Voter-facing screens now do not display the product name “Verity Scan with Relay.”

Features for Verity Transmit

- Transmit supports transmitting vDrives written by:
    - Verity Central
    - Verity Scan
    - Verity Scan with Relay
- For Central vDrives, Transmit now displays “Central vDrive” in lieu of the vDrive polling place.

Features for all Workstations

- Secure Boot now enabled on workstations.
- Full Disk Encryption now required for all deployments.

Features for Election Management

- Added new feature "Configuration Control", which supports limiting election variations based on what equipment and ballot types are used by a jurisdiction, eliminating unnecessary work for the user.

Features for Verity Data

- The Contest Title field limit is increased to 250 characters.
- Verity Data now supports entering separate contest instructions for devices and paper ballots.
    - Verity Data proofing reports containing contest instructions display both electronic instructions and paper instructions.
- Added support for defining Candidate Slate choices on grid-based ballots.
- Added additional rich-text formatting options for Ballot Additional Text.
- The Ballot Additional Text field limit increased to 3000 characters.
- Verity Data validates that fold lines do not intersect ballot landmarks, in addition to barcodes and option boxes
- The default PVR paper size changed to 8.5" x 11".

Features for Verity Build

- Verity Build includes a new setting to print single language ballots on Touch Writer.
- Added support for Write-in Mark Detection, including:
    - New options to control second-chance voting behavior for unmarked write-ins on Scan devices.
    - New option to control the default counting behavior for unmarked write-ins on Scan devices.
- Added a note that "Setting the default Voting Method will also apply to Verity Reader".

Features for Verity Central

- Added support for Write-in Mark Detection, including:
    - A new adjudication condition called "Unmarked Write-in".
    - An election Preference to count unmarked write-ins as if they were marked; off by default.
    - An election setting to count unmarked write-ins as if they were marked.
    - An election preference and setting to allow automatic acceptance of unmarked write-ins during scan, or when accepting at the batch, ballot, or page level.

- Allowing the user to filter voter intent issues by "Unmarked Write-ins".

Features for Receiving Stations

- Renamed "Verity Relay" application for clarity; now called "Verity Relay Receiving Station."
- Features for Verity Transmit support added to a new "Verity Transmit Receiving Station" with the following modifications from the "Verity Receiving Station":
    - Application supports receiving vDrives written by:
        - Verity Central
        - Verity Scan
        - Verity Scan with Relay
    - vDrives written from Verity Transmit Receiving Station support at least the same number of ballots as vDrives written from Verity Central, Scan, or Scan with Relay.
    - The Receiving Dashboard displays the status of Central vDrive data separately from the status of device vDrive data.
    - The vDrives Written Report displays, after the "ID of the transfer vDrive" field, the type of device that wrote the CVR data ("Central" or polling place device type) for each child vDrive written to a transfer vDrive.
    - The Received vDrives Report displays, before the "Polling place name" field, the type of device that wrote the CVR data ("Central" or polling place device type) for each received vDrive.

Features for Verity Count

- Count results reports containing contest instructions display electronic instructions only.
- Slate Choices: On results reports, both choice names are displayed next to a single vote counter.
- Count now includes a digital signature for any exported collection of CVRs.
    - The digital signature is user-verifiable using a separate utility.
- Improved Alias functionality:
    - Aliases Groups and Sets (collections of Alias Groups) can be exported or imported to/from removable media.
    - Alias Groups can be imported into any elections containing the same strings.
    - Alias Sets can only be imported into the election with the same Election ID from which they were generated.
    - Alias Sets can be used for reports and results exports, including the Detailed Vote Total export.
- Visually updated the Verity Count dashboard.

Modifications to Verity 2.7.1:

- Change the contest screen on Touch Writer to require voters to select a specific combination of candidate and party when voting for a cross-endorsed candidate.
- Change the review screens on Touch Writer and Reader to reflect only the specific party association(s) selected by the voter.
- Add a device report that includes vote totals for each party association for cross-filed candidates.
- Add a Count report that includes vote totals for each party association for cross-filed candidates.

Mark definition:

System supports marks that cover a minimum of 4% of the rectangular marking area.

Tested Marking Devices:

System supports Black and Blue ballpoint pens; testing was performed with black, blue, dark blue, pink, light green, green, orange, and red pens, as well as #2 pencil lead.

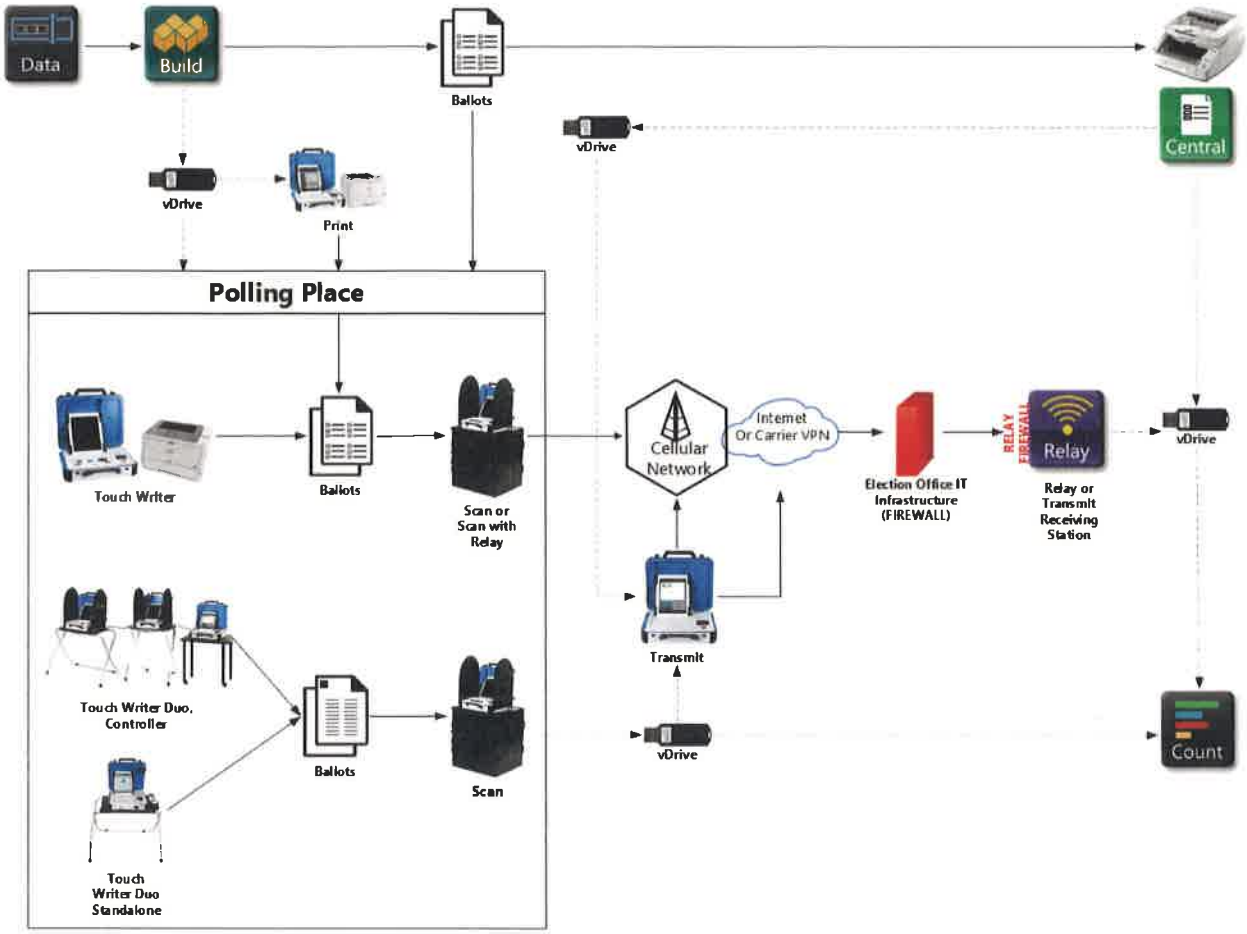
Language capability:

System supports English, Spanish, Chinese, Japanese, Korean, Khmer, Thai, Vietnamese, Tagalog, Ilocano, Hindi, Haitian Creole, Gujarati, Hmong, Lao, Hawaiian, Cantonese, Punjabi, and Bengali.

Components Included:

This section provides information describing the components and revision level of the primary components included in this Certification.

System Diagram



Proprietary Software

System Component	Software or Firmware Version	Comments
Verity Data	2.7.1	Data management software
Verity Build	2.7.1	Election definition software
Verity Central	2.7.1	High speed digital scanning software
Verity Count	2.7.1	Tabulation and reporting software
Verity Relay Receiving Station	2.7.1	Data transmission software (receiving station)
Verity Transmit	2.7.1	Data transmission software
Verity Transmit Receiving Station	2.7.1	Data transmission software (receiving station)
Verity Print	2.7.1	On-demand ballot printing device firmware
Verity Scan	2.7.1	Digital scanning device firmware
Verity Scan with Relay	2.7.1	Digital scanning device firmware with optional Relay functionality
Verity Touch Writer	2.7.1	Ballot marking device
Verity Touch Writer Duo	2.7.1	Ballot marking device, with internal COTS ballot summary printer and optional audio tactile interface
Verity Touch Writer Duo Standalone	2.7.1	Ballot marking device, with internal COTS ballot summary printer and optional audio tactile interface
Verity Controller	2.7.1	Polling place management device

COTS Software and Firmware

Description	Version
Verity Data, Build, Count, Relay Receiving Station, Transmit Receiving Station	
Microsoft Windows 10 Enterprise 2019 LTSC	10.0.17763
Microsoft SQL Server Standard 2019	15.0.4153.1
McAfee Application Control for Devices (McAfee Solidifier)	8.2.1-143
Verity Central – Central Count Paper Ballot Scanner	
Microsoft Windows 10 Enterprise 2019 LTSC	10.0.17763
Microsoft SQL Server Standard 2019	15.0.4153.1
McAfee Application Control for Devices (McAfee Solidifier)	8.2.1-143
Nuance Western OCR, Desktop, OEM	V20
Verity Print, Touch Writer – Electronic BMD Device, Touch Writer Duo – Electronic BMD Device, Touch Writer Duo Standalone – Electronic BMD Device, Controller, Transmit	
Microsoft Windows 10 Enterprise 2019 LTSC	10.0.17763
Microsoft SQLite	3.36.0
McAfee Application Control for Devices (McAfee Solidifier)	8.2.1-143
Verity Scan – Precinct Paper Ballot Scanner	
Microsoft Windows 10 Enterprise 2019 LTSC	10.0.17763
Microsoft SQLite	3.36.0
McAfee Application Control for Devices (McAfee Solidifier)	8.2.1-143
Nuance Western OCR, Desktop, OEM	V20

Hardware

Description	Version
Verity Print – Ballot Printer	3006095 Rev A
Verity Print – Ballot Printer	3005356 Rev E
Verity Print – Ballot Printer	3005856 Rev B
Verity Scan – Paper Ballot Scanner	3006080 Rev A
Verity Scan – Paper Ballot Scanner	3005350 Rev I
Verity Scan – Paper Ballot Scanner	3005800 Rev B
Verity Touch Writer – Electronic BMD Device	3006090 Rev A
Verity Touch Writer – Electronic BMD Device	3005352 Rev H
Verity Touch Writer – Electronic BMD Device	3005852 Rev B
Verity Touch Writer Duo – Electronic BMD Device	3006070 Rev A
Verity Touch Writer Duo – Electronic BMD Device	3005700 Rev B
Verity Touch Writer Duo Standalone – Electronic BMD Device	3006075 Rev A
Verity Touch Writer Duo Standalone – Electronic BMD Device	3005730 Rev A
Verity Controller – Networked Centralized Management Device	3006085 Rev A
Verity Controller – Networked Centralized Management Device	3005825 Rev B

COTS Equipment

Description	Version
Verity Data, Build	
Verity Data and Build Applications and Workstation Kit • HP Z4 G4 Workstation • HP Z240 Workstation supported for existing customers only	A
OKI Data C831dn Color Printer for existing customers only	N35100A
OKI Data C844dn Color Printer	N35301A
OKI Data C911dn color Printer for existing customers only	N36100A
OKI Data C931e Color Printer	N36100A
OKI Data B432dn Mono Report and Ballot Printer	N22500A
OKI Data B431d Mono Report Printer for existing customers only	N22202A

Brother HL-L6400 Series printer	HLL6400DWVS
Into Print SP1360 printer	SP1360
HP 8-port Ethernet Switch	1405-8GV3
Vinpower Digital USB Duplicator 7-targets	USBShark-7T-BK
Vinpower Digital USB Duplicator 23-targets	USBShark-23T-BK
Verity Central	
Verity Central Applications and Workstation Kit • HP Z4 G4 Workstation • HP Z240 Workstation supported for existing customers only	A
Canon DR-G1100 High-Speed Scanner	M111181
Canon DR-G1130 High-Speed Scanner	M111171
Canon DR-G2110 High-Speed Scanner	6130030
Canon DR-G2140 High-Speed Scanner	6130020
OKI Data B432dn Mono Printer Report Printer	N22500A
OKI Data B431d Mono Report Printer for existing customers only	N22202A
Brother HL-L6400 Series printer	HLL6400DWVS
8-port Ethernet Switch	1405-8GV3
Verity Count	
Verity Count Applications and Workstation Kit • HP Z4 G4 Workstation • HP Z240 Workstation supported for existing customers only	A
OKI Data B432dn Mono Printer Report Printer	N22500A
OKI Data B431d Mono Report Printer for existing customers only	N22202A
Brother HL-L6400 Series printer	HLL6400DWVS
HP 8-port Ethernet Switch	1405-8GV3
Verity Relay Receiving Station	
Verity Relay Applications and Workstation Kit • HP Z4 G4 Workstation • HP Z240 Workstation supported for existing customers only	A
OKI Data B432dn Mono Printer Report Printer	N22500A
OKI Data B431d Mono Report Printer for existing customers only	N22202A
Brother HL-L6400 Series printer	HLL6400DWVS
Verity Transmit Receiving Station	
Verity Relay Applications and Workstation Kit • HP Z4 G4 Workstation • HP Z240 Workstation supported for existing customers only	A
OKI Data B432dn Mono Printer Report Printer	N22500A
OKI Data B431d Mono Report Printer for existing customers only	N22202A
Brother HL-L6400 Series printer	HLL6400DWVS
Verity Print	
OKI Data C831dn Color Printer for existing customers only	N35100A
OKI Data B432dn Mono Printer Report Printer	N22500A
OKI Data C844dn Color Printer	N35301A
OKI Data B431d Mono Report Printer for existing customers only	N22202A
Brother HL-L6400 Series printer	HLL6400DWVS
Optional AutoBallot Barcode Scanner Kit Includes the following 2d barcode scanner: • Hart part number: 1003672 • Motorola/Zebra part number: DS4308 or DS4608	C
Verity Scan – Paper Ballot Scanner	
Verity Ballot Box	D

Optional Relay Accessory Kit (4G LTE Cat-M1) Includes the following COTS modem • Hart part number: 1005248 • MultiTech part number: MTD-MNA1-2.0	A
Verity Touch Writer – Electronic BMD Device	
OKI Data B432dn Mono Printer Report Printer	N22500A
OKI Data B431d Mono Report Printer for existing customers only	N22202A
Brother HL-L6400 Series printer	HLL6400DWVS
Duracell UPS	DR660PSS
EATON UPS	5P1500
Accessible Voting Booth	D
Optional AutoBallot Barcode Scanner Kit Includes the following 2d barcode scanner: • Hart part number: 1003672 • Motorola/Zebra part number: DS4308 or DS4608	C
Headphones • Brand: V7, part number HA300-2NP or HA310-2NP	2005230
Verity Touch Writer Duo – Electronic BMD Device	
Brother PJ700 Series Thermal Printer	PJ723
Accessible Voting Booth with ATI Tray	D
Standard Voting Booth	D
Optional Detachable ATI Kit	A
Optional headphones for ATI Kit Brand: V7, part number HA300-2NP or HA310-2NP	C
Verity Touch Writer Duo Standalone– Electronic BMD Device	
Brother PJ700 Series Thermal Printer	PJ723
Accessible Voting Booth with ATI Tray	A
Standard Voting Booth	D
Optional Detachable ATI Kit	A
Optional AutoBallot Barcode Scanner Kit Includes the following 2d barcode scanner: • Hart part number: 1003672 • Motorola/Zebra part number: DS4308 or DS4608	C
Optional headphones for ATI Kit Brand: V7, part number HA300-2NP or HA310-2NP	C
Verity Controller	
Optional AutoBallot Barcode Scanner Kit Includes the following 2d barcode scanner: • Hart part number: 1003672 • Motorola/Zebra part number: DS4308 or DS4608	C
Verity Transmit	
Optional Modem Accessory kit (4G LTE Cat-M1)Includes the following COTS modem: • Hart part number: 1005248 • MultiTech part number: MTD-MNA1-2.0	A
Optional WiFi Accessory kit Includes the following COTS modem: • StarTech part number: USB433ACD1X1	A
Optional RJ-45 Ethernet Accessory kit	A

Includes the following COTS modem: • StarTech part number: USB31000SW	

System Limitations

This table depicts the limits the system has been tested and certified to meet.

Election Data Limits	Testing Limit/Requirement Z240 or Z4 G4 Systems (all supported workstations except Data/Build/Count combined system)	Testing Limit/Requirement Data/Build/Count combined system)
Languages in a single election	19	19
Precincts in an election	3,000	2000
Splits per Precinct	20	20
Total Precincts + Splits in an election	3,000	2000
Districts for voting devices and applications	400	75
Polling places in an election	3,050	1200
Parties in a General Election	24	24
Parties in a Primary Election	10	10
Contests in an election (including propositions)	2,000	200
Contest choices (voting positions) in a single contest	300	75
Total number of Contest Choices in an Election (independent from ballot size)	5,000	600
Unique write-in values per contest (Count)	500	500
Unique write-in values per task (Count)	40,000	40,000
Voting Types in an Election	10	10
Tasks per Election (Central, Count)	15	15
Registered Voters per Precinct (Count)	99,999	99,999
Maximum Sheets per ballot	4	4
Ballot Stubs per ballot	2	2
Ballots per vDrive (Scan, 1 sheet ballot)	25,000*	25,000*
Ballots per vDrive (Controller)	20,000	20,000
Ballots per vDrive (Central)	20,000	20,000
Ballots per *election* (Central & Count)	1,750,000	1,750,000
vDrives per *election* (Count)	3,050	3,050
Ballot Sizes (Build, Central, Print, Touch Writer, Scan)	8.5"x11", 8.5"x14", 8.5"x17", 8.5"x20", 8.5"x22"**	8.5"x11", 8.5"x14", 8.5"x17", 8.5"x20", 8.5"x22"**
Ballot Sizes (Build, Central)	11"x17"	11"x17"

* This is a recommended limit for the number of single-sheet ballots scanned on an individual Verity Scan during a single election. For a two-sheet ballot, divide this number by two; for a four-sheet ballot, divide this number by four.

** Older printer models may not support a 22" ballot.

VVSG 1.0 Supported Functionality Declaration

Feature/Characteristic	Yes/No	Comment
Voter Verified Paper Audit Trails		
VVPAT	No	
Accessibility		
Forward Approach	Yes	
Parallel (Side) Approach	Yes	
Closed Primary		
Primary: Closed	Yes	Supports standard closed primary and modified closed primary
Open Primary		
Primary: Open Standard (provide definition of how supported)	Yes	Open Primary
Primary: Open Blanket (provide definition of how supported)	Yes	General "top two"
Partisan & Non-Partisan:		
Partisan & Non-Partisan: Vote for 1 of N race	Yes	
Partisan & Non-Partisan: Multi-member ("vote for N of M") board races	Yes	
Partisan & Non-Partisan: "vote for 1" race with a single candidate and write-in voting	Yes	
Partisan & Non-Partisan: "vote for 1" race with no declared candidates and write-in voting	Yes	
Write-In Voting:		
Write-in Voting: System default is a voting position identified for write-ins.	No	By default, the number of write-ins available in a contest is zero, users may increment as necessary
Write-in Voting: Without selecting a write in position.	Yes	Support is configurable per election.
Write-in: With No Declared Candidates	Yes	
Write-in: Identification of write-ins for resolution at central count	Yes	
Primary Presidential Delegation Nominations & Slates:		
Primary Presidential Delegation Nominations: Displayed delegate slates for each presidential party	Yes	
Slate & Group Voting: one selection votes the slate.	Yes	
Ballot Rotation:		
Rotation of Names within an Office; define all supported rotation methods for location on the ballot and vote tabulation/reporting	Yes	Rotation by precinct and precinct split
Straight Party Voting:		
Straight Party: A single selection for partisan races in a general election	Yes	
Straight Party: Vote for each candidate individually	Yes	
Straight Party: Modify straight party selections with crossover votes	Yes	

Straight Party: A race without a candidate for one party	Yes	
Straight Party: "N of M race (where "N">1)	Yes	
Straight Party: Excludes a partisan contest from the straight party selection	Yes	
Cross-Party Endorsement:		
Cross party endorsements, multiple parties endorse one candidate.	Yes	
Split Precincts:		
Split Precincts: Multiple ballot styles	Yes	
Split Precincts: P & M system support splits with correct contests and ballot identification of each split	Yes	
Split Precincts: DRE matches voter to all applicable races.	Yes	
Split Precincts: Reporting of voter counts (# of voters) to the precinct split level; Reporting of vote totals is to the precinct level	Yes	
Vote N of M:		
Vote for N of M: Counts each selected candidate if the maximum is not exceeded.	Yes	
Vote for N of M: Invalidates all candidates in an overvote (paper)	Yes	
Recall Issues, with options:		
Recall Issues with Options: Simple Yes/No with separate race/election. (Vote Yes or No Question)	Yes	
Recall Issues with Options: Retain is the first option, Replacement candidate for the second or more options (Vote 1 of M)	Yes	
Recall Issues with Options: Two contests with access to a second contest conditional upon a specific vote in contest one. (Must vote Yes to vote in 2nd contest.)	Yes	
Recall Issues with Options: Two contests with access to a second contest conditional upon any vote in contest one. (Must vote Yes to vote in 2nd contest.)	Yes	
Cumulative Voting		
Cumulative Voting: Voters are permitted to cast, as many votes as there are seats to be filled for one or more candidates. Voters are not limited to giving only one vote to a candidate. Instead, they can put multiple votes on one or more candidate.	Yes	
Ranked Order Voting		
Ranked Order Voting: Voters can write in a ranked vote.	Yes	
Ranked Order Voting: A ballot stops being counting when all ranked choices have been eliminated	N/A	Tabulation rules are unique per jurisdiction
Ranked Order Voting: A ballot with a skipped rank counts the vote for the next rank.	N/A	Tabulation rules are unique per jurisdiction
Ranked Order Voting: Voters rank candidates in a contest in order of choice. A candidate receiving a majority of the first-choice votes wins. If no candidate receives a majority of first choice votes, the last place candidate is deleted, each ballot cast for the deleted candidate counts for the second-choice candidate listed on the ballot. The process of eliminating the last place candidate and recounting the ballots continues until one candidate receives a majority of the vote	N/A	Tabulation rules are unique per jurisdiction

Ranked Order Voting: A ballot with two choices ranked the same, stops being counted at the point of two similarly ranked choices.	Yes	
Ranked Order Voting: The total number of votes for two or more candidates with the least votes is less than the votes of the candidate with the next highest number of votes, the candidates with the least votes are eliminated simultaneously and their votes transferred to the next-ranked continuing candidate.	N/A	Tabulation rules are unique per jurisdiction
Provisional or Challenged Ballots		
Provisional/Challenged Ballots: A voted provisional ballots is identified but not included in the tabulation, but can be added in the central count.	Yes	
Provisional/Challenged Ballots: A voted provisional ballots is included in the tabulation, but is identified and can be subtracted in the central count	Yes	
Provisional/Challenged Ballots: Provisional ballots maintain the secrecy of the ballot.	Yes	
Overvotes (must support for specific type of voting system)		
Overvotes: P & M: Overvote invalidates the vote. Define how overvotes are counted.	Yes	If the system detects more than the valid number of marks in a contest, it is counted as an overvote
Overvotes: DRE: Prevented from or requires correction of overvoting.	Yes	
Overvotes: If a system does not prevent overvotes, it must count them. Define how overvotes are counted.	Yes	If the system detects more than the valid number of marks in a contest, it is counted as an overvote
Overvotes: DRE systems that provide a method to data enter absentee votes must account for overvotes.	Yes	
Undervotes		
Undervotes: System counts undervotes cast for accounting purposes	Yes	
Blank Ballots		
Totally Blank Ballots: Any blank ballot alert is tested.	Yes	
Totally Blank Ballots: If blank ballots are not immediately processed, there must be a provision to recognize and accept them	Yes	
Totally Blank Ballots: If operators can access a blank ballot, there must be a provision for resolution.	Yes	
Networking		
Wide Area Network – Use of Modems	Yes	With optional Verity Scan with Relay and Relay Receiving Station or Verity Transmit and Transmit Receiving Station

Wide Area Network – Use of Wireless	Yes	With optional Verity Scan with Relay and Relay Receiving Station or Verity Transmit and Transmit Receiving Station
Local Area Network – Use of TCP/IP	Yes	
Local Area Network – Use of Infrared	No	
Local Area Network – Use of Wireless	No	
FIPS 140-2 validated cryptographic module	Yes	
Used as (if applicable):		
Precinct counting device	Yes	
Central counting device	Yes	